



MINISTRY OF EDUCATION AND RESEARCH



NATIONAL UNIVERSITY RESEARCH COUNCIL

White Book of Scientific Research in the Romanian Universities




Politehnica Press
Bucharest, 2005



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 POLITEHNICA Press Publishing House
Bucharest, 2005

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NURC - National University Research Council
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The data collected in this book is declared by the universities on their own responsibility.

The succession of the universities within the specializations was established according to the number of students declared by each university.

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FOREWORD

A new stage in academic scientific research



Prof. Eng.
Ioan Dumitrache, PhD

It is generally known that the level of development in a society is fundamentally determined by the achievements of its education system, by the education level of its citizens. The main resource of a nation consists in the creativity of its members, and the highly qualified human resources represent its real treasure.

Higher education represents the source of knowledge which the most enlightened minds feed on, producing in their turn a new set of knowledge.

Higher education and scientific research are activities that elevate the soul, shape characters, spawn cognitive powers that control the present and outline the future.

Without a competitive education system, without a solid and coherent education, without intellectual elites, a society faces the risk of disappearing by being stifled, of completely losing touch with the continuously developing civilised world.

The challenges of globalization together with the expansion of the information society and the endorsement of the knowledge-based society will trigger significant leaps in communication, in the ways of accomplishing the exchange of material and spiritual values, in educating, shaping and managing the human resources.

Under these circumstances, the contribution to the development of knowledge and the access to the scientific and technologic breakthroughs require the continuous training of the human resources and the development of the cognitive and intellectual assets.

In a society rapidly evolving towards the cognitive civilization, the role of education, of creating new skills, of enhancing the personal cultural background embody real challenges. The option for education, for cognitive models, although it is not an easy one, represents an opportunity for achievement in a dynamic society, in which the intellectual elites play a decisive role. The human capacity of creating and using knowledge in an effective and intelligent way in a continuously changing environment is the driving force of any society based on the competition and globalization spirit.

However, a dynamic and competitive higher education strictly depends on the existence of: a) a strong sector of academic research; b) a coherent and flexible legislative framework; c) the necessary material and financial resources; and last but not least d) the system of recruiting and motivating highly qualified specialists, with creative potential, in order to ensure the proper functioning of higher education and its competitiveness.

A content-analysis of higher education and, obviously, of the scientific research in universities comes naturally now, after 15 years of pursuits and changes with more or less beneficial results for a society undergoing a prolonged and inefficient transition.

The integration in the European environment of education and research implies not only the awareness regarding the current situation in higher education and scientific research, the compatibility with the corresponding systems from the developed countries in Europe, but also setting out the paths and measures that are required for reaching the quality standards imposed by integration.

The restructuring of the higher education and its organization in three cycles - graduate, master's, and doctoral studies - implies a rearrangement of the educational system, in which scientific research plays an essential role. Training highly qualified human resources through master's and doctoral programmes represents an important objective of the restructuring trend in the educational system, in the wider context of enhancing quality and efficiency in the process of producing, transmitting and using knowledge.

In the knowledge-based society, the role of the universities becomes essential for encouraging innovation and scientific research, for participating in the development of erudition, and for the growth of the standard of living, implicitly.

The fundamental research with genuine impact on the advancement of education and of the innovative economy should represent a major direction of the research activity from universities, and the involvement of young members of the teaching staff, doctoral students and master's students in major research programmes is an essential condition of this process.

The essential research will have to be supported more and more as the main method of producing knowledge, and the creation/development of a modern infrastructure for research can play an extremely important part in ensuring the accomplishment of experiments and validating the hypotheses as the basis for engendering innovation, increasing the scientific production and the visibility of the Romanian science.

The increase in competitiveness in a knowledge-based economy implies the dissemination and the exploitation of knowledge in economy and in society as a whole. The universities are summoned to expand their capacity to transmit erudition, by promoting technological innovation

and by tighter connections with the socio-economic environment, inclusively.

Encouraging performance and supporting excellence is required. One must promote the creation/consolidation of international partnerships and reward success in attracting international funding for research, development and innovation, as well as the contribution to the increase in visibility of the Romanian science. These can create the prerequisites for our presence, as partners with full rights in the production of knowledge and the exchange of information, in a knowledge-based global economy, in which the European Area of Research has been structured, is developing and has defined its priorities for the future.

The expansion of scientific research, turning to good account the human potential, reorganizing and

restructuring the entire scientific research and technologic transfer system according to efficiency criteria must be priorities of the decision makers.

The synthetic presentation of the results of scientific research in universities represents a good opportunity for making an appraisal, now, after 10 years of operation for CNCSIS, but at the same time it stands for a moment of thorough analysis of the way in which universities respond to the exigencies of integrating the education and research in Romania into the European environment of education and research.

Prof. Eng. Ioan Dumitrache, PhD
President of CNCSIS

Corresponding Member of the Romanian Academy

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Public Universities

Complex Specialization



Rector



Prof. Nicolae Bocșan, PhD

Historical Overview of the University

On May 22, 1521, a Jesuit College was established in Cluj at the initiative of Stephen Bathory, but it operated only for a limited period of time. However, a Jesuit Academy was created in 1688 to continue the activity of this Jesuit College, and in 1776 Empress Maria Theresa turned it into a German University, later replaced by the Piarist School of Joseph II. The year 1872 saw the creation of a Hungarian university which operated here until 1919, when it



was replaced by the University of Dacia Superior. The Hungarian Bolyai university was established in 1945, and in 1959 it merged with the Romanian university under the name of Babes-Bolyai University. BBU is the only multicultural university in Romania, with classes taught in Romanian, Hungarian, and German.

Faculties and Departments

- Mathematics and Computer Science, Physics, Chemistry and Chemical Engineering, Biology and Geology, Geography, Environmental Science, History and Philosophy, Psychology and Education Science, Political and Administrative Science, Letters, Law, Economics, Physical Education and Sports, European Studies, Sociology and Social Work, Business, Orthodox Theology, Greek-Catholic Theology, Roman-Catholic Theology, Reformed Theology.

Master and Doctoral Programs

MASTER - 141 master programs, 59 of which in foreign languages;

Doctoral programs - 25 doctoral fields

Patrimony

23 buildings, 5 of which are either new or renovated, 13 dorms, 1 sports center, 3 training centers, 2 experimental stations, the A. Borza Botanical Garden, 2 student restaurants, 4 cafeterias.

Fields in which human resources are trained

Mathematics, computer science, physics, chemistry, chemical engineering, biology, geography, environmental science, law, philology, applied language studies, history, philosophy, sociology, social work, psychology, education science, economics, cybernetics and economic statistics, political science, administrative science, communication science, physical education and sports, theology, drama, cinematography and media.

Presentation of research activity chart

The research activity is coordinated by the Council for Scientific Research and by an appointed deputy rector. This activity is carried out in keeping with the BBU Scientific Research Strategy for 2005-2010, and with the regulations governing its implementation. Within BBU, the management of scientific research is provided by the Scientific Research Management Service. A network of contact persons competent in research matters includes each and every faculty. BBU is the regional contact for the Research Department of the Ministry of Education and Culture. BBU is a member of the European Association of Research Managers (EARMA).

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Top Priority Research Directions

1. Natural and artificial nanostructured systems; nanometric processes and (bio)technologies;

Human Resources

Professors	245
Senior Lecturers	239
Lecturers	406
Assistants Lecturers	343
Teaching Assistant	46
Research Fellows	6
Administrative Staff	1215
Students	46500
of which:	
Undergraduate	37802
Master	2999
PhD - full attendance	764
PhD - attendance not required	2174

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Key-role played in certain fields

Presentation of Research Institutes



- sexual pheromone of the corn root worm *Diabrotica Virgifera Virgifera* le-Conte-Coleoptera, Chrysomelidae, Patent no. 119362/2004;
- Goron S., Vodnar I., Liquid oxygenation or ionization device, OSIM, Bucharest - Romania, National Patent Office, Patent no. 117797/18.06.2002;
 - Pop A., A new copper-based composition against vine blight. Manufacturing procedure, 2004;
 - Hathazi A., A Manipulatorok (The Manipulators) - Drama, 2004;
 - Kiso-Kata P., The World of Objects - Animation, 2004;
 - Miclea M., The Letters Educational Software, ORDA, 2004;
 - Dragos N., New nucleotide sequences, registered and accepted by GENBANK (NCBI-USA) - 28 sequences, 2004;
 - Banciu H., *Thioalkalivrio halophilus* - a new taxon described in extremophiles 8: 325-334 and validated in VALIDATION LIST 102, 2004;
 - V. Stanciu, Ce sara-i d aiasta sara, Romanian carols, AUDIO CD, 2004.

Key-role played in certain fields

The scientific research activity is carried out in keeping with the Research Strategy for 2005-2010. The main objective is that by the year 2010 BBU will be one of the top 500 universities included in the "Shanghai classification."

Interdisciplinary Experimental Research Institute

Director: Professor Simion Simon, PhD

The Interdisciplinary Experimental Research Institute, the only one of its kind in Romania, includes the following research centers:

- Center for Molecular Biology, Director: Octavian Popescu;
- Center for the Study of Bio-materials and of Biological Systems, Director: Ioan Silaghi Dumitrescu;
- Center for Environmental Research, Director: Iustinian Petrescu;

(Continued from page 11)

- Badescu, G., *Dimensions of Political Participation in Romania*, Perseus Book Group, 2004.
- Burzo, E., *Magnetic Properties of Non-Metallic Inorganic Compounds Based on Transition Elements*, Springer Verlag, ISBN 3-540-56067, 507 p., 2003;
- Mitu, S., *Die etnische Identitat der Siebenburger Romanien*, Bohlau Verlag, Koln-Weimar-Wien, 354 p., 2003;
- Pop I., Ingham D. B., *Convective Heat Transfer: Mathematical and Computational Modelling of Viscous Fluids and Porous Media*, Pergamon, Oxford, 2001;
- Kiss S., Simihaian M., *Improving Efficiency of Urea Fertilizers by Inhibition of Soil Urease Activity*, Kluwer Academic, Dordrecht, 417 p., 2002;
- Diudea, M. V., Gutman, I., Jantschi, L., *Molecular Topology*, Ed. NOVA SCIENCE, Huntington, New York, 332 p., 2001;
- Dumitrescu D., Lazzarini B., Jain L., *Fuzzy Sets and Their Applications to Clustering and Training*, CRC Press, Boca Raton, New York, 665 p., 2000.



- Center for the Study of Advanced Materials, Director: Simion Astilean;
- Center for Physical-Chemical Analyses, Director: Petre Ilea.





LAREAN - REGIONAL LABORATORY FOR COMPLEX SPECTROSCOPIC AND ELECTROCHEMICAL ANALYSES

Director: Professor Ioan A. Silberg, PhD.
Equipment: NMR Varian Gemini 300 MHz device, IR device with Fourier transformation, FT-IR Bruker Spectrometer; computerized command system, control and specter processing for access to NMR Bruker 400MHz, AUTOLAB PGSTAT12 electrochemical system, ELECTROFLEX electrochemical system type EF-453,USF Elga UHQ PS device for the preparation of ultra pure water, Code DB 300-30, UV-VIS Jenway spectrophotometer; pH/ion-meter, ICP spectrometer, NMR Bruker XWIN-NMR software.



NATIONAL MAGNETIC RESONANCE CENTER

Director: Professor Simon Simon, PhD.
Equipment: Nuclear magnetic resonance (NMR) lab, Avance 400 MHz Bruker spectrometer for measurements on liquid and solid samples (MAS NMR), Electronic paramagnetic resonance (EPR) laboratory, ADANI spectrometer, X band, special software: X-WINNMR V3-x and WINEPR.

Multi user Research Centers

NATIONAL CENTER FOR X-RAY DIFRACTOMETRY

Director: Professor Cristian Silvestru, PhD.
Equipment: monocrystal X-ray diffractometer, X-ray diffractometer for polycrystalline / amorphous systems, special software: CAMBRIDGE STRUCTURAL DATABASE (CSD), INORGANIC CRYSTAL STRUCTURE DATABASE (ICSD), DIAMOND software.



NATIONAL CENTER FOR SME BUSINESS MANAGEMENT

Director: Professor Ioan Lazar, PhD.
Equipment: a central server, 5 local servers, an intranet of 70 powerful computers.

Financial resources obtained for research

	National millions RON	Internat. EURO
2004	29236	268670
2003	14069	218558
2002	126550	990903
2001	74087	79741
2000	27521	59645
1999	15377	43335
1998	11277	-
1997	2515	-
1996	1283	-
1995	598	-



CENTER FOR ELECTRONIC MICROSCOPY

Director: Professor Constantin Craciun, PhD.
Equipment: Transmission electronic microscopes (TEM); scanning electronic microscopes (SEM) with an elementary analysis system (EDAX - for 92 elements); LKB



Ultramicrotomes; vacuum evaporator; critical point dryers; fluorescence microscope; Knifemaker; Thermocycler; BIORAD electrophoresis kit for proteins and nucleic acids; UV-VIS spectrophotometer; SIGMA cooler centrifuge; LMW ultracentrifuge; mass centrifuge; -80oC freezer; rock and mineral slicing devices; high performance analytical scales.

LABORATORY FOR THE COMPLEX INVESTIGATION OF TECHNICAL MATERIALS AT LOW TEMPERATURES

Director: Professor Emil Burzo, PhD.
Equipment: "Oxford Instrument" measurement device with a super-conductive coil, Faraday scales, Bruker X-ray device, gamma nuclear



resonance measurement device, equipment for the liquefaction of nitrogen and helium, helium recovery device, sample preparation devices (melting ovens, thermal treatment).

REGIONAL CENTER FOR TOPOGRAPHY, CARTOGRAPHY, TELE-DETECTION, AND SYSTEMS

Director: Senior Lecturer Buz Victor, PhD.
Equipment: network of 6 Pentium III computers, 1 Internet map-server, 6 printers, 1 plotter, 1 A4 scanner, 1 A0 scanner, professional digital camera + accessories, 4 digitizers, 1 Hub. The computers have powerful processors (1 GHz), 256 MB of RAM, 2*20 Gb HD, 1 black/white and 1 color copier, both with 5 mm static precision; one surveillance device, mobile GPS, software: Arc/Info 8, ArcView LabKit 8.1 (including Spatial Analyst, Network Analyst, 3D Analyst), DAK, Image Analyst, ER Mapper 2, OrthoImage, ERDAS, OrthoBase, Idrisi including Carta Linx.

The international activity of "Babes-Bolyai" University reflects the development and innovation strategy initiated in the past decade and includes increased cooperation with reputed universities from Europe and from the US (250 signed agreements), an increase in the number of student and teaching staff mobilities, the promotion abroad of the BBU offer of programmes, the organization of international scientific events (50 in 2005) and summer schools (15), participation in EU programmes, the signing of joint agreements at all levels: master (10), doctoral (65), visiting professors (162 foreign professors lectured at BBU, 31 Romanian professors lectured abroad).



International Affiliations of the University

"Babes-Bolyai" University is a member of the following international organizations:

- European Universities Association - deputy chairman, Andrei Marga;
- International Association of Universities;
- Danube Rectors' Conference (UBB holds the presidency in 2005);
- Inter University Centre Dubrovnik;
- Association of Carpathian Region Universities;
- European Language Council;
- Agence Universitaire de la Francophonie;
- Association of Francophone Faculties of Letters and Human Sciences;
- Conference of the Rectors of Central and Eastern European Francophone Universities.

Key role played in certain fields



3. 7th International Conference on Physics of Advanced Materials, Iasi, 2004;
4. International Symposium Innovative Applications of Information Technologies in Business and Management, Iasi, 2002;
5. International Symposium Knowledge BUSINESS'2003, Knowledge Technologies in Business and Management, Iasi, 2003;
6. European Excellence in Business Studies Student's Education, International Symposium, Iasi, 2000;
7. NATO Advanced Research Workshop on Concurrent Information Processing and Computing (Sinaia, 2003);
8. International Conference "Adult Education Institutions: Duties and Competences", mai 2003;
9. European Conference on Intelligent Technologies Iasi (in cooperation with "Gheorghe Asachi" Technical University), 2002, 2004;
10. The discussion "Historical and cultural parallels between the Eastern romanity and the one from South Italy", in co-operation with Bari University, Iasi, 2004

Products created/homologated/ capitalized/Inventions/Patents (maximum 10 significant products)

30

- Utilisation de facteurs d'augmentation pour la modification du potentiel biosynthétique chez *Claviceps purpurea* Fr.(Tul), authors: C. S. Il Dr. Stefania Surdu, C. S. Il Dr. Zenovia Otleanu, Assoc.Prof. Dr. Maria Magdalena Zamfirache - silver medal in International Ward of Invention, Geneva, 2002;
- Method for directed growth of mussels and the installation for method's application, authors: Prof. dr. Ionel Miron, Assoc. Prof. Dr. Liviu Miron - golden medal in International Ward of Invention Bruxelles, 2004;
- The process of preparing hydrogen by water radiolysis, Prof. Dr. Alexandru Cecal, 2001;
- The process of enzymatic hydrolysis enzimatica of chemical substituted starch with groups of sodium phosphate, 2001, Prof. Dr. Camelia Belide;
- The process for obtaining some stabilizers for isotactic polypropylen, 2001, Prof. Dr. Alecsandru Cascaval;
- Process of industrial and wasted water purification, 2001, Prof. Dr. Ion Sandu;
- Process of pluvials water depollution after penetration of residual radioactive deposits with uranium containing minerals, 2003, Prof. Dr. Alexandru Cecal;
- Stochastic Sensing Through Covalent Interactions, authors: Hagan Bayley, Seong-

(Continued from page 17)

- *Brücken Schlagen. Studien Zur Deutschen Literatur. Festschrift Für* George Gutu, Hoisie A., Scwob A., Sienerth, St., 490 pag., Ikgs Verlag, München, 2004;
- *Individu et societate en Dacie romaine. Etude de demographie historique*, Bliriba I., 166 pag., Otto Harrassowitz Verlag, Wiesbaden, 2004;
- *Cioran*, Modreanu S., 237 pag., Oxus Paris, 2004;
- *Handbook of Polymer Blends and Composites*, Dorohoi D., 65 pag., Ed. Rapra Technology Limited, Shrewsbury, England, 2002;
- *Advanced Environments, Tools and Applications for Cluster Computing*, Grigoras D., Nicolau Al., Tourseil B., Folliot B., NATO

- Advanced Research Workshop, IWCC 2001, Mangalia, September 1-6, 2001, Revised Papers, 220 pages, Springer 2002;
- *Vegetation of Biosphere Reserve "Danube Delta" - with Transboundary Vegetation Map on a 1:150 000 scale*. Hanganu J., Dubyna D., Zhmud E., Grigoras J., Menke U., Drost H., Stefan N., Sarbu I., 2002, Danube Delta Nationale Institute, Romania, M. G. Kholodny- Institute of Botany & Danube Delta Biosphere Reserve, Leysland , 88 pages;
- *Soil Erosion in Romania In Soil Erosion in Europe*, Ionita I., Radone M., Mircea S., Editors John Boardman and Jean Poesen, 50 pag., Publisher John Wiley & Sons, 2004.

- Ho Sin, Luchian Tudor, Steve Cheley, 2003
- Solid ecological resin for odorization (file OSIM 10.10.2004), Prof. Dr. Ion Sandu;
- Alkaline solution for the consolidation of frescoes and old ornamental pieces of marble, concrete and mortar (file OSIM 2004), Prof. Dr. Ion Sandu.

Key role played in certain fields

Computer Sciences:

- **Petri's Networks**, Prof.dr. Toader Jucan is the founder of the formal verification of the distributed systems research team;
- **Human Language Technologies**, Prof.dr. Dan Cristea is the founder of the Euroian International School (7th edition in 2005);
- **Web Technologies**, Lect.dr. Sabin Buraga is the founder of the interest group in Web Technologies, initiator and editor of the Web series (The publishing house Polirom), and initiator of the <Web/> workshops (5th edition in 2005).

Mathematics: A Faculty of Mathematics team led by Acad. Prof. Viorel Barbu obtained new and significant results (used by prominent scientists from USA, France, Russia) on the finite dimensional stabilization with robust controls of stationary regimes within fluids governed by the Navier-Stokes equation, allowing the numerical construction of the stabilizing feedback.

Biophysics: Luchian Tudor, Shin Seong-Ho, Bayley Hagan have succeeded in monitoring, at the single molecule level, certain covalent and non-covalent interactions.

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THE PRESENTATION OF SOME LABORATORIES

The biochemistry laboratory organized within the Center of Biochemic and Genetic of microbial and vegetable cells, between 2000-2002, has the latest equipment that



allows it to undertake modern research in biochemistry and enzymology and even biochemical genetics (spectrophotometers UV-VIS, pH-meters, analytical scales, centrifuge with cooling, laboratory centrifuges, electrophoresis device for polyacrilamide gel of proteins and nucleic acids, thermocyclers - Gene ATAQ Controller). The laboratory welcomes both the young and the old: master students carrying out research activities, university staff involved in various research contracts (Prof.dr.Vlad Artenie, Director)

INSTRUMENTAL ANALYSIS LABORATORY

The equipment of high performance laboratory for scientific research and didactic activities



UV-VIS Spectrophotometer GBC Scientific Equipment

consists of: UV-VIZ Cintra 10e; HPLC 1100 LC Hewlett Packard; Trace Lab 50; Flame Atomic Absorption Spectrophotometer, Perkin Elmer 3300 (Prof.dr.Raluca Mocanu, Director).



HPLC 1100 LC Hewlett Packard

THE FINE ORGANIC SYNTHESIS THROUGH UNCONVENTIONAL METHODS-MICROWAVES AND ULTRASOUNDS

Is based on the organic synthesis in the heterocyclic systems series under the influence of microwaves and ultrasounds. The equipment consists of: Monomod microwaves reactor STAR-2, Modified multimonomod microwaves reactor SAMSUNG, High precision infrared device for the temperature measurement Cole Palmer (Microwaves); Ultrasounds device TRANSSONIC T-310, Coupled ultrasounds generator and accessories (Ultrasounds). (Prof. dr. Ionel Mangalagiu, Director).



Monomod reactor STAR-2, CHEM

The applied and experimental psychology base (BUCUM-PEA), an applied and fundamental research base in psychology

International Affiliation of the University

"Alexandru Ioan Cuza" University is an official member of:

- IUA - INTERNATIONAL ASSOCIATION OF UNIVERSITIES;
- EUA - EUROPEAN UNIVERSITY ASSOCIATION;
- AUF - AGENCE UNIVERSITAIRE de la FRANCOPHONIE.

Financial resources obtained for research

	National millions RON	Internat. EURO
2004	14235	244075
2003	5851	397672,5
2002	5335	740337
2001	4508	1080771
2000	2147	400512
1999	1545	201405
1998	1942	368459
1997	1239	-
1996	734	-
1995	416	-



in the self-funding regime working under the open gates principle. The laboratory offers consultancy services, educational services, practical intervention research and research services, involving the following topics:

- organizational development and analysis; the evaluation and development of staff; the advertising image, promotion and creation; the development of the psycho-social and professional abilities - the social psychology and adapting group dynamics
- tools of psychological diagnostic, psychological and psycho-physiological investigation, the development of e-learning software, setting up and arranging psycho-diagnostic and the experimental psychology laboratories - The psycho-diagnostic and experimental psychology laboratory
- psycho-therapy, psychological consultancy, complex psychological evaluation, psycho-pedagogy assistance, professional training in various psycho-therapy techniques and

psychological consultancy - The psycho-therapy laboratory

Two research stations operate within BCUM-PEA. One of them is at the "Alexandru Ioan Cuza" University and the other is at "Babes-Bolyai" University from Cluj-Napoca.

International cooperation

"Alexandru Ioan Cuza" University has concluded 44 bilateral international agreements with universities from: Bulgaria (1), China (1), North Korea (1), Cuba (1), Switzerland (4), France (8), Deutschland (4), Greece (3), Italy (4), Republic Moldova (3), Norway (1), Holland (1), Poland (1), Singapore (1), Spain (1), Tunisia (1), Turkey (1), Ukraine (1), Hungary (1).

During the SOCRATES programme, 150 bilateral agreements have been concluded.

Success Stories

The making of Atomic Force Microscope (AFM). It is a student who plays the leading role in one of the biggest success stories at the Faculty of Physics at the "Alexandru Ioan Cuza" University. Despite his young age, Mihai Moraru became "father" of the Microscope of atomic strain, during Socrates programme, of grant C/39.702 financed by World Bank and the bilateral co-operation between University "Al.I. Cuza" from Iasi and the University from Konstanz. In the process he benefitted by scientific, technical and material support from the



group led by professor Miynek from Konstanz and the plasma physics group led by prof.dr. Popa, from Iasi. The device was set up in 1999 and has assured the achievement of specific studies for surface analysis at nanometric scale on the demand of researchers from our University, INFT Iasi, INFLPR Bucharest, University "Babes Bolyai" from Cluj and other units.(foto)

Conotoxins are complex chemical compounds that make up the composition of numerous toxins produced by marine animals. Their use against the others members of the local ecosystem to which they belong, represents the main way of survival. It has been demonstrated that one of these toxins (CVID), isolated from the snail *Conus catus*, is extremely selective for the N - type calcium channels, which play a fundamental role in the transmission of nociceptive information (pain). Due to major clinical implications of our studies, part of the research programme has been chosen as the subject of a scientific documentary broadcast on "Animal Planet" television channel (2004).

Studies concerning multifunctional nanostructured materials (magnetic,

ferroelectric). Focusing on the latest research issues (magnetic nanostructured materials, multifunctional materials, molecular magnetism, ferroelectric materials, spin electronics) the research carried out in our University in this field became closely connected with research networks from our country and European Union. The group was included as a partner in the Network of Excellence "Molecular Approach to Nanomagnets and Multifunctional Materials", which will be financed by EU with more than 10 million EURO for the next four years, through FP6 programme. Our consortium project (NANOCONS) was ranked first at the national research competition opened in 2004 by CNCSIS and will be financed next three years. Complementary finances were also obtained through NATO programme, French Government (ECONET network, Brancusi program) and COST priority 525 funds. The group publishing activity - over 30 annual ISI studies in the last 3 years, as well as significant quotation (over 100 in the last 3 years) is the main proof of the success of the research activity, well connected and internationally acknowledged.



Rector

Prof. Ioan Pânzanu, PhD

Historical Overview of the University

Set up by Decree no. 756 from July 16 1864 by Alexandru Ioan Cuza, as successor of the Royal Academy (1694), the University of Bucharest has decisively contributed to the development of Romanian education, science and culture. The Palace of the University from Republici Bvd. was started as early as 1857, and its current headquarters, that of the Law School, was built during 1934-1936. The reform from



1948 imposed the detaching of certain schools as independent institutions. In 1989, UB had only 8000 students, as compared to 27000 in 1928. With new international partnerships and new schools, with over 30000 students, UB is now a dynamic institution, inspired by the Bologna process and by the objectives of Romania's European integration.

Faculties and Departments

- Faculty of Administration; Faculty of Biology; Faculty of Chemistry; Faculty of Law; Faculty of Philosophy; Faculty of Physics; Faculty of Geography; Faculty of Geology and Geophysics; Faculty of History; Faculty of Journalism and the Science of Communication; Faculty of Foreign Languages and Literatures; Faculty of Letters; Faculty of Mathematics and Computer Science; Faculty of Psychology; Faculty of Sociology and Social Work; Faculty of Political Sciences; Faculty of Baptist Theology; Faculty of Orthodox Theology; Faculty of Roman-Catholic Theology; The Department of Open Distance Learning; The UNESCO Department for intercultural and inter-religious studies.

Master and Doctoral Programs

Master Programs:

- Faculty of Biology - Taxonomy; Neurobiology; Genetics; Compared Biology of Normal and Tumor Cells; Microbiology and Biotechnology; System Ecology; Biodynamics; Molecular Biology and Biochemistry;
- Faculty of Chemistry - Applied Enzymology;

- Natural Multifunctional Organic and Synthetic Composites; Optimization of the Chemical-Analytical Control and Quality Assurance; Coordinative Chemistry; Applied Synthesis, Structure and Reactivity for Pharmaceuticals (French); Biosensors in monitoring the environment; Physics Chemistry and Applied radio-chemistry; Therapeutic Chemistry; Environment Quality Control; Catalysis and Catalytic Processes;
- Faculty of Law: Public Law; Private Law; Business Law; Work and Industrial Relationships; Judicial Career; Community Law; International Law; Professional Master Programme for European and International Business Law;
- Faculty of Physics: Theoretical Physics and the Physics of the Condensed State; Biophysics and Medical Physics; Polymer Physics and Material Technology; Atomic Interactions, Elementary Particles, Astrophysics and Applications; Environmental Protection. The Physics of Atmosphere and Earth; Optics, Spectroscopy, Plasma, Lasers; Electronic Physics and Metrology;
- Faculty of Philosophy: The Philosophy of Culture; Theoretical Philosophy; Cognitive Sciences; European Studies;
- Faculty of Geography: Changes in the Environment and Regional Development; Sustainable Landscape Management by means of Regional organization; Modeling of the Urban and Rural Systems; Applied Climatology and Environmental Protection; Sustainable Management and Usage of Water Supplies; Dynamic Geomorphology and Earth Environmental Protection; The Management of Ground Resources and Activities;
- Faculty of Geology and Geophysics: Geological Environmental Engineering; Assessment of the Sedimentation Basins; Petrology and Metallogenics;
- Faculty of History: History of South Eastern Europe; Europe in the 19th century; Romania in the 19th century; International relations; The History of Ideas and Mentalities; Greek-Roman History and Archaeology;
- Faculty of Letters: Modern and Contemporary Romanian Literature; Ethnology and Folklore; Romanian Language: communication strategies and structures; Applied linguistics; Literary and Cultural Theory; Consultancy and Expertise in Advertising; Hebrew Culture and Civilization (1,5 years); Information Strategies; Compared and Universal Literature; Cultural Anthropology; Publishing Practice and Theory; Electronic Public Administration; The Didactics of Philological Subjects; Communication and Public Relations Models; Culture and Mentality in European Integration; Theoretical Linguistics; Balkan Studies;
- Faculty of Journalism and the Science of Communication: Science of Communication; The Management of Mass Media Institutions; Communication Campaigns; Multimedia and Audio-Video Production;

Human Resources

Professors	355
Senior Lecturers	252
Lecturers	418
Assistant Lecturers	343
Teaching Assistant	127
Research Fellows	136
Administrative Staff	1232
Students	35510
of which:	
Undergraduate	28153
Master	3615
PhD - full attendance	420
PhD - attendance not required	3322



- Faculty of Foreign Languages and Literatures: Francophone Studies; Canadian Studies; Ibero-Romance Cultural Studies; British Cultural Studies; American Studies; Russian Cultural and Business Communication Studies; Translation and Terminology; Conference Interpretation; Theoretical Linguistics; English Didactical Linguistics; German Didactical Linguistics; Rhetoric and Argumentation; Slavic Cultural Studies; Asian Studies; Italian Studies; Literary Translation Studies;
- Faculty of Mathematics: Algebra and the Theory of Numbers; Mathematical Analysis; Geometry; Complex Geometry, Topology, Computational Algebra; Applied Computer Science; Theoretical Computer Science; The Mechanics of Fluids and the Mechanics of Solids; Stochastic Calculus, Applied Statistics and Optimization;
- Faculty of Sociology and Social Work: Social Anthropology and Community Development; Social Policies; Public Communication and Opinion; Community Administration of Justice; Security Studies; The Management of Social and Health Services; Strategic Management and Social Development; Communication, Society and Mass Media (French); Prevention and Management of Drug Addiction; Sociology, Advanced Social Research; The Management of Human Resources; Demographics;
- Faculty of Psychology and the Sciences of Education: Organizational and Economic Psychology, Psycho-diagnosis and Psycho-therapy; Integrated Education; Educational Management and Assessment; School Counseling; Recuperation and Therapy in Special Psycho-Pedagogy;
- Faculty of Political Sciences: International Relations and European Studies Political Theory (English); European and Romanian Politics; Policy and Governance in the European Union;
- Orthodox Theology: Exegesis and Hermeneutics; Doctrine and Culture; Pastoral and Liturgical Life;
- Roman-Catholic Theology: Catholic theology - Communication and the social doctrine of the church;
- The Francophone Doctoral School: Social Sciences - Interdisciplinary;
- Administration and Business: The Management of the Resources of Cultural Institutions; Management in Public Administration; The Management of Public Relations and Secretariat; Human Resources;
- The UNESCO Department: Intercultural communication in the context of European Integration; Intercultural Management (English and French)
- The CREDIS Department: The implementation and the management of information Networks; The development and implementation of Web services; Computer networks; Educational management; School Counseling; Information and Communication Technology in Education; The Management of the Resources of Cultural Institutions; Securing information networks; Journalism; Public relations and Advertising; Databases; Web programming; Information Security; Mathematics methodology; The

The number of papers published in ISI - quoted journals **830**

(the most cited 10 papers)

- Extracellular trypsin increases asic a selectivity for monovalent versus divalent cations, Emil Neaga, Bogdan Amuzescu, Cristina Dinu, Beatrice Macri, Florentina Pena, Maria-Luiza Flonta, Journal of Neuroscience Methods - 2004
- Oxalato-Bridged and binuclear complexes: Synthesis, Crystal Structures, Magnetic and Epr investigations, Marinescu G., Vişinescu D., Cucuş A., Andruh M., Journaux Y., Kravtsov V., Simonov Y. A., Lipkowski J., European Journal Of Inorganic Chemistry - 2004
- New potentiometric microbial biosensor for ethanol determination in alcoholic beverages, Rotariu L., Bala C. Magearu V., Analytica Chimica Acta - 2004
- Epoxidation of cyclohexene and indene with hydrogen peroxide in the presence of wO5 onto hydroxypapatite as catalyst, A. Crosman, G. Gelbard, G. Poncelet and V. I. Părvulescu, Applied Catalysis A- General - 2004
- The new physics at rhic, from transparency to high P.T suppression, J.J. Gaardhoeje for the Brahma Collaboration (I. Arsene, I.G. Bearden, C. Beşliu, Al. Jipa, I.S. Zgură), Nuclear Physics A;
- Distinguishability and nonclassicality of one-Mode Gaussian States, Marian Paulina, Marian Tudor A., Scutaru Horia, Physical Review A - 2004
- Role of the 3d distributions of load and lithospheric strength in orogenic axes: polystage subsidence in the carpathians foredeep, Tărăpoancă M., Garcia-Castellanos D., Bertotti G., Maţenco L., Cloetingh Sapl, Dinu C., Earth and Planetary Science Letters - 2004
- Rationality properties of manifolds containing quasi-lines, Ionescu Pallin, Naie Daniel, International Journal of Mathematics - 2004
- Symmetric coalgebras, Dăscă-

lescu Sorin, Năstăşescu Constantin, Iglesias F. Castano, Journal of Algebra - 2004

- Modular qfd lattices with applications to grothendieck categories and torsion theories, Albu, Toma; Iosif, Mihai; Teply, Mark-Journal of Algebra - 2004

The number of papers published in journals from the main stream of publications **2883**

(the most cited 10 papers)

- Arches. Actes de L'association Roumaine des Chercheurs Francophones en Sciences Humaines, Alexandrescu Vlad, Pour une problematique du miracle au XVIII-e siecle;
- The Roman Pandects, Alexandru Athanasiu, The Legal Status of Work Relations in Regulating the New Work Code (V);
- The Organisational Psychology Journal, Avram Eugen, The Fundamentals of Health Care Management;
- The Annals of the University of Bucharest, Foreign Languages and Literatures, Avinciu Madona, On the Transparent Body of the Prophet and the Perfectibility of Man in Guiding the Lost by Moise Maimonide;
- Archaeologic Materials and Research, (new series), Babes Mircea-Cărlomanesti;
- The Annals of the University of Bucharest - Chemistry, Rotariu L., Arvinte A., Liţescu S. C., Bala C., Fast enzymatic method for acetaldehyde determination in wine quality control;
- Progress in Catalysis, Bradu C., Avramescu S.M, Udrea I., Mihaelache N., Catalytic oxidation of 2-Nitrophenol in aqueous solution by hydrogen peroxide over some oxide catalysts;
- Studia Politica. Romanian political science review/Revista română de ştiinţă politică, Carp Radu, Matei Iulia, Sarafian Gabriel, Revising the Romanian Constitution. Aspects of Foreign Policy and Euroatlantic Integration.

(Continued on page 23)



management of the Health System; Health and Social Insurance; Public Administration; Security Studies; Prevention and Management of Drug Addiction; Deviation, Crime, Social Prevention and Intervention; Social Work - Career change; Applied Geography - Resources and geographic risks; Guide and accompanying interpreter in tourism activities.

Doctoral Programs:

- Faculty of Biology: Biology;
- Faculty of Chemistry: Chemistry;
- Faculty of Law: Law;
- Faculty of Philosophy: Philosophy;
- Faculty of Physics: Physics;
- Faculty of Geography: Geography;
- Faculty of Geography: Environmental Science;
- Faculty of Geology and Geophysics: Geology;
- Faculty of History: History
- Faculty of Journalism and the Science of Communication: Communication Sciences
- Faculty of Foreign Languages and Literatures: Philology
- Faculty of Letters: Philology
- Faculty of Mathematics and Computer Science: Mathematics
- Faculty of Mathematics and Computer Science: Computer Science
- Faculty of Psychology and Education Sciences: Education Sciences
- Faculty of Psychology and Education Sciences: Psychology
- Faculty of Sociology and Social Work: Sociology
- Faculty of Sociology and Social Work: Social Work
- Faculty of Political Sciences: Political Sciences
- Faculty of Theology: Theology

Patrimony

Educational Spaces - 20; Student Hostels - 15; Experimental Stations - 6.

Fields in which human resources are trained

Mathematics; Physics; Chemistry; Computer Science; Biology; Geography; Geology; Environmental Science; Philosophy; Language and Literature; Applied Modern Languages; History; Cultural Studies; Theology; Law; Sociology and Social Work; Political Sciences; International Relations and European Studies; Administrative Sciences; Communication Sciences; Educational Sciences; Psychology; Biotechnologies; Geologic Engineering; Mines, Oil and Gases; Applied Engineering Sciences

Presentation of research activity chart

The Chairman of the Board of Administration;
Research Department.

Structures

Research Institutes	2
Research Centers	86
Research Laboratories	47
Multi-user Research Centers	3

Location: 36-46 Mihail Kogălniceanu Blvd, Bucharest
Phone number: 021-3077300;

Fax number: 0213131700; E-mail: rector@unibuc.ro;
www.unibuc.ro

(Continued from page 22)

The number of papers published in volumes of international scientific conferences with reviewers

988

(10 papers presented at the most prestigious events)

- *Hitting Distribution Domination and Subordinate Resolvents; An Analytic Approach*, Bucur, Gheorghe; Boboc, Nicu, Preprint Bibos Universities of Berlin and Bielefeld;
- *Binuclear Complexes as Tectons in Designing Supramolecular Solid-State Architectures*, Andruh M., invited lecture, 4th International Conference of the Chemical Societies of the South-East European Countries;
- *Synthesis, Characterization and Superoxide Dismutase Like Activity of Cu(II) and Zn (II) Complexes with Macrocyclic Ligand Containing Tyrosine Residues*, Otar R, Badea, M; Grecu N.; Bala C.; Rotariu L.; Cristurean E.; Marinescu D, 4th International Conference of the Chemical Societies of the South-East European Countries on Chemical Sciences in Changing Times;
- *Parsing WITH P AUTOMATA*, Gramatovici, Radu; Enguix, G., Bel-Applications of Membrane Computing;
- *Tradition and Projection*, Vlăduțescu Gheorghe, Colloque de la francophonie;
- *In margine alla redazione del vocabolario romeno-italiano*, Utale Roxana, Conference at the University of Pisa;
- *Questioni della traduzione des testo letterario*, Utale Roxana, Conference at the University of Pisa;
- *ICT- as Support for Social Services in Romania*, Ștefănescu, Pollana, Human Service Informations Technology Applications, Hong Kong;
- *Stable Sets of Exchange Econo-*

mies with Non-Convex Preferences, Ștefănescu, Anton, International conference in cybernetics;

- *Dualism In The Philosophy Of Mind: Some Problems (10 Pag.) Si Natural Kinds And Biological Species*, Staicu Laurențiu, University of Tulsa, USA.

The number of scientific books published by publishing houses acknowledged abroad 79

(maximum 10 significant books)

- *Methods of Graded Rings. Lecture Notes in Mathematics*, C. Năstăsescu, Constantin; Van Oystaeyen, F., Springer-Verlag, Berlin, 304 pp.;
- *Die Valenztheorie. Bestandaufnahme und Perspektiven*, Stănescu, Speranța, Peter Lang Verlag, 350 pp.;
- *Applications of the Theory of Groups in Mechanics and Physics*, Teodorescu, Petre, Nicorovic, N.A., Kluwer, 439 pp.;
- *Potential Theory and Right Processes*, Boboc, Nicu; Beznea, Lucian, Kluwer Acad. Publish, Springer, 376 pp.;
- *Dynamics and Bifurcation of Patterns in Dissipative Systems*, Oprea, Iulia; Dangelmayr, G., World Scientific Publisher, 404 pp.;
- *Formal Languages and Applications*, Martin-Vide, C.; Mitrana, Victor; Paun, Gheorghe, Springer Verlag, 620 pp.;
- *Projective Geometry and Formal Geometry*, Bădescu Lucian, Birkhauser Verlag, 209 pp.;
- *L'Homme face au climat. L'imagnaire de la pluie et du beau temps*, Boia, Lucian, Les Belles Lettres, 209 pp.;
- *Il Romeno per gli italiani*, Derer Doina, Vallardi, 150 pp.;
- *Charta Ecuamenique: Un reve, un texte, une demarche des eglises en Europe*, Ioniță Viorel, Editions Parole et Silence, 168 pp.

Top Priority Research Directions

Sustainable development and biodiversity are main directions in biology, together with the study of



genetics and cellular biology. The Mechanics of continuum media, algebra, stochastic models, numeric analysis, computer science, theoretical physics, nanotechnology, environmental protection are other themes within exact and natural sciences. The political and economic history, the history of mentalities, ancient archaeology, international relationships, contemporary philosophy, theoretical linguistics, the study of traditional societies and information societies, mass communication, didactics, are main directions within social and human sciences

Outstanding Research Infrastructure

The department of systemic ecology; The Genetics Institute of the university of Bucharest; The research centre with multiple users in the domain of systemic ecology; The research centre with multiple users in the domain of molecular biology (BCUM-BM); The research centre with multiple users "Electro-physiological techniques and the modeling of computer cellular and molecular interactions"

Excellence Centers

- The mechanics of continuum media - Dragoș Lazar;
- The centre of Logics and Computer Science Bucharest - Ștefanescu Gheorghe;
- The centre for image research - Alexandrescu Sorin;
- The centre of research and training of human resource in systemic ecology and sustainable development - Vadineanu Angheluta;
- The research centre for environmental protection PROTMED - Udrea Ion.

International Scientific Activities

(the 10 most important ones)

- 2004 - the 3rd forum Eurachem Romania;
- 2004 - the 6th symposium on catalysis;
- 2004 - international symposium on cognitive sciences;
- 2004 - annual Canadian-Romanian colloquium "Media communication and issues of communication in modern language"
- 2004 - The National Conference of American Studies

Products created/homologated/ capitalized/Inventions/Patents

(maximum 10 significant products) 16

- Bio-polymeric films on the basis of polyvinilic alcohol and hydrolased collagen;
- Active coal, procedure and equipment for its extraction;
- Catalysts and procedures for the treatment of waste waters polluted with various organic pollutants;
- Procedure regarding the conservation and improvement of the nutritional value of fodder plants by means of fermentation

International Cooperation

20 categories: FP 5 - 7; FP 6 - 5; Cost - 3; NATO - 5.

Key part played in certain domains

The University of Bucharest, together with other universities in the country such as: the Alexandru Ioan Cuza in Iassy, the Babes-Bolyai in Cluj-Napoca, the Polytechnic University in Bucharest represent a high quality standard of higher education. They have taken part in a consortium (together with ICI) for the CALISTRO project.

The project pursues raising the awareness of the academic audience as well as of the common audience concerning the issues and the need of providing quality within higher education, as well as identifying and implementing certain effective mechanisms of quality assessment, on the basis of an ample inquiry within the academic circles in Romania and on the basis of a detailed survey of the situation in some reference countries. The CALSIRO documents, the quality guide and articles can be found at the following address: http://www.calsiro.ro/prog/ghid_viz_calsi.asp.

The University of Bucharest has created a site which is especially dedicated to the reform of the higher education system: <http://www.reforma-universitara.ro>. Furthermore, the University of Bucharest has opened a FORUM meant for all academic staff and students who wish to debate the problems that are specific to the implementation of the Reform of the Higher Education System at the University of Bucharest: <http://www.reforma-universitara.ro/forum.asp>.

International Affiliations of the University of Bucharest

The University of Bucharest is a member of the EUA (The European Association of Universities) and has attended its most important reunions, Salamanca (2000) and Glasgow (2005).

The University of Bucharest is a UNICA partner (Network of Universities from the Capitals of Europe) - The International Network of Universities from the European capital cities, a network of 39 universities, set up in 1990. UNICA is one of the five prestigious academic institutions. The role of this network is to promote prestigious academic excellence, its integration, as well as cooperation between European universities. The UNICA mission, structure, projects and publications can be found at the following address: <http://www.ulb.ac.be/unica/agenda.html>.

The Black Sea University Network (BSUN) is a network that has been created from the university exchanges in the East of Europe with the Baltic Sea University (UPPSALA) and University of Mediterranean Sea in Rome. The BSUN activity is oriented towards the formation of teachers and young researchers, economists, managers, professors by means of post-graduate courses. BSUN is a product of the Constitutive Conference organized in cooperation with the Ovidius University in Constanta whose chancellor at that time, PhD. Prof. Adrian Bavaru has become the first chairman of BSUN. Black Sea University Network, has currently over 100 partner universities among which the University of Bucharest.



Success Stories

Dan Grigorescu - International pilgrimage in the Hateg region - "The island of dwarf dinosaurs"

The department of Geology and Paleontology of the Faculty of Geology and Geophysics University of Bucharest, has recently organized in Sibiu the 7th European Workshop on Vertebrate Paleontology - (7EWVP). The scientific event is held annually and this was the first time when it was organized within the central and eastern European space. This is an acknowledgement of the significant contribution which the researchers in this region have brought to the study of the fascinating field of the paleontology of vertebrates. Besides academic staff, researchers and students from Romania, at the 7EWVP researchers from France, Germany, England, Scotland, Switzerland, Belgium, Hungary, the Czech Republic, Slovakia, Poland have attended the symposium, this being a premiere in the history of EWVP.

A definite attraction for the participants at the 7EWVP was the opportunity of visiting the Hateg region (the Hateg Basin, as it is known by geologists and paleontologists), a worldwide renowned region for its fossil remains, originating in the last moments of the evolution of dinosaurs, at the end of the Cretaceous age. The most appreciated fossils in the Hateg region obviously belong to the dinosaurs, representing some of the last specimens that had inhabited the Earth before their final disappearance, 65 million years ago; alongside dinosaurs there have been discovered remains belonging to other types of organisms, having lived during the same period, creating the image of a complete ecosystem. However, even more interestingly, most Hateg dinosaurs, besides being endemic species known to the world as inhabiting only this area, are significantly smaller in size than their close relations on the "continent" - for we have to mention the fact that during the Cretaceous age, the Hateg region was part of a tropical island at the South of Europe. Many researchers have connected the two facts, considering the Hateg dinosaurs as being "insular dwarfs", that is animals who have shrunk in size given the circumstances of restrictive insular environment. However, new findings suggest that not all Hateg dinosaurs were small in size; some specimens could reach up to 15m in height, which can hardly be labeled as "dwarfish", even in the supra-dimensional universe of the dinosaurs. Furthermore, other creatures contemporary with the Hateg dwarf dinosaurs could rather be considered giants, such as the recently described flying reptile (pterosaur, in the paleontologic terminology) called *Hatzegopteryx thambema* (the name being translated as the monstrous Hateg flying reptile), which is one of the largest such creatures currently known on Earth, having a wing-length of 12m and a skull of over 2.5m - a genuine live glide of the Mesozoic skies.

The study of the Cretaceous ecosystem in the Hateg Basin is a unique opportunity for scientists to research and understand the history of life on Earth. Just as present-day islands are considered true "life laboratories", being objects of interest for both

biologists and ecologists, understanding what had happened in the "paleolaboratory" in Hateg some 68 million years ago, is a challenge for paleontologists, for all those interested in the history of life on Earth.

A treasury that has drawn the attention and admiration of Romanian and foreign specialists in paleontology was discovered in the Hateg area by Prof. Dr. Dan Grigorescu at the Faculty of Geology and Geophysics in Bucharest. This is about *Hatzegopteryx thambema* (the name can be translated as the monstrous flying reptile in the Hateg), which has a skull of an approximately 3 m length and a wing length of over 12 m.

Reader. Dr. Viad Alexandrescu - Cantemir's manuscript

The research centre The Bases of European Modernity at the University of Bucharest has recently announced a sensational discovery belonging to reader dr. Viad Alexandrescu, director of the center. This has to do with the only autograph manuscript of Dimitrie Cantemir (1675-1723) ever found on the territory of Romania. The 28 pages of this manuscript are part of the *Sacro-Sanctae Scientiae indepingibilis imago* treatise, which Dimitrie Cantemir seems to have written at Constantinople around 1700. The rest of the manuscript, which researchers were already familiar with, can be found at the State Library in Moscow. The newly discovered document comprises a Dedicatory letter and an Index rerum, which are of capital interest for establishing both the theological and spiritual vision of the author, and the conceptual character of his earlier work.

Those interested can read the study *Un manuscris inédit et inconnu de Démètre Cantemir*, by reader dr. Viad Alexandrescu in the latest issue of the ARCHEVS magazine.

Presentation of Laboratories

The **Genetics Institute** was set up in 1993, due to an initiative by the General Genetics and Evolutionism Laboratory, as a small staff of Molecular Cytogenetics, initially called CENTRAGEN, which later, in 2001, started functioning under the name THE GENETICS INSTITUTE - director (prof. dr. L. Gavrilă).

Starting from a poor material basis, animated however by a desire turned into a professional credo, that of developing research in the domain on modern bases, benefiting of the financial support granted by the Ministry of Research and Technology (MRT), subsequently turned into the National Agency for Science, Technology and Innovation (NASTI), as well as annual projects with CNFIS and CNCSIS, the research staff has turned into the centre of genomic and molecular cytogenetic analyses - CENTRAGEN. Within only five years, they have managed to supply the laboratory with modern equipment and appropriate reactants. This has been the premises of approaching issues with a high degree of difficulty, similar or equivalent to international standards, competitive both at home and abroad and materialized by means of

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	108897.9	716327
2003	52300	217439.1
2002	155399.8	173628
2001	99184.8	345922
2000	40011	8000
1999	3019.7	-
1998	338	-
1997	339.5	-
1996	5767.6	-
1995	427.3	-

Presentation of Laboratories

Presentation of Research Centers

Presentation of Multi-user Research Center



accepting and publishing original scientific papers, in the most prestigious specialized journals at home and abroad.

In the laboratories of THE GENETICS INSTITUTE have been performed the first molecular analyses in Romania regarding the Y chromosome, confirming the pioneering work of dr. Gheorghe Stefanescu in lassy, thus making Romania part of the international scientific program Human Genome Diversity, with in a fruitful cooperation with the Laboratory of Human Population Genetics Tor Vergata in Rome.



The Research Centre for Environmental Protection and Waste Management (Director PhD. Prof. I. Udrea)

Main themes:

- Procedures of water treatment and purification;
- Catalytic depolluting of industrial gas fluxes;
- Retrieval of useful components from various waste;
- Re-technology and improvement of certain processes with a view to reducing toxic fumes emission; drafting certain technologies with a low degree of pollution;
- Technologies for manufacturing catalyzers;
- Drafting impact studies and environmental assessments;
- Biotechnological alternatives in environmental protection.

Multiple-user research center for ELECTROPHYSIOLOGY, MODELING OF CELLULAR INTERACTIONS AND COMPUTATIONAL MODELING (Head: PhD Prof. Maria-Luiza Flonta)

Objectives:

1. Creation of high standard research facilities by running competitive procedures and techniques (cell cultures, patch-clamp and voltage-clamp techniques, imaging and fluorescence assays);
2. Training of specialists in electrophysiology and molecular modeling;
3. Publishing of results in international journals.

At present, our research groups (cell cultures/ electrophysiology and molecular modeling) are running the following projects:

- The mechanisms of thermal and nociceptive

transduction (characterization of cold receptors TRPM8, ASIC la channels);

- The activation of VR1 receptors and of h current (involved in pain perception);
- Identification of target ionic channels for anti-inflammatory agents, in dorsal root ganglia neurons;
- Functional properties of Na- and K channels in dorsal root ganglia maintained in diabetic conditions;
- Characterization of antidepressants and neuroleptics interaction with lipid bilayers and ion channels involved in the generation and transmission of action potentials;
- Structure and dynamics of the serotonin transporter, of lysozom and of gp 120 glycoprotein (molecular modeling);
- Prediction of neuroleptics biological activity (QSAR study).

Multi - User Research Center in the Filed of Systems Ecology (Director Associate Prof. Carmen Postolache)

The base is supporting the activities for the research of ecological systems and for the qualification of human resources in the field of systems ecology and the management of the Natural Capital.

It is also the support for the following types of programmes:

- Postgraduate programmes: Human resource qualification in the field of knowledge development and the Management of the Natural Capital (NC) and the Socio-Economic Systems (SSE), based on the theoretical principles of the Systems Ecology, on the methodology of the systemic analysis and on the multidisciplinary approach - master (2 years) and doctoral studies (4 years) in "Systems Ecology and Ecotechnology";
- Training programmes: The base is contributing to the continuous training of the human resources for the management of the sustainable socio-economic development;
- Fundamental research programmes: Research of the diversity, productivity and of the carrying capacity of the Natural Capital (including the biodiversity in the strict sense - taxonomic diversity and diversity of genetic resources);
- Applied research programmes: For the development of the integrated monitoring system of the Romanian Ecological Network dynamics, of the information systems for the main components of the NC and of the instruments for their management and co-development CN-SSE;
- Programmes for expertise and assistance: Assistance in the field of management of the NC and SSE, of co-development CN-SSE.



The Genetics Institute

Multi User Research Center in the Domain of Systemic Ecology (Director PhD. Prof. Gh. Ignat)

The host institution of this research database is the University of Bucharest, the Department of System Ecology. Its partners are the "Babeş Bolyai University in Cluj Napoca and the "Alexandru Ioan Cuza" University in lassy.

Objectives:

1. Creating a research basis which would function international standards with the help of:
 - Introducing state-of-the-art procedures or techniques (cellular cultures, the patch-clamp technique, the voltage-clamp techniques, imagery I means of fluorescence);
2. Training specialists in electrophysiology or molecular modeling
3. Promoting and disseminating results.

The following research projects are current under way in the existing laboratories (the Laboratory of cellular cultures, the Laboratory of electrophysiology, and the Laboratory of molecular modeling):

- The mechanisms for translation of heat or nociceptive stimuli (the characterization of receptors for cold and menthol);
- The activation characteristics of the pain receptor VR1;
- The characterization of the interaction with the lipid bilayer or the ionic channels involved in the transmitting or modeling of the nervous impulse of the hypericine, amitriptiline and imipramine;
- Functional idiosyncrasies of the K channels sensitive to ATP;
- The study of the effect of polyamines on central and peripheral neurons;
- Molecular modeling of the interactions between HIV-1 viral protease and organic inhibitors;
- Investigating the three-dimensional structure biosurfaces and biomacromolecules.



Rector

Prof. Ion Vladimirescu, PhD

Historical Overview of the University

The University of Craiova was founded by passing the Law 138/25.04.1947. The first faculties set up were: The Faculty of Agronomy (1947), The Agronomic Institute (1948), The Technical Institute (1951) and The Pedagogical Institute (1959). The Ministerial Decision no.894/27.08.1965 certifies the inclusion of other faculties: Mathematics, Physics, Chemistry, Philology, Law, Sport, Theology, Economic Sciences, Electrical Engineering, Medicine. Other faculties were also reorganized and several colleges set up



Faculties and Departments

- 16 faculties (Letters; Mathematics and Informatics; Chemistry; Physics; History, Philosophy and Geography; Theology; PE Training and Sport; Agriculture; Horticulture; Law; Economic Sciences; Electrical Engineering; Mechanics; Electromechanics; Automation and Computer Science; Engineering and Management of Technological Systems - Dr.Tr. Severin);
- 2 colleges: The University College of Craiova and The University College of Dr.Tr. Severin;
- 6 departments.

Master and Doctoral Programs

MASTER - 46 programs within 12 faculties
Doctoral programs - 6 fundamental domains, 21 domains (Exact Sciences: mathematics, physics, chemistry; Economic Sciences: management, cybernetics and economic statistics, accountancy, international economic relations, finance, economy; Humanities: history,

philology; Juridical Sciences: law; Engineering Sciences: automation, computer science, electrical engineering, energetics, mechanical engineering, industrial engineering, engineering of materials; Agricultural Sciences.

Patrimony

8 buildings for educational process; 11 buildings as student hostels; 3 sport halls; 4 libraries; 5 experimental stations; 2 protocol buildings; "Teleuniversitatea" television broadcasting studio; "Universitaria" Publishing House; "Alexandru Buia" Botanical Garden; S200 Building (for the IT Park)

Fields in which human resources are trained

Mathematics and nature sciences, engineering sciences, social humanistic sciences, economic sciences, life and soil sciences, agricultural sciences, arts..

Presentation of research activity chart

The Regulation regarding the organization, functioning and financing of the scientific research of the University of Craiova mentions that the scientific research activity is carried on in departments, research centres and is coordinated by the Scientific Research Council, subordinated to the University Senate. The Vice Rector responsible for the scientific research and the Department of Scientific Research ensures the operational management.

Structures

Research Institutes	0
Research Centres	36
Research Laboratories	191
Multi-user Research Centers	1

Top Priority Research Directions

1. The thoroughgoing study of scientific knowledge in prior domains;
2. The development of methods of reorganization and control of the socio-economic system of Romania;
3. Modernization of development technologies of Romanian industry;
4. The development of a network based on virtual laboratories;

Human resources

Professors	508
Senior Lecturers	440
Lecturers	728
Assistants Lecturers	465
Teaching Assistant	123
Research Fellows	0
Administrative Staff	896
Students	30010
of which:	
Undergraduate	28215
Master	861
PhD - full attendance	56
PhD attendance not required	978



5. The development of a network based on virtual laboratories;
6. Scientific partnership with national and international academic and research institutions;
7. Participation at international projects within FP 6.

Outstanding Research Infrastructure

50 servers localized in 6 buildings of the University, 1500 computers, metropolitan infrastructure with optic fiber, and transfer rate between 100 MBM/s and 1 GB/s, 40 subnetworks. In the territory, 3 servers and 40 computers; TV broadcasting studio; 2 video-conference systems.

Excellence Centers

Xcellency Centre (National Programme RELANSIN): Industrial Robots and Flexible Lines of Manufacturing, Director of the Centre: Prof. Mircea Ivanescu, Ph.D.

International Cooperation

40 projects were financed by the World Bank between 2000-2004; 17 projects were carried out with beneficiaries from United Kingdom, Germany, France, Belgium, Israel, South America, Portugal etc.; there are 3 projects within the FP 6. The University of Craiova participates at academic exchange programmes through Socrates and Leonardo. The faculties are affiliated to different international scientific organizations from Europe, Asia, South America and USA, actively participating in projects initiated by these.

International Scientific Activities (the 10 most important ones)

1. International Conference on Applied and Theoretical Electricity, Symposium on Cryoelectrotechnics and Cryogenics, Craiova, 2000;
2. ICATE - International Conference on Applied and Theoretical Electricity Craiova, 2000;
3. International Conference SMAT, 2001;

The number of papers published in ISI - quoted journals

170

(the most cited 10 papers)

- V. Rădulescu, *Multiplicity of Solution for a Class of Non-Symmetric Eigen Value Hemivariational Inequalities*, J. of Global Optimization, 17, 2000;
- G. Corneanu, *The Variability Induced in Some Chrysanthemum for Torum Sorts through X- Rays Irradiation*, 2000;
- G. Cividjan, *Some Formulas for 2D Permeances*, IEEE Transaction on Magnetics, vol. 36, no.5, 2000;
- A. Câmpăneanu, *Non-Linear Dynamical Models for the Saturated Induction Machine*, Revue Roumaine des Sci. Tech. Bucuresti, Romania, 2001;
- D. Buşneag, *On Extensions of Pseudo-valuation on Hilbert Algebras*, Discrete Mathematics, 2002;
- C. Bizdădea, E.M. Ciocoranu, E.M. Nagru, S.O. Saliu, *Interactions of a Single Massless Tensor Field with the Mixed Symmetry (3,1), No-Go Results*, Journal of High Energy Physics (JHEP) vol. 10, 2003;
- M. Baniceru, O. Croitoru, S.M. Popescu, A. Popescu, *Chromatography*, 2004;
- I. Bibicu, A. Samide, M. Preda, *Steel Corrosion in Diluted Ammoniac Solutions Studies by Mossbauer Spectrometry*, Materials Letters, 2004, 58;
- V. Rasvan, D. Popescu, *Control of Systems with Input Delay - An Elementary Approach*, Advances in Time Delay Systems (S.I. Niculescu and K. Gu eds.), Lect. Notes in Comput. Sci. Engng., 2004, vol. 8, pp. 103-110, Springer Verlag, 2004;
- O. Rusu, A. Samide, P. Chiriță, M. Băniceru, *A New Complex Combination of BI III Utilized as a Stationary Phase in Gas Chromatography*, J. Indian Chem. Soc., 2004.

The number of papers published in journals from the main stream of publications

2658

(the most cited 10 papers)

- I. Stancu, M. Ștefan, C. Popescu, *Experimental Results regarding*

the Potato Crop on the Flattened and Non-flattened Soils from Tam-buresti, Dolj district (1986-2000), Scientific Symposium of Agronomy with international participation "Current and Perspective Issues in Agriculture", "Ion Ionescu de la Brad" University of Agriculture and Veterinary Medicine, Iasi, 2002;

- C. Popescu, D. Vasile, *Researches Regarding the Genesis and the Main Properties of Some Acid Soils from the North of Oltina*, Thesis of Scientific Symposium "90 years of academic agronomic education in Iasi", Romania, 2002;
- S. Domnisoru, R. Ogarcă, S. Vinatoru, *Considerations Regarding the Relationship between Accountancy and Internal Revenue Services for Companies*, Management and Accountancy of the Firm, no.8/2004, p.45-53, "Economic Tribune" Publishing House, Bucuresti;
- I. Buzera, *Epistolary Speech as a re-reading of the opera*, Annals of the University of Craiova, Series Philology - Universal and Compared Literature, XXII Year, no.1-2, p.25-36
- A. Popa, Gh. Condei, D. Popa, F. Dragomir, *Modalities of Preserving the Biodiversity of the Viniferous Sorts and of the Fathering Plants*, The Bulletin of the University of Agriculture and Veterinary Medicine, Agriculture and Horticulture Series, 2004, Cluj-Napoca;
- D. Anton, C. Nicu, M. Manda, *A Behavior Study of Some of the Perennial Herbaceous Flower Species in the Environmental Conditions of Craiova*, Scientific Papers of the University of Agriculture and Veterinary Medicine, Horticulture B Series, 2004, Bucuresti;
- V. Răsvan, *Systems with Propagation: Problems and Results*, Scientific Bulletin of the "Politehnica" University of Timisoara, Automation and Computers Series, 2000.
- E. Petre, *On Adaptive Control of a Class of Multivariable Non-Linear System using Neural Networks*, Revue Roumaine de Sciences Techniques, série Electrotechnique et Energetique;

(Continued on page 29)



4. "Robotica" Conference with international participation, 2002;
5. Recreational Sportive Activities for Different Aged People, 2003;
6. An Efficient Way of Body Self Education, 2003;
7. International Symposium on System Theory - SINTES 11, 2003;
8. The 4th International Conference on Artificial Intelligence and Digital Communications, 2004;
9. The International Conference on Applied and Theoretical Electricity, Section Avionics Equipment, 2004;
10. The 7th International Conference on Applied and Theoretical Electricity, 2004;
11. "Varieties linguistiques et culturelles" International Seminar, 2004.

**Products created/homologated/
capitalized/Inventions/Patents**
(maximum 10 significant products)

31

- The Sort of Valcor walnut tree, Ion Botu
- The Sort of Valres walnut tree, Mihai Botu
- The Sort of Solar and Venus groundnut, Ion Gangioveanu
- Hardware-Software technique for protection of programming products
- Command and monitoring system for the enlightening networks, Gh. Manolea
- Automation Monipres - system of the mill for testing rubber subassembly, Gh. Manolea
- Technology of realization of polyester multilayer materials, glass fiber, Monica Preda
- Modality of manufacturing the plain friction bearings from powders of the Copper alloys, with reduced tin content, Gheorghe Stefan;
- Sinterized iron plate from high-density carbon steel and the obtaining process;
- Measuring system of int. diameters CL7: B23 Q 15/02, Certified Invention, 119520 B1, St. Buzatu

(Continued from page 28)

- A. Babalean, R. Constantinescu, C. Ionescu, Extended BRST Symmetries in Gauge Field Theories, Romanian Reports in Physics, 53, 2001;
- V. Tomescu, Pleistocene Human Areas, Annals of the University of Craiova, Biology Series, Horticulture, Technology of the Agricultural Products Processing, 2001. *Rezultate experimentale privind cultura cartofului pe psamosolurile nivelate și nenivelate de la Tâmburești, Dolj (1998-2000)*, Simpozionul Științific de Agronomie cu participare internațională "Probleme actuale și de perspectivă în agricultură.", USAMV "Ion Ionescu de la Brad", Iași, 2002;

**The number of papers
published in volumes of
international scientific
conferences with reviewers**

1983

(10 papers presented at the most prestigious events)

- D. Duță, E. Constantinescu, R. Mitrea, R. Soare, *The Influence of the Cultivar and of Fertilizers on the Carrots Crops (Daucus Carota, L.) on the Sandy Soils from the South of Oltenia Romania*, Proceedings of the XXXIV Annual Meeting ESNA (European Society from New Methods in Agricultural Research), Novi Sad Serbia and Montenegro, 2004;
- C. Lulea, R. Mitrea, A.M. Mocanu, *Research on the Influences of the Irrigation on the Main Chemical Futures of the Cambic Chernozem from Birca, Dolj, Romania*, Symposium on Agriculture, Opatija, Croatia, 2004;
- T. Nisterescu, C. Sitnikov, C. Barbu, *Regional Development in Romania - Perspectives and Strategies, Aspects of Globalization, Regionalization and Business*. ID Salavrakos, ATNER, Greece, 2004;
- G. Soava, *Methods for Measuring the Productiv Efficiency*, 140th Panonian Applied Mathematical Meeting, Maribor, 2004;
- C. N. Teodorescu, *Radiographie*

Socio-Lectale Urbaine, International Symposium "Varieties, linguistiques et culturelles", Craiova, 2004;

- N. Panea, *Woman's Image in Romanian Paremiology, International Conference "Language, Literature and Cultural Policies", Craiova, 2004;*
- Al. Popescu, C. Tigae, C. Spănu, M. Isvoranu, A. Popescu, *The Separation of Certain Enantiomers Used as Pharmaceuticals by HPLC*, Euroanalysis XIII, Salamanca, Spania, 2004;
- M. Pleniceanu, A. Kriza, C. Spanu, M. Isvoranu, *New Liquid Membrane, Ion-Selective Electrodes used for Potentiometric Determination of Copper and Nickel*, 1st International Conference of Analytical Chemistry, SCAR Brașov, Romania, 2000;
- N. Țândăreanu, *Using Java - Prolog Connection to Implement Automated Reasoning, Second Conference on Artificial Intelligence and Digital Communication, 2002;*
- D.D. Burdescu, *Adaptive Control Stages for Improving Plasma Characteristics in Reactive Ion Etching*, Congres ARA, Vancou-ver, 2001.

**The number of scientific
books published by
publishing houses
acknowledged abroad**

9

(maximum 10 significant books)

- *Variational and Nonvariational Methods in Nonlinear Analysis Boundary Value Problems*, V. Rădulescu, D. Motreanu, 388 pages, Kluwer Academic Publishers;
- *Processing of food raw material and losses of active biological substance*, C. Banu, V. Nour, M. Iordan, G. Musteata, 352 pages, "Tehnica" Publishing House, UTM Chisinau;
- *Mecanique des materiaux*, M. Marin, 165 pages, Ed. Maison d'edition de l'Université, Sofia;
- *Le symbolisme des catastrophes*

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Prof. Teodor T. Maghiar, PhD

Historical Overview of the University

In 1780 in Oradea "a higher institution for philosophic teaching" is founded, which was to become in 1788 the Faculty of Law. On 1 October 1963, an order of the Ministry of Education established in Oradea a 3-year Pedagogic Institute meant to do away with the scarcity of teachers in secondary education. In May 1990 a decree of the Romanian Government established the Technical University of Oradea, later called the University of Oradea.



Faculties and Departments

■ **Faculties:** 18 (Architecture and Constructions, Economics, Electrotechnics and Informatics, Energy Engineering, Environmental Protection, Fine Arts, History - Geography, Law and Jurisprudence, Letters, Management and Technological Engineering, Medicine and Pharmacy, Music, Orthodox Theology, Physical Education and Sport, Political Sciences and Communication Sciences, Science, Social Humanistic Science, Textiles and Leatherworks).

Master and Doctoral Programs

MASTER - Master studies: Architecture and Constructions; Physical Education and Sport; Electrotechnics and Informatics; Energy Engineering; Management of Technological Engineering; History-Geography; Letters; Science; Economics; Medicine and Pharmacy; Social Humanistic Sciences; Environmental Protection; Law and

Jurisprudence; Political and Communication Science; Textiles and Leatherworks.

10 Doctoral programs: Electrical Engineering, Industrial Engineering, Energy Engineering, Economy, Medicine, Theology, Biology, History, Geography, Filology.

Patrimony

The whole area for the training courses is 43900 square m, university campuses covering an area of 14300 square m, canteen having a capacity of 600 seats (3 series), The guest house, The students' club, Places with spiritual destination, "Gaudeamus" didactic and research base, The Snack Bar, Medical assistance, Local printing facilities, The University publishing house.

Fields in which human resources are trained

Science, Life sciences, Farming sciences, Medical sciences, Economic sciences, History and geography, Law and public administration, Politics, Art and letters science, Philosophy, Theology, Psychology.

Presentation of research activity chart

Research complements teaching at the University of Oradea. Extensive research is carried out in research centers, research groups, and within faculties. Research is part of every academic employee's work. It is one of the criteria in evaluating the employee's performance. It may be part of the didactic performance plan.

Structures

Research Institute	3
Research Centers	15
Research Laboratories	72
Multi-user Research Centers	0

Top Priority Research Directions

Energy Technologies, Electrical Technology and Electronics, Mechanical Technology and Engineering, Environmental Technology and Engineering, Medicine, Social -

Human Resources

Professors	110
Senior Lecturers	123
Lecturers	448
Assistants Lecturers	395
Teaching Assistant	261
Research Fellows	16
Administrative Staff	988
Students	26000
of which:	
Undergraduate	21150
Master	3050
PhD - full attendance	43
PhD - attendance not required	598



Humanistic Sciences, Economic Sciences, Law Sciences, Mathematics and Information Technology, Physics, Physical Chemistry, Biology, Music and Arts.

Outstanding Research Infrastructure

- Medicine and Pharmacy-COBAS, AVL, ELISA lines, 3-D color Doppler echograph with reconstruction capability, ESVL litroptier, Tomography computers;
- CNCG-SCADA (Supervisory Control and Data Acquisition);
- Faculty of Management and Technological Engineering-CIM system, Plant cell for manufacturing.

International Cooperation

- Workshop-I Mediteranei within the Network of Excellence Jean Monnet - University of Malta as Coordinator;
- IP Socrates - Integracion de minorias y comunicacion intercultural, coordonator Universitatea din Alicante;
- IP Socrates Programm - The sense of European Integration: historical beginings and development, University of Siena, Italy as Coordinator
- Socrates Programm - Learning and Modulation in University Education, University of Roma, Italy as Coordinator;
- FP6 - X Culture, Tampere University.

International Scientific Activities (the most 10 important ones)

International Conference The Role of the Media and of the New Information and Communication Technologies in the Democratisation Process of Central and Eastern European Societies, October 2001

Internation Conference The Contribution of the Media to the Enlargment of the European Union, October 2002;

The 27th Congress of the American Romanian Academy of Sciences and Arts, 2002;

Conferința internațională European and International Security versus the Explosion of Global Media, octombrie 2003;

International Conference Media and Good Governance Facing the Challenge of the European Union Enlargement, 2004;

Number of papers published in ISI - quoted journals 5 (the most cited 10 papers)

- *Vibrational spectroscopy and theoretical studies on 2,4 - dinitrophenyl hydrazine*
- *Influence of melting temperature on iron ions behavior in b2o3-bao-fe2o3 glasses studied by magnetic susceptibility;*
- *Vibrational spectroscopy and theoretical studies on 2,4-dinitrophenyl hydrazine;*
- *Self doping effect on heavy ion irradiated bi 2212 thin films;*
- *Synthesis and tgd/ta study on two new metallo(v) - arsenato(v) heteropolyacids containing vanadium (v).*

The number of papers published in journals from the main stream of publications 1270 (the most cited 10 papers)

- *Aspect regarding the reaction of the hubs used for strenghting steel concrete, Pop T. Mircea, Ungur Petru, Maghiar Teodor, Craciun Dan, Craciun Raluca, Microcad Magazin 2004, International Scientific Conference, Miskolcs;*

- *Romania and its historical peculiarities amongst the newcomers in the european union, Horga Ioan, Revista Political Space In The History Of European Integration. The Enlargements Of The Eec/Eu (1961-2005), Siena;*

The number of papers published in volumes of international scientific conferences with reviewers 474 (maximum 10 significant books)

- *Investigation of hydropower plants of the somes-crisul hydropower development by technical diagnosis, I. Felea, M. Veres, I. Rogoz, The proceedings of the Fifth International World Energy System Conference;*
- *Presentation of a program designed to calculate the initial injection moment for a diesel, Mitran Tudor, Pater Sorin, Bratu Ioan, Abrudan Gheorghie, Proceedings of the International Machinery Faire, Nitra;*

Products created/homologated/ capitalized / Inventions/Patents 5 (maximum 10 significant products)

- Physical Map of Bihor County, N Stelian, C Chiriac;
- Touristic Map of The Vadu Crisului-Suncuius
- Zece Hotare Area, Geographic Department;
- Inv. Nr. brevet 118237/2003, Resounding cavities with metal structure using multiple covering structures, TMaghiar, PUngur, SRoman, TBuidos;
- Inv. Nr. brevet 118500/2003, Cathod with direct heating for powerfull magnetrons, TMaghiar, PUngur, SRoman, MRosca;
- Inv. Nr. brevet 119848/2005, Electrical engine operated using electric fields, TMaghiar, TDeliman, KBondor.



International Affiliations of the University

- ACRU - Universities Association from the Carpathic Region;
- ACA - The Association for Academic Cooperation;
- AUE - The Association of the European Universities.

International Cooperation:

Belgium: University Louvain-at-Neuve, University from Liège, Katolic University of Leuven, Free University from Bruxelles, KATHO Katholieke Hogeschool Zuid-West-Vlaanderen, University from Gent;

Bulgaria: University from Blagoevgrad;

Canada: University St. Francis Xavier, Antigonish, Nova Scotia, Glendon College, University York;

The Czech Republic: University from Ostrav;

Finland: Central University Ostrobothnia Polytechnic Kokkola, Hame Polytechnic, Humanities Polytechnic din Kauniainen, University from Lapland;

France: University from Reims Champagne-Ardenne, IRTS Aquitaine, University Paris 10 Nanterre, University from Orléans, University Louis Pasteur from Strasbourg, IUT Troyes, University from Angers, University Aix-Marseille III, National Institute of Applied Sciences from Lyon, University Bordeaux III Michel de Montaigne, University Nancy 2, University from Perpignan, University Robert Schuman from Strasbourg, University from Poitiers, University Paul Sabatier from Toulouse, University Angers, University Paris Sud, University Pierre et Marie Curie Paris, University Paris 7 Denis Diderot, University Méditerranée, University Claude Bernard Lyon 1, University from Rouen, University François Rabelais from Tours, National Polytechnic Institute from Grenoble, University from Antile, University from Bourgogne, University from Artois, University from Nisa Sophia Antipolis

Germany: Germany: University Ludwig Maximilians from Munchen, Geographical Institute Habland, University from Hanovra, University from Jena, University Eberhard Karls from Tübingen, University from Rosstock, Katolic University from Eichstatt Ingol-

stadt, University from Berlin, University of Applied Sciences from Trier, The Institute of Applied Sciences from Dortmund, University Friedrich Alexander Erlangen-Nuremberg;

Greece: TEI Piure, University Panteion from Atena, National Technical University from Atena, University Aristotel from Tesalonik, University Ben Gurion from Negev;

Italy: University from Camerino, University University G. d'Annunzio from Chieti and Pescara, University of Genova, University from Parma, University from Pisa, University Roma Tre, University from Bari, University from Bologna, University "La Sapienza" from Roma, University from Udine, University from Modena and Reggio Emilia, University from Milano, University from Florence, University from Trieste, University Ca' Foscari of Venezia, University of Torino, University of Sassari, University of Messina, University from Napoli Federico II, University San Pio V from Roma, University from Siena;

Great Britain: University Salford, University from Londra, Moray College;

Norway: University Akershus;

Holland: University of Nijmegen, University Erasmus of Rotterdam, University of Groningen, Hogeschool of Amsterdam;

Poland: University of Gdansk, University of Katowice, University of Lodz, University of Lublin, University Jagiellonian of Cracovia, University of Rzeszow;

Portugal: University of Coimbra, University Tras-os-Montes e Alto Douro, Politechnical Institute of Coimbrva, University of Porto, Camoes Institute of Lisabona;

Russia: University Orel;

Slovakia: Technical University of Kosice;

Slovenia: University of Primorska;

Spain: University of Alicante, Independent University of Barcelona, University of Salamanca, University of Granada, University Complutense of Madrid, University of Baleare Islands, University Pontificia Comillas of Madrid, Politechnique University of Valencia, University of Girona, University of Vigo;

USA: State University Georgia, University Commonwealth from Virginia;

Hungary: University of Debrecen, University Karoli Gaspar of Budapesta, University of Godolo, University of Miskolc, University of Pecs, Technical University of Budapesta.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	8271	1962734
2003	3341,5	694716
2002	1781,84	43298
2001	942,35	337792
2000	783	99200
1999	607	0
1998	525	0
1997	464,2	0
1996	564	0
1995	128	0



Laboratories



*Laboratory of Modelation,
Simulation
and CAD Techniques*



*Laboratory of Optimising
and Conducting
Energic Systems*



*Laboratory of
Electrotechnics*



*Laboratory of
Dental Practice*



Rector

Prof. Ioan Mihai, PhD

Historical Overview of the University

The origins of the West University of Timisoara go back to December 30th 1944, when the Law Bill no. 660 stated that a university needed to be founded in the Western region of Romania. The first Faculties have either been replaced or have become independent institutions. In late September 1962, this higher educational institution turned into a University. This is why the date of October the 1st marks both the beginning of each academic year and the final recognition of the University as such.



Faculties and Departments

- The Faculty of Mathematics and Informatics;
- The Faculty of Physics;
- The Faculty of Chemistry, Biology and Geography;
- The Faculty of Law;
- The Faculty of Arts;
- The Faculty of Music;
- The Faculty of Physical Education and Sports;
- The Faculty of Political and Communication Sciences;
- The Faculty of Letters, History and Teology;
- The Faculty of Economics;

- Faculty of Sociology and Psychology;
- The Department of Primary School Teachers;
- The School of High Comparative European Studies;

Master and Doctoral Programs

MASTER - 67 programs;
Doctoral Programs - in 13 domains.

Patrimony

13 educational places, 8 student homes, 3 sportive bases, 1 experimental station.

Fields in which human resources are trained

Mathematics; Informatics; Phylosophy; Communication Skills; Political Sciences; International relationships; Phytology; History; Teology; Fine and Decorative Arts; Chemistry; Biology; Geography; Law; Sports; Physics; Music; Psychology; Sociology; Social Services; Education sciences; Economics; Finance; Accounting; Management; Marketing.

Presentation of research activity chart

The research activities in the West University of Timisoara can be performed individually or in groups at the level of each department, research units or study centers. The basic and/or applied research activities take place in the university departments. Research units may be organized and completely or partially financed by the University. There are four kinds of research units in our university: institutes, centers, groups and laboratories, and they are managed by professors, researchers and students.

Structures

Research Institutes	1
Research Centers	13
Research Laboratories	20
Multi-user Research Centers	1

Human Resources

Professors	134
Senior Lecturers	132
Lecturers	271
Assistant Lecturers	142
Teaching Assistant	74
Research Fellows	2
Administrative Staff	387
Students	20461
of which:	
Undergraduate	17096
Master	2445
PhD - full attendance	43
PhD attendance not required	877

Top Priority Research Directions

1. The optical crystals, simulating the crystal processes, the spectroscopy of laser crystals;
2. Development biology, ethology and ecology;
3. Efficient strategies in child protection;
4. Philosophy, media, communication skills;
5. Business law, criminal law;
6. Geomorphology, environmental geography, regional geography;
7. The musical history of Banat region, the music performance of the 20th century;
8. Teaching practice and educational alternatives.
9. Contemporary visual arts, new means of expression in applied research in decorative arts and design.

Outstanding Research Infrastructure

The Laboratory of Development Biology - (embriology) with uniqueness rank; The Laboratory of Electronical Microscopy - points out a field; The Laboratory of Etology - points out a field; The Research Center "The Physics of Crystalline Materials"; The Research Center "Theoretical Physics"; The Psychological Studies and Research Center of Timisoara; The Interactive Studio "Mansarda" (The Attic); Multifunctional cultural studio - a system analysing the human movement.

International Cooperation

Cooperation with the Bremen University in the FP6 project: Graduate and Postgraduate Transdisciplinary Study on Environmental Protection;

NATO project: Ionic Liquids, 2003-2005;
C. Stelian - research grant ICA1-CT-2002-70011, as part of the INCO Program financed by The European Community - "Confirming the International Role of Community Research", EPM-Madylam, Grenoble, France;

C. Stelian, D. Vizman, research grant ICA1-CT-2002-70012, as part of the INCO Program financed by the European Community;

The number of papers published in ISI - quoted journals

345

(the most cited 10 papers)

- Ciorbă, G.A., Radovan, C., Vlaicu I., Pitulice L., *Correlation between Organic Component and Electrode Material: Consequences on Removal of Surfactants from Wastewater*, *Electrochimica Acta*, 46 (2000) 297-303;
- Craioveanu, Mircea, Puta, M., *Some remarks on the rigid body with one control*, *Tensor N.S.*, vol. 63, nr. 2, 2002, 113-125;
- Hohn Mihai, *Decisional behaviour and driving (a psychological approach)*, *Transportation Research, An International Journal*, Part b: Methodological, 2000;
- Isvoran A., Morariu V., *Comparison of the Behavior of Sea Hare Myoglobin when it Forms Two Different Complexes*, *Chaos, Solitons and Fractals*, 12 (2001) 1041-1045;
- Megan M., Sasu A.L., Sasu B., *Theorems of Perron type for uniform exponential dichotomy of linear skew-product semiflows*, *Bulletin of the Belgian Mathematical Society - Simon Stevin*, 10, 1-21, 2003;
- Munteanu D., Bolcu C., Ostafe V., *Polyurethane-Bound Stabilisers*, *Polymer & Polymer Composites*, 8 (2000) 87-100;
- Nicoară I., Vizman D., Muller G., *Effects of the Temperature Asymmetry and Tilting in the Bridgman Growth*, *J. of Crystal Growth*, 212 (2000) 334-339;
- Nicoară I., Vizman D., Friedrich J., *On Void Engulfment in Shaped Sapphire Crystals using 3D Modelling*, *Journal of Crystal Growth*, 218(2000)74-80;
- Pârlog Hortensia, *Recent Anglicisms in Romanian*, "Nordic Journal of English Studies", Special Issue, vol. 3, no. 1, 2004, p. 207-218;

- Vintilă Mona, *Seasonality of Suicide in Romania*, *Perceptual and Motor Skills*, USA, 2001.

The number of papers published in journals from the main stream of publications

965

(the most cited 10 papers)

- Albu I.D., Obădeanu V., *Dynamical Systems and Lagrangian Spaces*, *Balkan J. of Geometry and Appl.* Vol. 5, 75-80, 2000;
- Alexiu Mircea, *Measures for Community Security*, in *Community Security Review*, no. 1, 2001;
- Craioveanu Mircea, Puta M., Birtea P., Dobre L., Mos I., *Some remarks on the dynamics and geometry related to Kirchoff's equations*, *Quaderno dei Seminari di Topologia Algebrica e Differenziale*, Univ. degli Studi di Roma "La Sapienza", nr. 26, 2004, 20 pp.;
- Kaslik E., Balint A.M., Chiilărescu C., Balint Șt., *The control of rolling maneuver*, *Nonlinear Studies*, 9(4) p.331-360, 2002;
- Lucica I., *The Indirect Syllogistics*, *The Philosophy Journal*, no. 4, 2003;
- Pașca Viorel, *The Nullity of Juridical Acts with Patrimonial Nature Concluded by the Insolvent Debtor*, *Commercial Law Review*, no.2/2005;
- Popa Nicolae, *Reflexions sur les configurations des frontieres de la Roumanie dans la logique de l'integration europeenne*, in *Rev. Mosella*, tome XXVII, nr. 3-4/2002, Universitatea din Metz (pp. 89-99) - ISSN 0047 - 8164;
- Ruja Alexandru, *Ovidiu Cotrus - From "The Romanian Tribune" to "The Literary Circle of Sibiu Review"*, in *Studies of Compared and Romanian Literature*, 2004;
- Țăran N., *Plea for the Correct Calculation of Interest Rates*, in *The Economist*, 17th November 2003, p. 7, no. 1419;

(Continued on page 39)

International Scientific Activities (the 10 most important ones)

British and American Studies Conference- Sustainable development in the new EU - border regions of South-Eastern Europe, 2004;

Products created/homologated/ capitalized/ inventions/Patents (maximum 10 significant products)

D. Nicoara, Vlad Lucian-Nicolae, I. Nicoara, V. Sofonea, C. Balint - Heating Device for the mechanism of shutting the burners of electric lamps with sodium vapors.



(Continued from page 38)

- Urdea P., Vula F., Ardelean M., Voiculescu M., Török-Oance M., (2004) - Investigations of some present-day geomorphological processes in the alpine area of the Southern Carpathians (Transylvanian Alps), *Geomorphologia Slovaca*, 4.

The number of papers published in volumes of international scientific conferences with reviewers

892

(10 papers presented at the most prestigious events)

- Benea Doina, *Les Amphores de Tibiscum (I)*, in *Acta RCRF*, 22, Berna, 2000, p. 251-254;
- Birş I., *Totalité et intégration ontologique*, XXIst World Congress of Philosophy, Istanbul, 2003;
- Brik M.G., Avram C.N., Avram N.M., *Linear electron-phonon interaction and non-radiative transitions in LiCaAlF₆Cr³⁺ laser crystals*, *OSA Trends in Optics and Photonics*, vol. 68, Advanced Solid States Lasers, M.E. Ferrmann and L.R. Marshall, pp. 275-279, 2002;
- Ilie Magdalena, *Efficient Communication and Solving the Conflicts in Education, in the volume of the International Conference "Professional Communication and Traductology"*, Academic Horizons Publishing House, 2004, ISBN 973-638-162-5, pp 43-45;
- Jordan V., Balint Şt., Balint A.M., *Solutions of the non-linear wave equation in the case of a finite tube*, *Proceedings of the Third International Conference on non-Linear Problems in Aviation and Aerospace*, 10-12 May, 2000, Daytona Beach, Florida USA, Vol.1, p. 323-330, Editor: S. Sivasundaram, European Conference Publications, Cambridge, 2001, ISBN: 0 9526643 2 1;
- Jordan V., Jordan M., Balint A.M., Balint Şt., *The control of a flying vehicle motion lengthways a branch of asymptotically stable steady-states*, *Proceedings of the 4th International conference on nonlinear problems in aviation and aerospace*, I.C.N.P.A.A.15-17 May, 2002, Melbourne, Florida, U.S.A. ed. S. Sivasundaram, European Conference Publications, Cambridge, 2003, pp. 209-216;
- Munteanu Anca, *The Complex Assistance in Cancer*, The European Conference of Health Psychology, St. Andrews, 5-8 September, 2001;
- Talpoş I., *Several Aspects Regarding the Application of the Subsidiarity Principle at the EU Level*, Bucharest, 2003;
- Urdea P. (2003), *Considerations on the Quaternary glaciation in the middle Mountains of Romania, XVI INQUA Congress, Session "Major Quaternary Glaciation: extent, timing, and global synchronism"* Reno, S.U.A. 20-25.07.2003;
- Voiculescu Sorina, *Rethinking women's bodies; from uniforms to sexual freedom, in Gendered cities: Identities, Activities, Networks, a Life-course Approach*; editor Cortesi Gisella, Cristaldi Flavia, Fortuijn Droogleeveer Joos, IGU/UGI, SGI, Villa Celimontana - Home of Geography, pag. 57-68, 2004.

The number of scientific books published by publishing houses acknowledged abroad

13

(maximum 10 significant books)

- Balint Şt., Balint A.M., et. Al. *Advances in Dynamics and Control* (Ed.) S. Sivasundaram, Series of monographs and collected contributions entitled Non-linear systems in aviation aerospace, aeronautics and astronautics. Chapman & Hall/ CRC Press Company. 2004;

(Continued on page 40)



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Structures	
Research Institutes	1
Research Centres	8
Research Laboratories	12
Multi-user Research Centres	1

Top Priority Research Directions

In the light of the national and European priorities, "Transylvania" University of Braşov has emphasized five priority research areas:

1. Engineering and nanosciences:
 - High-performance mechanical and industrial systems
 - Nanomaterials
2. Technologies for a knowledge-based society:
 - Virtual design & prototyping
 - Integrating IT systems in education and training, eLearning
3. Sustainable development:
 - Ecological systems
 - Renewable energies systems
 - New products and technologies based on recycled materials
4. Citizenship and governing:
 - Intercultural studies
 - Priorities of Romanian citizens in the perspective of European integration
5. Cellular and Molecular Biology.

The themes are carried out with national and international financial support; in 2004 "Transylvania" University of Braşov coordinated or was a partner in:

- FP6 projects: 2
- Leonardo da Vinci projects: 10
- Socrates projects: 7
- CNCISIS grants: 39 (type A: 26, type AT: 8, type TD: 5)
- MCT grants: 14
- Contracts with third parties: 67 (9 with international companies)

Outstanding Research Infrastructure

The University owns an infrastructure that allows high-performance research in various fields:

- Materials development: chemical vacuum deposit (CVD), spray pyrolysis deposit (SPD), electrostatic spray deposit (ESD);
- Optical properties measurements: Stanford laboratory for spectral analysis, microwaves analyser, ir, uv-viz spectrophotometers;
- Electrical properties measurements: GPB optical system for power and control measurement, AUTOLAB PG STAT 50 equipment for electrochemical measurements, 6 -

The number of papers published in journals from the main stream of publications

1656

(10 most cited papers)

- Abrudan I.V., Blujdea, V., Brown, S., Kostyushin, V., Pahontu, C., Philips, H., Voicu, M., 2003: *Prototype Carbon Fund: Afforestation of Degraded Agricultural Land in Romania*, The Forest Journal, No.1, 2003, pp. 5-17;
- Brătucu Gh.: *Aspects Regarding the Optimization of Agricultural Equipment Maintenance Costs Depending on their Availability*. In Bulletin of the Transylvania University of Braşov, vol 8(43) Series A, 2001, pp.41-50;
- Dumitriu A.: *Solutions for DC Motors Control in Robotics, Robotics & Management*, International Journal, 2004, p.4-11 (Supplement); ISSN 1453-2065;
- Cinciu, I.: *Forest and Water - A Common Destiny, Relation with Multiple Resonance in Human Beings' Life (in Romanian)*, The Forest Journal, No. 5, 2003;
- Mircea Lupu: *Analytical methods for airfoils optimization in the case of nonlinear problems in jet aerodynamics*, Math. Reports, Acad. Rom. 3(53), (2001), 33-43;
- Moldoveanu F., Gerogescu M., Floroian D. *"Robust Control Design of a Two-link Robot Manipulator Using Sliding Mode Theory"*, the 6th International Conference on Precision Mechanics and Mechatronics - COMEFIN6 - Braşov, Romania, October 10-12, 2002, Vol. 2 - 20 b, pp. 181-188, ISSN 1220 - 6830;
- Nunokava N., S. Owa, Nicolae Pascu, H. Saitoh: *Argument estimates of certain analytic functions*, Proc. Japan Acad. 79 (2003), 163-166;
- Păltinea E., Bon J-L: *Convergence of the failed componets in a Markov system with nonidentical components*, J. Appl. Probability;
- Calin, R.G., Visa, I., Comsil, M., Nanu, M., Duta, A., *An automatic spraying installation for nanostructured ceramics used in renewable energy sources*, Tijdschrift voor Klei, Glas en Keramiek, 2005, 26(2), pp.20-23;
- Sandu F., W. Szabo, V. Gazacu, *Sistem automat de testare cu*

acces wireless, Revista de Instrumentație Virtuală - anul IV, volumul IV, nr. 4 (16), ISSN 1453-8059, pag. 93-96.

Papers published in ISI - quoted journals

77

(10 most cited papers)

- Abrudan I. - *Mathematical Model Based on Maximal Weight Independent Sets for a Forst Harvesting Problem*, Tehnology Letters, vol. 5, nr. 2, UK, 2002, pp.1-4;
- Suciuc, C., Kansara, M., Holmes, P.G., Szabo, W. *Performance Enhancement of an Induction Motor by Secondary Impedance Control*, IEEE Transactions on Energy Conversion, vol. 17, no. 2, 2000, pp. 211-216;
- Crețu N., G. Niță, *Pulse propagation in finite elastic inhomogeneous. Media Computational Materials Science*, Elsevier, 31(2004), pag. 329-336;
- Dumitru S., A. Boer, *"Fluctuations in the presence of fields: Phenomenological Gaussian approximation and a class of thermodynamic inequalities"* in Physical Review E (USA) Volume 64 , 021108 (2001);
- Munteanu, M., *Study of the natural frequencies for two- and three-dimensional curved beams under rotational movement*, J. for Multibody Systems, March 2004, pp. 9-18
- Munteanu M. - *Method for a Fast Dynamic Analysis of 2D and 3D Mechanisms*, Multibody System Dynamics, Kluwer, February 2004, Vol. 11, Issue 1, pp. 63-85;
- Păltinea R. - *Optimal constant in approximation by Bernstein operators*, J. Comp. Analysis Appl., Kluwer Acad. 5 (2003), 195-235;
- Pitiș Gh. - *On the topology of contact manifolds*, Math. Scandinavica, 93 (2003), 99-108;
- Postelnicu, A., *Influence of a magnetic field on heat and mass transfer by natural convection*, Int. Jo Heat and Mass Transfer, Vol. 47, issues 6-7 , March 2004, pp. 1467-1472;
- Scheiber, E., M. Lupu - *Exact solution for an optimal impermeable parachute problem*, J. Comp. Appl. Math., Amsterdam, 147 (2002), 277-286.

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SOUR

4	Inter
-	EL
3	136
2	123
1	75
5	118
9	266
3	210
6	139
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325K Janis cryostat with temperature control;

- Magnetic properties measurements: data acquisition and measuring system for vibrations, velocity, displacement measurements; measurement rack for strains and forces; equipment for determining panels processing precision;
- Technologies development: 3D printing equipment - prototyping; Development systems with microcontrollers (Fujitsu) and digital signal processor systems (Motorola, Texas Instruments); Integrated services digital network (ISDN); Equipment for determining formic aldehyde emissions. The research laboratories own an appropriate IT infrastructure: hardware and software (CADENCE, SYNOPSIS, ALTERA, XLINX, MENTOR GRAPHICS, CATIA, ADAMS, NASTRAN, PATRAN licence).

Excellence Centers

- Scientific Centre of Excellence for Motor-Vehicles, Machines and Thermal Equipment - CESMET;
- Scientific Centre of Excellence for Applied Mechanics - CESMA;
- Research Centre for Processing and Testing Materials with Special Properties - CES-PROMAT;
- Research Centre for Machines and Production Systems - CCMSP;
- Research Centre for Design and Mechanical Systems - CCSM;
- Scientific Centre of Research for Automated Technological Developments - CCSDeTInfo;
- Scientific Centre of Research for Wood Working - CCSPL;
- Research Centre for Optimisation of Electrical, Electronic and Automation Equipment - OPTIM;
- Centre for Sustainable Development;
- Centre for Competence, Transfer and Assessment - CVTC;
- Centre for Technologies, Invention and Business - CTIB

International Cooperation

- PROMOTEUR Programme - Romania-France collaboration;
- SOCRATES-ERASMUS Programme - Thematic Networks: Project: EUI-Net (European University - Industry Network);
- LEONARDO DA VINCI Programme - Pilot Projects: Project: COMPLETE - New Strategies of competence acquisition for life-long learning in energy - transport - environment engineering;
- Web Based Training World, RO/02/B/F/PP 141053;

(Continued from page 42)

The number of papers published in volumes of international scientific conferences with reviewers

753

(10 papers presented at the most prestigious events)

- Andonie R., Cajaron, A.: *An Informational Energy LVQ Approach for Feature Ranking*. The European Symposium on Artificial Neural Networks ESANN 2004, Bruges, Belgium, April 28-30, D-side Publications, 2004, 471-476;
- Bădescu L., *Perspectives de Développement de L'industrie D'exploitation et Usinage Bois en Roumanie*, 6eme SIB Nancy-France 2-4 nov 2004;
- Băcanu G., *Computer Aided Engineering Training Theoretical Concepts and Applications*, The 10th International Congress, Conat 2004, Automotive and Future Technologies, Braşov, 2004;
- Comnac V., Cernat M., Cotorogea, M., Draghici, I.: *Sensorless Direct Torque and Stator Flux Control of Induction Machines Using an Extended Kalman Filter*, Proceedings of the Control Applications Conference, Mexico City, June 2001, pp. 1024-1030;
- Stoica, E., *Remarkable Natural Almost Paraherian Structures on Tangent Bundles Determined by a Riemannian Metric*, vol. Finsler and Lagrange Geometries, Kluwer Acad. (2003), pp.223-233;
- Lache S., Luculescu M.: *Parametric Sensitivity, A Useful Tool In Predicting the Mechanical Structure Design Changes*, 1st Int. Conf. From Scientific Computing to Computational Engineering, Sept. 2004, Atena;
- Munteanu Gh., Gh. Pitig: *Holomorphic subspaces in complex Finsler spaces*, Conf. Int. Alg. Groups and Geom. 22 (2004), 126-134;
- CHIRU, A., *Research regarding the building of a diesel monocylinder with direct injection by medium speed*, The 10th Int. Congress, CONAT 2004;
- Tamaş Şt., Abrudan I.V. - *Legal, Organizational and Practical Aspects Concerning the Protection*



of Forest Areas in Romania. In Proceedings of the International Conference Management and Conservation of Natural Forests, Ochrid, Macedonia, 2003;

- Visa, I., Comsit, M., *Tracking Systems for Solar Energy Conversion Devices*, Eurosun, 2004, Vol. 2, pp.143-148.

The number of scientific books published by publishing houses acknowledged abroad

13

(maximum 10 significant books)

- Agache, I., Eftimie, L., *Significance of increased Serum Levels of Beta 2 Microglobulin in Patients with Antiphospholipid*, Monduzzi Editore/Immunology, 2004;
- Dobrescu, C., *Pluralism and Diversity in the Intellectual History of East European Nationalism*, SAGE PUBLICATIONS Publishing House, USA, 33pp.
- Puchianu, C., *Unvermeidlich Schnee*, Karl Stutz, Passau, Germany, 92pp.
- Marin, M., *Problems in Mathematics Analysis and Algebra*, Elliot & Fitzpatrick USA, ISBN: 0-945019-92-0, 2004, 344 p;
- Munteanu Gh., Păltanea R., *Complex Spaces in Finsler, Lagrange and Hamilton Geometries*, Kluwer Acad. Publ. (Springer Media) FTPH 141, 2004, 231 p.;
- Păltanea R., *Approximation Theory Using Positive Linear Operators*, Ed. Birkhauser, Boston, (Springer Media), 2004, ISBN: 0-8176-4350-8, 202 pg.;
- Roşca I., *Biomecanique, Fondements Collection INSA*, Presses Polytechniques Romandes, Lausanne, Elvetia, 2001, 510 p.;
- Scalerandi M., N. Creţu, S. T. Chiriacescu, I. Sturzu, C. Roşca *Computational Acoustics and its Environmental Applications II*, Editura: Computational Mechanics Publ. Southampton-Boston;
- Talabă D., Roche T., *Product Engineering: Eco-Design, Technologies and Green Energy*, Springer, Printed in Netherlands ISBN 1-4020-2932-2, 2004, 539 p.



- Renewable Energy Systems and Environment Management ICT Tools, RO/02/B/F/PP 141026;
- Virtual laboratory RO/01/B/F/PP 141024;
- Annual participation in the SOCRATES Mobility Programme for Students and Teaching Staff;
- CNRS Programme: Poste Rouge, partners UTBv-LCMTR, CNR-UPR209 (France);
- AUF Programme - Bourse de formation en recherche, partners UTBv-LCMTR UPR-209 (CNRS-France);
- NATO Infrastructure Grant NIG-977271;
- Program Socrates/Comenius 2.1.SEE-EU Tools-Sustainable Development for High-school Education-an European Training Tool

International Scientific Activities (the 10 most important ones)

1. 6th International Conference on Fine Mechanics and Mechatronics - "COMEFIM-6", October 2002;
2. 10th International Congress, CONAT 2004, Automotive and Future Technologies;
3. PRASIC - Computer-Aided Design, 2000, 2002, 2004, Brasov, Romania;
4. BRAMAT 1999, 2001, 2003, 2005, Brasov, Romania;
5. International Conference on Optimisation of Electrical and Electronic Equipment - OPTIM;
6. The International Conference on Sustainable Energy, Brasov, Romania, 2005-09-15;
7. 8th International IUFRO Wood Drying Conference, Brasov-Romania 2003;
8. 4th International Conference on Wood Science and Engineering in the third Millennium, Brasov-Romania, 2004;
9. 2nd International Conference on "Symmetry and Antisymmetry" (satellite session of the European Congress of Mathematics), Brasov, 2000;
10. Piano Master Courses Transylvania Summer Academy.

Products created/homologated/ capitalized/Inventions/Patents (maximum 10 significant products) 5

- Magnetic Fluxmeter FIM02;
- Automated temperature control system for polymerisation furnace - installation homologated on industrial basis;
- Rack for measuring the diffusion layers with Barkhausen noises.

Inventions

- Flywheel with variable moment of inertia, patent no.114920/30.04.2001;
- Clock dial with hands' trigonometric rotation.

International Cooperation

Belgium: Université de Liège
China: Nanjing Forestry University
Denmark: Vitus Bering Danmark
Egypt: Academy of Computing and Economic Sciences of Maadi; Higher Institute for Agriculture Technology of Cairo
Finland: Helsingfors Universitet - University of Helsinki/Dept. of Forest Resource Management
France: L'Institut National des Sciences Appliquées de Lyon (Insa Lyon); Université de Technologie de Belfort-Montbéliard; Chaire UNESCO, Paris; Université de Nancy 1, Henri Poincaré; IFMA - L'Institut Français de Mécanique Avancée; Université de Paris 13 (Paris-Nord); Université de Paris 13 (Paris-Nord), Institut Universitaire Technologique de Saint Denis; Conservatoire National des Arts et Metiers de Paris; Université de Technologie de Belfort-Montbéliard + AUF; L'Université Montesquieu - Bordeaux IV; Université de Paris X (Paris-Nanterre)
Germany: Fachhochschule Kempten - University of Applied Sciences of Kempten; Universität Konstanz - University of Applied Sciences of Konstanz - Fachhochschule Heilbronn - University of Applied Science of Heilbronn; Sport Institute of Filips Marburg; Rheinisch-Westfälische Technische Hochschule Aachen - Aachen University of Applied Sciences; Ruhr-Universität Bochum - Bochum University of Applied Sciences; Fachhochschule Wiesbaden - University of Applied Sciences of Wiesbaden Albert-Ludwigs-Universität Freiburg - University of Freiburg; Westsächsischen Hochschule Zwickau - Technical University of Zwickau Technische Universität Ilmenau - Technical University of Ilmenau.
Greece: University of Athens; University of Patras; Technological Educational Institution of Missolochi; Technical University of Crete; University of Applied Sciences of Larissa.
Indonesia: Universitas Padjadjaran
Italy: Consorzio per la Ricerca Scientifica e Tecnologica Roma - Consortium for Technological and Scientific Research, Rome; Università degli Studi San Pio V - San Pio V University; Università degli Studi di Camerino - University of Camerino; Università degli Studi di Milano - University of Milan.
Israel: University of Ben Gurion;
Japan: Agaricus American Institute for Immunology Research of Tokyo;
Netherlands: Universiteit Utrecht; University of Groningen; Technische Universiteit Delft
Moldova: Universitatea Cooperatist-Comerciala Chisinau - Commercial University of Chisinau; Universitatea Tehnica a Moldovei - Technical University of Moldova, Chisinau; Academia de Transporturi, Informatica și Comunicatii - Academy of Transports, Computing and Communications of Chisinau.
San Marino: Istituto Europeo di Tecnologia di San Marino
Portugal: Universidade Nova de Lisboa - New University of Lisbon.





Spain: Universidad Complutense Madrid; Universidad Politécnica de Valencia - Polytechnic University of Valencia; Universitat Jaume I de Castelló - University of Jaume I de Castelló; Universidad Politécnica de Valencia, Escuela Politécnica Superior de Alcoy - Polytechnic University of Valencia, Polytechnic School of Alcoy; Universitat Oberta de Catalunya - University of Catalonia.
Switzerland: Maieutique Institute Foundation of Lausanne.
USA: University of New Orleans; University of Louisiana; University of Texas; Bloomfield College.
Thailand: Chulalongkorn University.
Turkey: University of Ankara; Firat University.

International Affiliations

- AUF - Agence universitaire de la Francophonie;
- WBUA - World Business University Association;
- IUFRO - International Union of Forest Research Organisations;
- ERC - European Rectors Conference;
- AEC - European Association for Conservatories;
- IAU - International Association of Universities

Testing Laboratory for mechanical couplings

The laboratory was set up in 1998 through a CNCSIS grant, type C, financed by the World Bank (value of 150 000 \$) and achieved the following main objectives:

- Geometric, kinematic and dynamic modelling of couplings with mobile contacts;
- Studies and research on performance improvement of couplings with mobile contacts;
- Designing and endowing a specialized documentation centre.

Scientific Centre of Research for Automated Technological Developments - CCSDeTInfo

The laboratory was set up in 1998 through a CNFIS grant, of major type, financed by the World Bank (value of 150 000\$) and undertakes the following main fields of activity:

- Machine building technology with sub-fields: computer-aided engineering; high performance technologies and equipment.;
- Themes: 2D/3D modelling; algorithms, CAPP



and CAD/CAM systems and programmes; simultaneous engineering, virtual engineering, flexible technologies, automated numerical command of technological processes; automated systems for data acquisition-distribution; quality management and engineering; optimisation of technological processes; high technological-economic performance of technologies and gauge tools and devices; designing technological databases.



Centre for Sustainable Energy

The Centre for Sustainable Energy was set up so as to assure a unitary education and research framework towards the development and promotion of sustainable energy, as viable solution for the natural environment protection and - at a larger scale - for the implementation, with proper tools, of the sustainable development concept.

The research, achieved within interdisciplinary departments, enjoys the human resources support (teaching staff, master's and doctoral students) from two departments (Product Design and the Chemistry of Materials and the Environment) belonging to the faculties of Technological Engineering and Faculty of Materials Science and Engineering. The centre owns laboratories that allow the synthesis of materials and their structural and mechanical approach, laboratories for CAD modelling, prototyping and testing laboratories as well as appropriate IT infrastructure.



Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	5622	554969
2003	5024	1586384
2002	4502	145883
2001	3680	237613
2000	3020	263075
1999	1298	295812
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Rector

Prof. Eng. Alexandru Epureanu, PhD

Historical Overview of the University

As a higher education institution, this University was established since 1948 when the Faculty of Land Management - the first of its kind in the country with this area. In the years 1951, 1955 and 1959 new faculties were established, furthermore constituting the Agricultural Studies, Polytechnical and Pedagogical Institutes, the latter two being united into the University, according to the Decree 5/1974, to which added the name "Dunarea de Jos" in 1991. Galati University



contributed to the instruction of engineers in six fields which were of national interest in higher education up until 1990: land management, terrestrial surveys, shipbuilding and naval transportation, food industry, fishculture, refrigeration techniques.

Faculties and Departments

- 15 faculties: Mechanical Engineering; Shipbuilding; Electrical Engineering; Computer Science; Metallurgy and Materials' Science; Food Industry and Science; Engineering Faculty in Braila; Letters and Theology; History and Philosophy; Arts; Medicine; Business and Administration; Physical Education and Sports; Cahul Branch;
- 2 colleges: University Medical College; University College for Primary School Teachers;
- 4 departments: Department of European Studies and Integration; Centre for Continuous Formation and Technological Transfer; Socrates-Erasmys Department; Open Distance Learning Department.

Master and Doctoral Programs

MASTER - 36 master programs within 11 faculties; 2 postgraduate programs taught in French within the Faculty of Sciences;

Patrimony

16 buildings with a total of 39,511 square meters as teaching areas, 10 students' hostels

with a total of 3323 places, 1 stadium, 4 sports halls (2 big halls and 2 small ones), one outdoor stadium and a rented sports base; 2 ships.

Fields in which human resources are trained

1. Technical (mechanical, industrial engineering; mechatronics; environment engineering; economic engineering; naval engineering and navigation; electric, electronic and automation engineering; computer science; materials' engineering; chemical engineering; agricultural studies; food industry; applied sciences; biology; geodesy);
2. Medicine (general practitioners; nursing);
3. Social-humanistic (philology; history; theology; communication science; arts; philosophy; music; physical education and sports; law; administration).

Presentation of research activity chart

In 2004 the Senate Commission for research has been updated. The main structures for carrying out research activity are research centres, to date being established 10 such research centres accredited by the NURC, while 3 others being under evaluation. Other structures are the departments and research compartments. The executive management is assured by the vicerector in charge with the research activity and by the chancellor.

Structures	
Research Institutes	0
Research Centers	10
Research Laboratories	57
Multi user Research Centers	1

Top Priority Research Directions

Apart from promoting excellence in research, the "Dunarea de Jos" University of Galati aims at identifying the means through which the majority of the teaching staff could be involved in the research activity. This is why the recognition by the Romanian National University Research Council of new research centres within the new university academic structures is intensely pursued. Finite element analysis of thermal processes in heterogeneous welded joints; Numerical modelling of the electric arc plasma; Thermal-economical optimisation of energetic plants with internal combustion engines; Numerical modelling of breaking wave phenomena; Numerical and experimental analysis of forward resistance of the ship hull; General and local resistance problems for naval

Human Resources

Professors	148
Senior Lecturers	170
Lecturers	166
Assistant Lecturers	145
Teaching Assistant	98
Research Fellows	-
Administrative Staff	661
Students	16154
of which:	
Undergraduate	14844
Master	872
PhD - full attendance	35
PhD attendance not required	403



structures, using modelling techniques based on the finite element method; Study of the local and general vibration of the ship; Marine structures; Numerical modelling of fluid flow; A systems for driving and modelling biotechnological processes; Optimisation techniques using genetic algorithms; Conversion systems for non-conventional energy; Internet systems command; Advanced materials (powders, ceramics and composites); Analysis and optimisation for the environment quality; Thermal-dynamic and kinetic studies in heterogeneous systems for obtaining special metals and alloys used in electronics, energetics, and machine manufacturing; Development of new products for: special diet, protection diet, natural diet; Food toxicology; Isolation of microorganisms highly productive of enzymes and biologically active substances, used in food industry; Translation and interpreting; Cognitive linguistics: metaphor; The semantics of perception verbs; Studies on the stragies of Romanian economy development in a macro-economy and regional field, in the perspective of Romania's accession in the European Union; Foreign trade orientation in the context of Romania's accession to the European structures; Touristic value of the Danubian area.

Outstanding Research Infrastructure

Hull tank; cavitation tunnel; data acquisition supply and real time automated processing of experimental data (acquisition boards and Hottinger Spider 8 connection); 8 Grundfos stalls for experimental research on turbomachines; Computing centre with 4 Unix servers; 3configured networks x 17 computers PIV; Commercial software with multiuser licenses: TRIBON, SHIPFLOW, FLUENT, COSMOS/M, MARC Mentat, AutoCAD, MicroStation; Laboratories for the study of phenomena and processes in interface engineering and tribocorrosion study; Solid state laser YAG-NEODIM Emax = 15J; Electronic microscope Scanning with microprobe REM 100; Link interferometer; analogic meters for dust powders class max 10 µm; Optoelectronic system for image acquisition in interface engineering processes; equipment for sol-gel thin films deposition ("Dipcoater"); equipment for thermal treatment in fluidized layer; equipment for the study of rotary bending fatigue and olygocyclic fatigue; torque digital transducer type C9A with acquisition board; momentum digital transducer and temperature transducer type T30FN200; Penetration meter for high density grease; DRON 3 Diffractometer; equipment for determining lubricants corrosiveness; Höppler and Engler viscosity meters with digital display; CA8334 Line system analyser; EDSA (Computer Aided Engineering Software); HPLC liquid

The number of papers published in ISI - quoted journals 74

(the most cited 10 papers)

- Vasile Lica, Clades Variana and Postliminium, in "Historia. Zeitschrift f. Alte Geschichte", 50 (2001), p. 496-501;
- L. Gheorghies, C. Gheorghies, Preparation of thin films from acid aqueous solution, Journal of Optoelectronics and Advanced materials vol. 4, no.4, Dec. 2002, p. 979-982;
- V. Muşat, B. Teixeira, E. Fortunato, R.C.C. Monteiro, and P. Vilarinho, Al-doped ZnO thin films by sol-gel method, Surface & Coatings Technology, 18-181 (2004) 659-662;
- L. Benea, PL. Bonora, A. Borrello and S. Martell, Preparation and investigation of nanostructured SiC-nickel layer by electrodeposition, Solid State Ionics 151 (2002)89-95;
- Levcovici S.M., Levcovici D.T., Paraschiv M.M., Laser hardening of aluminium bronzes, International Journal Materials and Manufacturing Processes (USA), vol 17, no. 1/2002;
- Domnişoru L., Domnişoru D.- Experimental Analysis of Springing and Whipping Phenomena, "International Shipbuilding Progress Delft", Marine Technology Quarterly, Volume 47, Number 450 (ISSN 0020-868X), pp.129-140, Delft, Iulie 2000;
- Bocălnială, C. D., Sa da Costa, J. and Palade, V. (2004). A Novel Fuzzy Classification Solution for Fault Diagnosis, International Journal of Intelligent and Fuzzy Systems, IOS Press. (In print);
- D. Cernega, V. Minzu - Large Scale Systems: Theory and Application 2001: "The Computation of the Supremal Controllable Language for an Assembly Workstation" Elsevier, ISBN 008046919, Iunie 2002;
- Muşat Sorin, Bogdan I. Epureanu - Small Amplitude Oscillations of a Centred Gyroscope-Transactions of the Canadian Society for Me-

chanical Engineering, Vol. 25, no. 2/2001, pp. 267-2723;

- Neagu Maria, Bejan Adrian - Costructural Placement of High-Conductivity Inserts in a Slab: Optimal Design of "Roughness" Journal of Heat Transfer, Transactions of the ASME, 2001, 123, 1184-1189.

The number of papers published in journals from the main stream of publications 940

(the most cited 10 papers)

- Springback Simulation for Hat-Bending by Static Explicit FEM Code Using a New Algorithm for Canceling the Non-Equilibrated Forces, Banu Mihaela, Yamamura N., Makinouchi A., Teodosiu C., Journal of Materials Plasticity Proceedings of the 2001 Japanese Spring Conference for the Technology of Plasticity, ISSN 4-0919-1925, p. 102-1-4, Japonia;
- Numerical Simulation and Generation of Curved Face Width Gears, Andrei Laurentia, Andrei Gabriel, Epureanu Alexandru, Oancea Nicolae, Walton D.- International Journal of Machine Tools & Manufacture, 42, 2002;
- Buckling/Plastic Collapse Behaviour of Stiffened Girders in Shear, Yanagihara D., Olaru V.D., Fujikubo M, Yao, T., Trans of the West-Japan Society of Naval Architects, 2003;
- Improving Mechanical Properties of Al si 10mg Alloy by Micro-Alloying, M. Vlad, A. Chiriac, L. Moraru, Review "Aluminium 2003", Decin, Cehia, pag. 273-277;
- Present State and Perspectives of Stellate Sturgeon Broodfish in the Romanian Part of the Danube, Ceapa Cornel, Le Menn F., Williot P., Bacalbasa Dobrovici Nicolae, International Review of Hydrobiolog, dedicat Simpozionului International: Caviar Production, Recent Developments&Future Trends in Breeding, conservation and Product Processing of Sturgeons, 2001;

(Continued on page 49)



chromatography equipment with annexes: Gas-chromatograph type GCHF18.3-4 with annexes; Spectrophotometer HACH Company USA DR/3000, computerized; spectrophotometer with atomic absorption type AAS1N; PROLANG with electronic switchboard - 2 pcs; graphical station MAISTRO V-300M (monitor 21" and Compaq Deskpro computer: ED, DF-650); Laboratory Enterprise simulation with computer facilities; Cardio-PC/e, ECG system for computer-assisted testing for physical stress, medical software INNOBASE Win32; Oxicard, portable type, ECG with pulse-oximeter, computerized interface, medical software INNOBASE Win32.

Excellence Centers

Bio-technologies in food industry and aquaculture; Ship Hydrodynamics, Structures and Technologies; Advanced Control Systems; Naval Computerized Electromechanical Systems (SEIDN); The Centre of Excellence for Materials and Environment Quality; Thermal Machines and Equipment and Environmental Engineering; Research Centre for the Interface of the Original and Translated Text. Cognitive and Communicational Dimensions of the Message - LITCIT; The Mechanics of Machines and Technological Equipment; Mechanics and Tribology of the Superficial Layer - MTSS; Technological Engineering in Machine Manufacturing; The European Centre of Excellence for the Environment INTERMEDIU.

International Cooperation

- Contract No. G1RT-CT-2001-05051 - Safety and Reliability of Industrial Products, Systems and Structures SAFERELNET;
- Contract No. FP6-PLT-506141 Network of Excellence in marine structures MARSTRUCT;
- IST-2000-26276 Statistical Indicators for Benchmarking the Information Society SIBIS;
- NMP 2-CR-2004-507331 Virtual Intelligence Forging - CA; Cod NWO 048.031.2003.007 - Cod Application of Discontinuous Galerkin Methods to Crack Growth Simulation;
- COBIL RO/BELGIA - Tribocorrosion of Engineering Materials on View of Their Industrial Use as Sliding Parts in Water - Lubricated Conditions; NATO 532/02-07 Triboscience and Tribotechnology;
- COST D - 19 Chemical functionality specific to the nanometer scale Darmstadt - 2004.

International Scientific Activities

(the 10 most important ones)

- International Conference "The Risk in Contemporary Economy" 19-20 Nov.2004; ESSE International Conference "Cultural Matrix Reloaded" - 15-16 Oct. 2004;

(Continued from page 46)

- *End of Transition? Ethical Reflection on Romanian Food Industry*, Rotaru Gabriela, Alexandru Rodica, Journal of European Society for Agricultural and Food Ethics 2003;
- *On the Structural and Optical Properties of Antimony Trisulfide Thin Films*, N. Tigău, Gh. I. Rusu, C. Gheorghies, Journal of Optoelectronics and Advanced Materials vol. 4, no. 4, dec. 2002;
- *The Melting Temperature of 99,8% Al Estimated from Activation Energy for Viscous Flow*, L. Moraru, Czech Journal of Physics, 2002;
- *A Processing Algorithm for an Intelligent Production System*, Mazilescu Vasile, Economy informatics, volume viii, nr.1, pag. 72-77 2003;
- *A Necessary Radiography - Orthodoxy and Globalisation*, Ion Cordoneanu, Journal for the Study of Religion and Ideologies, 2004.

The number of papers published in volumes of international scientific conferences with reviewers

2653

(10 papers presented at the most prestigious events)

- *Collapse Analysis of a Pontoon-Type VLFS in Waves*, Fujikubo M, Oлару Vd, Yanagihara D, Matsuda I., Proc 14th Intl. workshop on Very Large Floating Structures VLFS Tokyo;
- *A New Experimental Scheme for a Global Evaluation of Spring-back in Advanced Thin Metal Sheet Forming*, Banu Mihaela, Tăbăcaru Valentin, Maier Cătălina, Materials in Automotive Industry, ed. E. Essadiqi, F.E. Goodwin, M. Elbouljaini, ISBN 1- 894475 - 11-9, Canada, p. 115-122;
- *Energy Transformations in MHD Ship Propulsion*, N. Badea, M. Găiceanu, I. Voncilă, MARELEC 11-13 Iulie 2001 Stockholm - Suedia;

- *Air Quality Prediction Using Neuro-Fuzzy Tools*, Neagu C.D., Kalapanidas E., Avouris N.M., Bumbaru S., 9th IFAC/IFORS/IMACS/IFIP Symposium on Large Scale Systems: Theory and Applications ICI, București July 18-20, 2001, IFAC Proc. Volumes, Elsevier, pp. 459-465;
- *Considerations Concerning the Depositing on the (Al₂O₃-Al) Layers Through Electric Arc*, Drăgan Viorel, Nelu Cazacu, S. Dobrovici, T. Radu, S. Balint, Modelling and Optimisation in Materials Science Moc'40, Odessa, Ucraina, p 143;
- *Fungal Carotenoids Production by Solid State Fermentation System*, Bahrim Gabriela, Anca Nicolau, Mihai Popa, International Congress on Pigment in Food - Functionalities of Pigments in Food, Lisbon, Portugal, 2002;
- *Researches Concerning the Production of Healthy Foods*, Zara Margareta, Belc Nicoleta, The Fourth EurSAFE Congress Toulouse, France, March 20-23, 2003;
- *Low Danube Between Planning in Border Regions and Transnational Planning*, Pușcașu Violeta, Abstract volume XVI AESOP Congres "Planning in Border Regions", Volos, Grecia, pag. 94, 2002;
- *The Multi-Model Control of the Wastewater Treatment Process with Activated Sludge*, M. Barbu, Gh. Barbu, E. Ceangă, IEEE, The 12th Mediterranean Conference on Control and Automation, 6-9 June, 2004 Kusadasi, Turkey;
- *Iron-Nickel Alloys Used in the Measurement Equipment and Apparatus Domain*, Bordei M., Ciocan A, Ciurea A., Junior Euro-mat Lausanne, Elveția, 2004.

The number of scientific books published by publishing houses acknowledged abroad

18

(maximum 10 significant books)

- *Commande automatique des systèmes linéaires continus. Cours avec applications utilisant Matlab*, V. Minzu, B. Lang, 253 pag., Ellipses, Paris;

(Continued on page 50)

Key-role played in certain fields International Cooperation



- The 12th International Symposium on Modelling, Simulation and Systems Identification SIMSIS, 24-25 sept. 2004;
- International Conference "UNISO" - University and Society - 21-24 July 2004;
- Conference "Advanced Materials and Technology" TEHNOMAT '3 - with international participation - Nov. 2003;
- EUROALIMENT 2003 Conference, with international participation - Oct. 2003;
- International Conference on Tribology ROTRIB '03 - 24-26 oct.2003;
- International Conference and Summer School "Keys to Rapid and Cost Effective Hazardous Waste Site Investigation and Cleanup", with international participation - within the NATO Programme - 10-19 July 2003;
- Romanian-French Colloquium "Romania and EU Enlargement", in collaboration with the University Le Havre, France - 11-13 Apr. 2003;
- International Conference "Advances in Thermodynamics" - 10 Apr.2003.

Products created/homologated/ capitalized/Inventions/Patents (maximum 10 significant products)

9

- Shape and procedure for toothing the central wheel of the precessional gearing, author Frumusanu Gabriel, 2001;
- Driving simulator, B.I. 11853, author Puscasu Gheorghe, 2003;
- Plant for strip processing, authors: Potecasu Octavian, Pesceanu Mircea, Alexandru Patricia, Hanganu Doru, 2002;
- Procedure for reducing strains for slabs continuous casting, B21B1/46, authors: Cananau Nicolae, Ivanescu Alexandru, 2003;
- Procedure for removing discontinuities from continuous cast slabs, author Ivanescu Alexandru, 2001;
- Exothermal procedure for obtaining the technically pure iron, author Ivanescu Lilica, 2003;
- Procedure for burning low energy fuels, author Ivanescu Lilica, 2003;
- Ultrasound method for monitoring the characteristics of milk coagulation, authors Costin Gheorghe Miron, Picu Mihaela, 2001;
- Procedure for obtaining the lipoxidase-amilase complex with selected yeast, B.I. 119468 B, author Dan Valentina, 2004.

Key-role played in certain fields

Ensuring the safety of foods. The Research Centre Biotechnologies in Food Industry and Aquaculture, re-accredited as a type B centre by the Romanian National University Research Council in 2004, has a multidisciplinary team coming from the three departments of the Faculty of Food Science and Engineering. The

(Continued from page 49)

- *Tesi di costruzione di macchine*, Giovanni Nerli, Fälticeanu C., 240 pag., Levroto e Bello Torino Italia;
- *Pattern recognition control systems - a distinct direction in intelligent control*, E. Ceangă, Frangu, L., 17 pag., Advances in Automatic Control, (ISBN 1-4020-7607-X) (1 capitol);
- *Low Temperature and Cryogenic Refrigeration. Section Cost-to-Quality Optimization of Refrigeration*, Ioniță Ion, Ion V. Ion, 12 pag., Kluwer Academic Publishers NATO Science Series Dordrecht/ Boston/ London;
- *L'état de la géographie roumanie*, Pușcașu Violeta, 41 pag., Ed. C.I.R.T.A.L. Le Havre Franța;
- *The Management of Small and Medium Sized Enterprises*, Epureanu Al. et al., 718 pp., Technical-INFO Publishing House, Kishinev, Republic of Moldova ISBN 9975-63-122-37;
- *Shaping Tools Through Solid Moulding*, Baicu Ioan, Cancea Nicolae, 213 pP., TEHNICA-INFO Publishing House, Kishinev, Republic of Moldova, ISBN 9975-63-172-X;
- *The Third Half*, Petru Iamandi, 40 pag., K.T.Publications Stamford-UK;
- *Theory and Practice of Balance Sheet*, Isai Violeta, 420 pp., Valinex Publishing House, Kishinev, Republic of Moldova;
- *Equipment and Technologies specific for SMEs*, EPUREANU AL. et al., 384 pp. Tehnica-INFO Publishing House, Kishinev, Republic of Moldova, ISBN 9975-63-120-7.

International Cooperation

Our university signed bilateral agreements in the fields of education and research with many partners from Austria, Belgium, Bulgaria, China, Denmark, Egypt, Finland, France, Germany, Greece, Italy, Ireland, Israel, Japan, Great Britain, The Netherlands, Hungary, Portugal, Republic of Moldova, Slovakia, Spain, Sweden, Turkey, Ukraine and The United States of America. Among these institutions, mention must be made of: Université Catholique de Leuven, Bulgarian Academy of Sciences, Aalborg University, Université de Bordeaux, Université du Havre, IUT Strasbourg, Ecole Supérieure de Mines Sofia Antipolis-Paris, Université Paris XII-Val de Marne, Università "Federico II" di Napoli, Università di Trieste, Hiroshima University, University of Sheffield Hallam, University of Brighton, Technical University of Delft, University of Wageningen, Instituto Superior Tecnico de Lisboa, Fish Culture Research Institute Szarvas, Universidade Nova de Lisboa, Universidade of Valladolid, Duke University.

centre has 37 research laboratories, 9 pilot plants (milk, protection products, natural flavours and colour additives, wine, beer, meat, flour products, pastry, sugar, enzymes) as well as a base for research and fishing which includes the "Egreta" ship with 60 places, outfitted with a laboratory; 2 fishing motorboats; fishing tools. Apart from the university main library, there is a small resource centre within the structure of the centre that comprises the "Brad Segal" Library totalling 1309 volumes and the "Dumitru Bogatu" Library with 1200 volumes.

The Centre has highly competitive computer facilities and develops expertise and analysis for food products quality through the Laboratory of Physical-Chemical and Microbiologic Analyses, a structure accredited by RENAR, the Romanian Accreditation Association.



THE RESEARCH CENTRE SHIP HYDRODINAMICS, STRUCTURES AND TECHNOLOGIES SHIPBUILDING FACULTY



Hull tank

RESEARCH CENTRE "TECHNOLOGICAL ENGINEERING IN MACHINE BUILDING - ITCM"

Accredited on 11 May 2004 with the certificate no. 10/CC-B by the Romanian National Research Council, The Research Centre Technological Engineering in Machine Building - ITCM has its own infrastructure with the "Dunarea de Jos" University of Galati, fitted for the goals and objectives the Centre has declared.

This infrastructure is made up of:

- 14 teaching and research laboratories;
- 2 mechanical engineering workshops;
- 12 rooms.

The manager of this centre is Professor Nicolae Oancea, PhD.

The goal of this center is to strengthen the research and development strategies that the Ministry of Education and Research together with the European Union are implementing in designing new processing techniques and in developing new products.

The scientific and technologic task of the Centre is to:

- identify and solve real problems of the Romanian industry, with a view to help them evolve and align to the EU norms in the field of processing;
- offer expertise in the field of machine manufacturing, of production systems and ensuring quality;
- create and implement new products and technologies, useful for a developed society;
- create a link with the European research centres (established within the research programmes financed by the European Union) and by Japan.

The role of this Centre is to define, to plan, to structure and to organize activities for developing multidisciplinary methodologies and technologies, emerged from areas complementary to mechanics and manageable in the field of machine manufacturing, quality assurance and production systems engineering.

The research centre will gain international recognition. We have an ongoing project within the Sixth Framework Programme, that is VIF-CA, with partners from France, Germany, Sweden, Belgium, Great Britain, The Netherlands, Spain, Poland, Hungary, Italy, Slovenia, Turkey, Romania (members of the research team) that has as main objective the creation of a Network of Excellence in the field of volumic plastic deformation.

- The potential impact of the Centre
- Monitoring the regional, national and international research;
 - Educational impact by contributing to the development of human resources
 - Dissemination of research results: publications, workshops and seminars.



International Affiliations of the University

- Associated member of Agence Universitaire de la Francophonie AUF;
- Member of the Black Sea University Network;
- Member of WEGEMT Western European General Education in Marine Technology;
- Member of European University Association.



Prototype for simulating ship's wave resistance

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	5314.8	51828
2003	4927.16	65038
2002	8522.42	447395
2001	1096.38	251911.4
2000	4515.0	26831.42
1999	2307.07	14937.14
1998	1323.55	1765.42
1997	727.61	0
1996	465.44	0
1995	205.2	0



Outstanding Research Infrastructure

The computer network is formed by 824 computers, of which 23 servers, placed in 13 buildings from Sibiu with fiber optic connection at 100Mb/s. Internet connection speed is at 4 Mb/s. On this network we also have 1 videoconference system, TV studio and multimedia, E-learning for Virtual University, one Training Centre in Numerical Control and Production Management.

Excellence Centers

4 research centres recognized by the CNCISIS, Quality Research Centre in the process of being acknowledged as centre of excellence, know-how transfer centre.

International Cooperation

COST, COMENIUS, INCO-COPERNICUS, World Bank, FP5, FP6, programs (projects).

International Scientific Activities

(the most 10 important ones)

1. The 2nd Balkan region conference on engineering education.
2. Ecumenical conference between the Orthodox Church and the Reformation World Alliance.
3. International conference "Romania - long-term demands in view of EU integration in 2007".
4. International conference "Altexim - Sciences, Processes and Agricultural and Food Industry Technologies".
5. International conference "Globalization, integration and social development in CEE".
6. International conference "Law and Public Administration regarding EU integration".
7. International conference "Infinite Londons".
8. Romanian - American pediatric symposium.
9. "Emil Cioran" International conference East - West Cultural Passages Conference.

Number of papers published in ISI - quoted journals 52

(the most cited 10 papers)

- Simian D., *Computational Aspects in Spaces of Bivariate Polynomials of W-Degree*, Lecture Notes in Mathematics, 2004.
- Tănase, M., Oprean L., *Research on the spreading of Cuscuta L. (Convolvulaceae) in the county of Romania*, Feddes Repertorium, Berlin, 2001.
- Sirbu I., *Aspects Concerning the Distribution and Ecology of the Freshwater Molluscs from the Romanian Inner Carpathian Basin*, Heldia, 6, Munchen, 2004.
- Roceanu A., Roman - Filip C., Băjenaru O., *Hyperhomocysteinemia Risk Factor for Ischemic Stroke in Young Patients*, European Journal of Neurology, 2004.
- Milov A. D., Tsvetkov YU. D., Formaggio F., Oancea S., Toniolo C., Raap J., *Solvent Effect on the Distance Distribution Between Spin Labels in Aggregated Spin Labeled Trichogin Ga Iv Dimer Peptides as Studied by Pulse D Electron-Electron Double Resonance*, Physics and Chemistry, 2004.
- Vințan L., *Two-Level Branch Prediction Using Neural Networks*, Journal of Systems Architecture, 2003.
- Măruțoiu C., Puiu S., Moise M.I., Soran L., Măruțoiu O.F., Bobos L., *Optimisation of the Separation of Some Aflatoxins by Thin Layer Chromatography*, Journal of Planar Chromatography 2004.
- Egan C., Steven G., Vințan L. - *Cached Two-Level Adaptive Branch Predictors with Multiple Stages*, pp. 179-191, in "Lecture Notes in Computer Science" Review, vol. 2299, Springer-Verlag, ISSN 0302-9743, ISBN 3-540-43409-7, Berlin Heidelberg, 2002.
- Egan C., Steven G., Quick P., Anguera R., Vințan L. - *Two-Level Branch Prediction using Neural Networks*, Journal of Systems Architecture, vol. 49, issues 12-15, pp.557-570, ISSN: 1383-7621, Elsevier.

- Zamfirescu C., *A Case Study for Modular Plant Control*, Lecture Notes in Artificial Intelligence, 2003.

The number of papers published in journals from the main stream of publications 2680

(the most cited 10 papers)

- Popescu D., Smith R., Malthus: *Le paradis déchire - politiques versatiles, pronostique incertain*, International conference "Romania - demands in the development process, in light of the EU integration in 2007", Sibiu.
- Oprean C., Kifor C.V., Georgescu N., *Managing Processes at the Master Program in Quality Management from Lucian Blaga University of Sibiu*, Proceeding of the conference: The 6th Baltic region seminar on engineering education, Wismar, Germany, 2002.
- Oprean L., Sipoș A., Nedeșita V., *Influence of the autolysate upon the multiplication of some industrial yeast strains*, The 15th international congress of chemical and process engineering, Prague, Czech Republic, 2002.
- Boncut M., Popoviciu N., *On the Fourier transform of the box-spline functions*, The 29th annual congress of the ARA, Bochum, Germany, 2004.
- Gutan M., *L'integration Europeenne - Une chance pour l'autonomie locale en Roumanie post communiste*, Public administration restructuring within the context of EU integration, Publishing house All Beck, Bucuresti, 2002.
- Sofonea G., Marcu F., *The Comparative Study of Experimental and Numerical Results of Stresses in the Arm of the Frontal Loader*, The 10th International Conference of Fracture Mechanics, July 8-10th, Bacau 2004, Publishing house Alma Mater, 2004.
- Danciu I., Danciu C., *A New Proceeding for the Maize Milling by Degermination of the Grain*, 16th International Congress of Chemical and Process Engineering, Praga, 2004.

(Continued on page 55)



**Products created/homologated/
capitalized/Inventions/Patents**
(maximum 10 significant products)

21

1. Smarandache C., "The External Fixer at Children", 2001.
2. Nanu D., Titu M., Oprean C., Titu G., "Exact Positioning Device of the Tool Electrode, according to the Machine Part, at the Electroerosion Processing", 2003.
3. Titu M., Nanu D., Oprean C., Titu G., "Device for Magnetic Activation of the Electroerosion Processing", 2003.
4. Bercan N., "Balanced Telescopic Arm", 2002.
5. Diaconescu C., "Electronic Equipment for the Generation of Singular Discharges in Impulse", 2003.
6. Deac V., "Procedure and Device for the Welding of Polyethylene Pipes", 2004.
7. Titu M., Nanu D., Oprean C., Titu G., "Electronic Equipment for the Generation of Singular Electric Discharges in Impulse", 2003.
8. Sabau D., "Double Coaxial Induced Fan for Hydatic Cyst. Fixation Cramp Iron.", 2001.
9. Sabau D., "Unprosthetic Laparoscope Method for the Everturation Cure", 2001.
10. Sabau D., "Laparoscope Transtumoral Drilling Procedure in Malignant Esophageal Stenosis", 2001.

(Continued from page 54)

- Luca S., *Conclusions regarding the archeological assets from the Caras Severin county*, International Symposium C. Daicoviciu, H. Daicoviciu, M. Guma - Caransebes, 2004.
- Neagu A., *On the local, national and international in contemporary literature: the challenges of the 21st century classroom*, "Reading Worlds", The 19th Oxford conference on the teaching of literature, an annual British Council conference, Oxford University, 2004.
- Bera L.G., Maniliu I., *The performance of information technology in a cardiovascular system, transformation of health care with information technologies*, Studies in health technology and informatics, 2004.

**The number of papers
published in volumes of
international scientific
conferences with reviewers**
2430

(10 papers presented at the most prestigious events)

- Popa E., *Semantic Specification of Programming Languages, Algebraic Methodology and Software Technology*, University of Iowa, 2004;
- Pavelescu L., *A "One Hand Clapping" Approach to Life, American, British and Canadian Studies*, 2004;
- Bologa O., *CAD/CAM Techniques in the Field of CNC Punching Machines*,

- Romanian Journal of Information Science and Technology*, 2004;
- Dur I., *Area we through modern Hellenism crisis?* Saeculum, 2004;
- Crişan S., *The transport in the modern company*, Economic Review, 2004;
- Giura L., *From Ioan Lupas's correspondence with Carol Gollner of Medias, Sargetia - History series*, 2004.
- Sabau D., Bardac O., Bratu D., Antonescu M., Cocora L., Santa A., Sabau A., *Open surgery treatment for hidatic hepatic cyst*, "Medical Sibiu" Review, 2004.
- Mihoc V., *"In the beginning was the word" (John 1,1)*, the Scientific Annals of Al. I. Cuza University, Iasi - Theology, 2004.
- Bacaci A., *Notes on current matrimonial status*, The Law, 4/2001.
- Stanciu M., Sand C., Ciortea G., *Study concerning the possibilities of capitalisation on the agro-tourism potential in Rasinari village, Sibiu county*, Romania, Novacio, A Tudomany es a Gyakorlat Egysége az ezredfordulo aagrariumaban, szefoglatok "A belepes kapujaban", 2004.

**The number of scientific books
published by publishing houses
acknowledged abroad**
36

(maximum 10 significant books)

- Duşu D.M., *Industrial Business Management*, The Romania-American Collaboration Program, Publishing House of University Missouri, Columbia, USA, 2000;

- Eugene Van Isterbeek, *Les noces des mots et des choses*, De Zevenslapers/Les Sept Dormants, Leuven, 2004;
- Cenuşer D.I., *Orality and Writing in Shakespeare's Early Comedies and Problem Plays*, Editura Les sept dormants, Leuven, 2002;
- Popovici Z., *Surgical Treatment for Carcinoma of the Cervical Esophagus - Indications for Mediastinal Tracheostomy*, Recent Advancesmonduzil Editore, Bologna, 2001;
- Popescu D., *Cour d'economie generale - le passage des pays de l'Europe centrale et de l'est a l'economie de marche*, L'universite de Rennes, 2001;
- Nidermaier P., *Stadtbau im mitteltaler (1242-1347)*, bohlaus verlag, Kohn, Wien, 2001;
- Drăghici E., *Funhionentheorie mit anwendungen in die flussigkeitsveihrik vol II*, Editura Hagen, 2003;
- Lupaş A., Lupaş L., *Mathematical Analysis and Approximation Theory*, Editura Burg Verlag, 2002;
- Albu I., *Die inschriften der stadt Hermanstadt 1350-1711*, Hora verlag, 2001;
- Mihoc V., *L'hymne christologique de l'epître aux Philippiens dans son contexte*, "Benedictina", Roma, 2001.



QUALITY RESEARCH CENTRE

Director:
Prof. Constantin OPREAN, PhD

The Quality Research Centre was established in 1994 by the ULBS Senate decision. The Quality Centre was recognized by CNCSIS in 2000 and now is in process of being acknowledged as a centre of excellence.

The centre's mission is to offer assistance for organizations that want to improve the quality level for their products and services.

The centre carries out interdisciplinary research regarding the improvement of product and service quality.



The research activity is carried out in the following departments:

- Quality Management in Industrial Engineering
- Quality Management and Engineering in food industry
- Quality Management and Engineering in agricultural sciences
- Quality Management and Engineering in public administration
- Quality Management and Engineering in information's technology
- Quality Management and Engineering in education
- Quality Management and Engineering in work safety, and labour relations.
- Environment Engineering and Quality Management

Research laboratories:

- Quality Management and Engineering
- Tolerance and dimensional control
- Experimental research
- Reliability and control systems
- Optimizing technological processes
- Manufacturing technologies

- Microbiology (photo)
- Hydrobiology / ecology and water protection
- Vegetal Biotechnologies.

Research infrastructure



- 2 computer networks of 10 units connected to the internet
- Centre Library with over 500 volumes, 3 magazine subscriptions;
- software license for Qualica QFD, AIO WIN 6.0, iGrafx Process for six sigma 2003, Rekrton FMEA Professional 3.0

Research personnel's structure

- 14 professors; 15 associate professors, 10 Lecturers, 17 Assistant Lecturers and Teaching Assistants; 24 PhD students.

Research programs, collaborations

- International programs: Phare, Leonardo, Socrates, World Bank
- National programs: CNCSIS, CNFIS, CALIST, RELANSIN, AMTRANS, INFOSOC, Romanian Academy of Sciences

Companies:

- Phoenix Mecano
- Mould, Compa,
- Thyssen Krupp,
- Continental, SNR
- Rulmenti,
- Poliflex, Brandl,
- Balanta, Retezat

Research funds:

- 12 billion lei;
- 250.000 EURO





THE CENTRE FOR STUDIES AND RESEARCH FOR METAL FORMING

Director centru:
Prof. Octavian BOLOGA, PhD

In the structure of the University "Lucian Blaga" of Sibiu functions, as a distinct research unit, subordinated to the University Senate, the Centre for Studies and Research for Metal Forming. The centre structure and activities were set up to be similar to those existing at the metal forming institutes of the Universities of Stuttgart and Hannover (Germany): Institut für Umformtechnik Stuttgart and Institut für Umformtechnik und Umformmaschinen Hannover, respectively.

For determining the centre's research activities, we started from the remark that the current global industrial development is generated by a real explosion in implementing metal forming technologies. The obtained results have materialised, from a scientific point of view, in the theoretical and experimental establishing of new procedures for processing by metal forming, the usage and development of modern techniques for the computer-aided design of products and tools used in forming processes, the development of techniques and methods for the simulation of forming through the finite elements method.

The scientific and technological services offered by the Centre for Studies and Research for Metal Forming have continuously developed, seeking:

- the systematic and rigorous approach to the fundamental research in the domain of metal forming;
- the study of new methods for the processing through forming (vibratory deep drawing, rotative volumic processing, incremental stretching of metal sheets by means of metal balls, deep drawing at high powers and speeds, assembling by metal forming etc.);
- elaborating technologies that would contribute to the increase of productivity, of products' competitiveness, to the decrease of manufacturing costs through replacing classic technologies (metal cutting or even metal forming technologies);
- the implementation of the studied procedures and technologies in the flexible manufacturing variant, by increasing the

flexibility and automation degree of the equipment employed.

- the elaboration of methods and methodologies for the monitoring and diagnosis of the equipment employed (forming equipment, machine-tools and inter-operational transfer systems);
- to develop the cooperation ties with similar research centres from abroad in order to support the European integration of our country.
- the cooperation with similar institutes from Romania for the reviewing or elaboration of



new standards in the domain of materials, technologies and equipment for metal forming;

- the increase of the research efficiency by amplifying the cooperation with the industry, on topics of national interest;
- to support master and doctoral programs.

As a consequence of the development of forming technologies at national and global level, the existence, consolidation and development of a regional centre of excellence, is a major goal in the centre's development strategy, with mixed teams of faculty members, researchers, specialists, doctoral students and master degree students working to promote the modern metal forming technologies in an area of the country where several companies exist that would allow the application of these technologies (COMPA Sibiu, INDEPENDENTA Sibiu, BALANTA Sibiu, HIDROSIB Sibiu, FLARO Sibiu, EMAILUL Medias, ICOS Ocna Sibiului, SIMEROM Sibiu etc.) is absolutely necessary. It is a contribution to the social-economic development of the region and, implicitly, of the country.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	7311	8970
2003	4001	2110
2002	3963	50750
2001	3973	129420
2000	1170	75428
1999	600	49005
1998	317	0
1997	319	0
1996	153	0
1995	15	0



During the development of the centre's activity, its members have taken up several training periods, in the domain of unconventional metal forming procedures, professional orientation, at prestigious universities or research institutes from Romania or from abroad, such as: King's College, University of London, Universities of Stuttgart and Hannover, Germany, University of Missouri - Columbia, SUA, Universities Carlos III of Madrid, Spain, Nottingham, Great Britain, Institute National des Sciences Appliquées Rennes and Université Paris Nord, France.

The Center for Studies and Research for Metal Forming has contributed to organizing, in November 1999, at the Faculty of Engineering in Sibiu, the International Conference "Beyond 2000 - Research Strategies", as well as the International Conference on Manufacturing Science and Education MSE 2003 (November 2003).

The center's director, Prof. Octavian Bologa, PhD, is a collaborator of the International Deep Drawing Research Group.

The centre's collective, reuniting members of the General Association of Engineers from Romania (AGIR), was continuously preoccupied to strengthen ties with similar associations from other countries. In this context, we have succeeded to create, at Sibiu, a branch of the Association of Engineers from Germany (VDI), the center's members achieving membership in the VDI.

The Center has research rooms, laboratories, bureaus, library, totalling an area of over 400 m². The center's research laboratories are equipped according to the research domain:

- "Equipment for processing by pressing", 120 m²;
- "Pressing technologies", 50 m²;
- "Automation of pressing processes", 70 m²;
- "Computer-aided design of forming processes", 40 m²;
- "Materials science", 55 m².

There are five offices where the centre's members unfold their theoretical research activity, totalling an area of 90 m². The centre's library encompasses over 500 volumes from the Romanian and foreign speciality literatures and is hosted in a room with an area of over 15 m². The books were acquired with funding from TEMPUS (JEP 2766-91) program which has contributed to the center's establishment. In time, it was enriched with new books that appeared in the domain, the funds for their acquisition coming from scientific research contracts carried out by the center.



Rector

Prof. Lizica Mihut, PhD

Historical Overview of the University

“Aurel Vlaicu” University of Arad continues the city’s tradition of higher education, where the following landmarks stand out: 1812 - Preparandia (Pedagogical Institute); 1822 - Theological Institute; 1933 - Conservatory; 1949 - 1954 - Faculty of Zoo-technology and Veterinary Medicine; 1972 - 1990 - Institute of Sub-engineering. The Government Decision



567 of May 18, 1990 is the founding act of “Aurel Vlaicu” University, as a higher education institute.

Faculties and Departments

- 7 faculties (Engineering; Food Engineering Tourism and Environmental Protection; Economic Sciences; Humanities and Social Sciences; Exact Sciences; Theology; Sciences of Education);
- 7 departments (for training of educational staff; of programs, projects and international relations; of foreign languages and sports; of chemical and biological sciences; of mathematics and IT; of life-long education and distance learning; for Romanians world-wide).

Master and Doctoral Programs

MASTER - 24 Master Programs: Theology (Biblical Theology; Historical Theology; Applied Orthodox Pastoral Theology, Systematic Orthodox Pastoral Theology, Theology); Economic Sciences (Accounting and Information Systems, Executive MBA, Tax Regulations, Budget and Treasury, Information Systems, Manag. and Financing in Public Administration, Financial Markets and Stock Exchange, Financial Accounting and Management of Enterprises (in English), Food Engineering, Tourism and Environment Protection (Ecologic and Integrated Food Engineering, Quality Management of Food Products, Food technologies for 21st Century Consumer; Food Engineering and the Environment); Engineering (Quality Control and Expertise in Textile Products, Ecotextiles, Quality Management of Welded Structures, The Modernisation of Ecological Railway Transport, Robotic systems in Flexible Production, Flexible and Unconventional Textile Technologies)

Patrimony

“Aurel Vlaicu” University has: 6 educational facilities, covering a total of 21,112 sm, of which: course rooms and amphitheatres (36.2%); laboratories (32.8%); seminar rooms (27.4%); the University’s Central Library (3.6%); the Olympic-Size Sports Hall (measuring 3000 sm, with 600 seats); the Centre for Research - Innovation - Development - Business Incubator (1588 sm); Students’ Dormitories with 800 places (4105 sm); the Students’ Cafeteria (2800 sm).

Fields in which human resources are trained

Engineering sciences; Economics; Exact sciences; Humanities and Social sciences; Theology; Sciences of education.

Presentation of research activity chart

In 1992, the University introduced the New Regulation, establishing the structures for the

Human Resources

Professors	56
Senior Lecturers	60
Lecturers	134
Assistant Lecturers	100
Teaching Assistant	21
Research Fellows	0
Administrative Staff	101
Students	11764
of which:	
Undergraduate	10552
Master	1212
PhD - full attendance	0
PhD attendance not required	0



scientific research. The Superior Council for Scientific Research has a key role in leading those activities. In agreement with the legislation and the University's Charter, the research activities are developed in: centres of research and technological transfer; in centres of life-long education; in departments and laboratories; through individual research programs; within the Technological and Business Incubator.

Structures	
Research Institutes	2
Research Centers	3
Research Laboratories	38
Multi-user Research Centers	0

Top Priority Research Directions

Textile bio-technology; Modern processes by automation and robots; New classes of fuzzy controllers; Environmental quality; Food safety and quality; Economic prediction; Quality management system for enterprises; Accuracy in speaking and writing; Cultural context and modernism in literature; Pedagogy for pre- and primary school education; Education of adults; Intercultural education; Methodology for e-learning and coaching; Historical research based on new documents in the archives of Arad Diocese.

Outstanding Research Infrastructure

Chemical and Technological Research Center - focus: food sciences and the environmental protection; Center of Theological, Historical Studies and Pastoral - Missionary Prognosis - focus: theology and history; "Florin Valu" Research Center - focus: material sciences and applied physics; Technological and Business Incubator "UAV-IT Incubator" - a research-development-innovation entity of the INFRATECH Program of the MEC, European Institute, certified by the European Parliament.

The number of papers published in ISI - quoted journals 54

(the most cited 10 papers)

- S.G. Rival, C.G. Boeriu, H.J. Wichers, *Caseins and Casein Hydrolyzates. 2. Antioxidative properties and relevance to lipoxygenase inhibition*, J. Agricultural Food Chemistry, 2001, 49, 296-302, ISSN: 0021-8561;
- G. Cristescu, L. Lupsa, *Classes of Discrete Convexity Properties, Discrete and Computational Geometry*, 2004, 31, 461-490, ISSN 0179-5376 1432-0444 (on line);
- N. Dinca, E. Sisu, I. Sisu, I. Oprean, C. Csunderlik, M. Mracec, *Differential analysis in mass spectrometry. 2 - GC-MS and differential mass spectrometry analysis of 3- and 4-nitrobenzophenone dimethyl acetals*, Revue Roumain de Chimie, 2002, 47, 379-385, ISSN:0035-3930;
- M. Pop, I. Grosu, L. Muntean, G. Ple, D. Marginean, N. Dinca, *Synthesis and Stereochemistry of Some New 1,3-Dioxane Derivatives obtained from 1,3-Benzenedicarboxaldehyde*, Heterocyclic Commun, 2002, 8, 35-38, ISSN: 0793-0283;
- C. Idoiou, E. Segal, D. Chambre, *Kinetics of non-isothermal behaviour of synthetic cationites with low acidity*, J. Therm. Anal. Calorim., 1999, 56, 407-418, ISSN: 1388-6150;
- P. Budrugaec, E. Segal, C. Popescu, *Some remarks on the use of isothermal TG data for the evaluation of kinetics parameters. Application for degradation of polymeric materials*, J. Appl. Polym. Science, 2003, 355-360;
- F. Lucaci, *An Analytical Perspective on the Creatio ex nihilo Concept in Journal for the study of religions & ideologies*, nr. 2/2002, Babes-Bolyai University, pp. 81-95, ISSN: 1583-0039;
- E. Roventa, T. Spiricu, *Using Bézier Curves in Approximate Reasoning*, Kybernetes, Vol. 31, Nr. 7/8, 2002, p. 1121-1132;
- C. Popescu, M. Bucur, M. Szabo, *Invariant kinetic parameters of dyeing*, Coloration Technology, 2001, 117,199-203, ISSN;

- M.D. Stanescu, C. Florea, F. Chiraleu, A. Hartoapeanu, P. Sezonov, *Structure Study of Dibenzobicyclooctane alcohols*, Revue Roumain Chimie, 1998, 43, 861-866, ISSN: 0035-3930.

The number of papers published in journals from the main stream of publications 635

(the most cited 10 papers)

- G. Oudgenoeg, S. Piersma, C. Boeriu, H. Gruppen, R. Hillhorst, *Peroxidase mediated cross-linking of proteins and carbohydrates to impart new functional properties*, Industrial Proteins, 2000, 8(2), 14-16;
- I. Bele, *The Modernisation of Electric Traction with Rheostatic Adjustment for the Subway*, Facultad de Ingenieria Review - Antioquia Columbia University, 2001, 6, 10-15;
- O.Cira, *Numerical Experiments on Attraction Basin*, Advanced Modeling and Optimization (AMO), 2001, 2(3), 122-134;
- D. Herlo, *Intercultural learning by informal education in Romania*, "Andragoske studije", 2004, 1, 81-88;
- B.I.Pancan, M.F.Nicolov, *Analysis of substrates obtained in electro crystallization processes using potentials and germ formation work*, Romanian Reports in Physics, 2004, 56, 101-106;
- I.B. Pancan, I.R.Gabrus, Mariana Naghy, *The theory of water filtration. Mathematical and chemical aspects*, Bulletins for Applied & Computer Mathematics, BAM - 2076 A (CIV), 2003, 2094, 25-32;
- W. Tillmann, V. K. Naithani, C. Popescu, *Relaxation Shrinkage and Hygral Expansion of Wool Yarns and their Significance for Bubbling in Check Fabric*, DWI Reports, 2004, 126, 40-45;
- M. Simandan, *A century of Romanian Philosophy. Kaleidoscopio*, Semestrial de Ciencias Sociales y Humanisades Review, 2002, 12, 117-152, ISSN 1405-7107;

(Continued on page 61)



(Continued from page 62)

- M. Sasausan, *Die lokalen orthodoxen kirchen und problematik das Kanonischen territorium*, Ostkirchliche Studien, 2004, Heft 2-3, 159-184;
- M.D. Stanescu, C. Florea, P. Filip, *Mass Spectra of Dibenzo-CB Hydrocarbons*, Proc. Romanian Academy, Series B: Chemistry, Life Sciences and Geosciences, 2000, 2, 7-11.

The number of scientific books published by publishing houses acknowledged abroad 12
(maximum 10 significant books)

- H.J. Wichers, C.G. Boeriu, *The role of oxidising enzymes in food texture*, Cap. 12 in: *Texture in Food*, Vol. 2 *Solid Foods*, Ed D.Kilcast, Woodhead Publishing Ltd, 2004;
- C.G. Boeriu, J.E.G. van Dam, J.P.M Sanders, *Biomass valorization for sustainable development*, Cap. 2 in *Biofuels for Fuel Cells*, Eds. P. Lens, P. Westermann, M. Haberbauer and A. Moreno, IWA Publishing, 2005;
- O. Cira, C.M. Cira, *Numerical Methods for Algebraic Equations*, PAMM Centre, Technical University, Budapest, 2004;
- G. Cristescu, L. Lupsa., *Non-connected convexities and applications*, Kluwer Academic Publisher, Dordrecht / Boston / London, Series Applied Optimization, 2002;
- G. Cristescu, *Behaviours - implications and applications in convexity recognition and in topology*, PAMM Centre, Technical University, 2002;
- G. Halic, E. Halic, *Neutrix Calculus*, Series *Monographical Booklet*, PAMM Center Budapest, 2003; H. Zahn, K.

- Schäfer, C. Popescu, *BIOPOLY-MERS, Polyamides and Complex Proteinaceous Materials II* Chapter;
- *Wool from Animal Sources*, Eds: Alexander Steinbüchel, Stephen R. Fahnestock, Wiley-VCH Verlag GmbH & Co., Germany, 2003;
- E. Roventa, T. Spircu, *Management of Knowledge Imperfection in Building Intelligent Systems*, Springer-Verlag, 2005;
- E. Roventa, *Management of Uncertainty in Expert System Design*, York University, Toronto, 2003, GS/COSC 5327;
- E. Roventa, *Exercices corrigés de logique pour l'informatique*, Les Editions GREF (Groupe de Recherche en Etudes Franchophones), 2002.

The number of papers published in volumes of international scientific conferences with reviewers 328

(10 papers presented at the most prestigious events)

- C. Boeriu, C. van Dijk, *Peroxidase-mediated cross-linking of proteins) to induce new functional properties*, Proceedings of the 1st International Symposium on Enzymatic Protein Processing, Noordwijkerhout, Netherlands, 1998, p.46;
- N. Dinca., Mariana Nagy, *Elements of computer-assisted analysis in differential mass spectrometry*, Proceedings of the PAMM PC - 129/2000, Balatonmald Hungary, 2000, pp.55-58;
- O. Cira, *The Damped Newton's Type of Methods*, Proceedings of the 9th

Symposium of Mathematics and its Applications, Timisoara Romania, 2001, pp.9-11;

- L. Halmagean, V. Merin, O. Brinzan, C. Craiu, *Integrate management for wed control in vegetable cultures in accordance with ecological zone*, 8th International Conference on Food Science, Szeged Hungary, 2004, pp. 113-119;
- C. Iditoui, M. S. Bucur, C. Popescu, *The kinetics of dyeing and finishing textiles*, Proceedings of Aachen Textile Conference, Aachen Germany, 2002, B4 (157);
- R. Ioan, D. Glavan - *Study of line system for vibro-smoothing device DN 6-7*, 7 th International scientific symposium Quality and reliability of machines International Machinery Faire 2002 Nitra Slovak Republic, 2002, pp.4-8;
- F. Lucaci, *Le concept creatio ex nihilo et la semantique des mondes possible (Ontology)*, XX1st World Congress of Philosophy, Istanbul, Turkey, 2003, pp. 234-236;
- E. Roventa, T. Spircu, *Uncertain Reasoning and Beliefs*, 10th IFSA International Congress, Istanbul, Turkey, 2003, pp.73-76;
- M.D. Stanescu, *Enzymes in Textile Finishing, Overview*, Proceedings of World Textile Conference, Bruges Belgium, 2002, pp. 446-453;
- M.D. Stanescu, S. Mihuta, S. Bucur, M. Raileanu, D. Popovici, *Wool finishing with enzymes*, Proceedings of the 2nd International Conference on Textile Biotechnology, Athens USA, 2002, pp.109-116.

Excellence Centers

IT Development Centre, in collaboration with the Chancellery of North Rhineland, Westfalen, Germany; Centre for Ambient Cooperation, in collaboration with the Romanian Academy; Retezat National Park, Adda North Park, North Italy; Centre for Promotion of INFRATECH, BIOTECH,

MENER, INVENT National Programmes; Centre of Technological Transfer for Agriculture and Food Industry, in collaboration with Universita degli Studi in Udine, Italy for technological transfer in the field of agribusiness.



International Cooperation

Programme COST Action 847 Textile Quality and Biotechnology; ClipREG of the E.U. for the development of the Euroregion DKMT; Phare 2002 Economic and Social Cohesion (Centre for tourism development; Professional conversion of labour force in Arad County); Phare CBC Web Tourism, in co-operation with the Romanian community in Hungary; FP 5 - West-East ID; NATO - Biotechnology for Strategic Raw Materials; Jean Monnet - European Construction Process, Leonardo da Vinci, Socrates, Education 2000+.

International Scientific Activities
(the 10 most important ones)

- AVU international scientific symposia, 2000, 2002, 2004;
- International Summer Schools: "Soft-Computing" 2002, 2003, 2004;
- AVU international conferences: "Fuzzy intelligent sensors", 2000 and "Fuzzy Fusion Systems", 2001, with Universite de Savoy;
- "Jesus Christ- the same yesterday, today, and for ever" (Hebr. 13:8), 2000;
- Christian Anthropology and Postmodernism, 2002; Italian-Romanian Conference "Cultural affinities and integrated development" with Udine University.

**Products created/homologated/
capitalized/Inventions/Patents**
(maximum 10 significant products)

12

- M. Schurink, C.G. Boeriu, W.J.H. van Berkel, H.J. Wichers, True lipoxygenase inhibitor peptides and their use. European patent application EP 04077592.6, 2004;
- G.Oudgenoeg, S.R Piersma, C.G. Boeriu, R. Hilhorst, H. Gruppen, A.G.J. Voragen, C. Laane, Method of enzymatic cross-linking proteins and phenolic polymers. European patent EP 1169922, 2000;
- C.G. Boeriu, C. Van Dijk, H. Huizing, Enzymatic modification of proteins for industrial application. Patent nr. NL 1007158/30.03.1999; WO9916893;
- M. Oana, V. Ciulina, I. Ilie, M. Duma, Parentstock of Berlandieri x Riparia Kober 58B 54 Mn grapevine. Invention 1182 / 17.04.2003, applied in the western region of the country;
- M. Oana, S. Popescu, V. Ciulina, M. Dobre, Clone of Steinchiller 90 Mn grapevine. Invention 1181 / 17.04.2003, applied in the western region of the country.;
- M. Oana, S. Popescu, V. Ciulina, M. Dobre, Clone of Majorca Alba 204 Mn grapevine. Invention 1180 / 17.04.2003, applied in the western region of the country;
- R. Gabrus, S. Jeleriu, M. Strajescu, C. Rosca, O. Crucin, C. Ghiara, D. Mitzur, Procedure for obtaining a small tube for the detection of hydrogen sulphide, Romanian patent 117306 B/30.01.2002;
- S. Jeleriu, M. Strajescu, R. Gabrus, C. Rosca, O. Crucin, C. Ghiara, D. Mitzura, Procedure for obtaining a small tube for the detection of carbon sulphide, Romanian patent 117307 B/30.01.2002;
- O. Crucin, P. Teodor, C. Rosca, C. Ghiara, D. Mitzura, R. Gabrus, J. Sever, M. Strajescu, Procedure for recovering the palladium out of used catalysts, Romanian patent 117310 B/30.01.2002;
- D. Herlo, S. Porumb, I. Rehon, G. Muresan - Soft for education: 1. Hydrocarbon Study ORDA 02370001, 2. Alkene V.2 ORDA 02370002, (3). Arene V.2 ORDA 02370003, Certified 0452/28.11.2001.

**Financial resources
obtained for
research**

	National millions ROL	Internat. EURO
2004	8195	349599
2003	883	124533
2002	411	165469
2001	455	51944
2000	1027	8251
1999	64	5845
1998	25	0
1997	29	0
1996	21	0
1995	5	0



"Aurel Vlaicu" University of Arad sustains socio-economic development in the "5 West" region by infrastructure and projects, such as: the first Technological and Business Incubator, financed by the Romanian government with a 240,000 Euro grant; partnership contracts with Romtelecom; establishing the University's CISCO Academy, focused on studying and implementing new technologies in the field of informatics; the study concerning the risks and costs of the separate and combined functioning of SC CET Arad and SC ARTERM Arad, in a program of 75,000,000 ROL, financed by the City Council of Arad, etc. Such partnerships are the most important factors in the creation of instruments for regional development, beginning with the foundation of instruments and strategies, to the implementation of research results, in accordance with the requirements of the economic environment.

The Technological and Business Incubator (INFRATECH project-240,000 Euro-Government Decision #406/2003).



The services provided by UAV-IT Incubator can be divided into two categories: access services to communication infrastructure and consulting services for the establishment, promotion, and financial management of businesses, all based on information technology. The main direction of the activity is: the transformation of ideas into opportunities, of opportunities into activities, of activities into business, and of business into market economy. Its interests concern: intellectual property protection; projects for medium and small enterprises of "5 West"

region through E.U. programs; acquiring structural and regional development funds (PHARE, SAPARD, ISPA, etc) as well as funds for higher education and post-university qualifications (*ERASMUS, SOCRATES, LEONARDO da VINCI* or other organisations).

Through two-year co-operation with Gent University of Belgium in the field of textile research, "Aurel Vlaicu" University has won a **NATO Grant**. The project's main objective is transfer of knowledge concerning biotechnology, applied to textile raw materials, which are of strategic interests not only for Romania, but also for other Eastern European countries. The project ensures the continuation of the partnership in the textile research field. The total value of the grant is 25,000 Euro. The purpose of this project, as of all NATO projects, consists in upgrading the research infrastructure and knowledge of the new NATO members.

AMTRANS national program concerns the integration of the Romanian transport system into the EU, harmonizing Romanian solutions with those of Europe. In a project whose total value amounts to 4.5 billion ROL for the period September 2004 - July 2006, a trolley-bus will be built for urban transport, named "SOLO with chopper", which recoups energy when it brakes. It is dedicated to people with major handicaps in accordance with CE Directive 85/2001, ensuring compatibility with the European system. The partners of the project are ICPE Bucharest, SAERP Bucharest, Astrabus Arad, and the beneficiary is SC ASTRA TRINITY Arad.

The stages of the project are: elaboration of technical documentation, pilot and industrial productions, dissemination of research results. To accomplish this task, the laboratories have been fitted with computers, VCRs and video projectors, and all the devices for the successful completion of the project. A final product is expected to be produced, which will be certified by the proper authority.

CISCO Academy has been functioning as part of the University since 2002. It was a welcomed event in the academic



Presentation of Laboratories

Presentation of Programs

Success Stories



environment. The students will be able to make computer networks, from projection stage to implementation, all at international standards. The graduation diplomas obtained from the Academy are internationally recognised. The Academy prepares students for the CCNA (CISCO Certified Network Academy), an exam which is highly appreciated in the IT field. Students have access to exceptional laboratories equipped at international standards. This was possible thanks to the successful partnerships between the University and the Arad County Council introducing e-government in the county of Arad (e-Arad). A second major success was achieved by a research partnership with **Telecommunication Arad** whose beneficiary is **Romtelecom Arad**. A Frame Relay was made between two local computer networks for performance measures, in order to evaluate all possibilities and facilities of this type, for the identification of real and practical solutions in the public phone system.

The European Institute in "Aurel Vlaicu" University of Arad was founded in February, 2002, and certified by the European Parliament through its European MP Doris Pack, Co-director of the Institute and President of the Commission for the Establishment of Learning and Culture in Central and Eastern Europe, as well as by the presence of the representatives of the Saar region of Germany. The Institute was set up through the involvement of staff members from the Faculty of Humanities and Social Sciences. Its major aim is to create institutional connections, public-public and public-private partnerships between UAV and the countries of the European Union.

The European Institute played a leading role in the project to redecorate and renovate the ancient Arad water tower, turning it into a museum for antiques, arts, and spare-time. The two partners in this project were the local County Council and the IE representatives from Saarbrücken.

The European Institute was the initiator of a plan concerning the establishment of a publishing house, in partnership with the Austrian PEN CLUB. Originally a Munich publishing house it has now its headquarters in Vienna, known as Vier Viertel Verlag. This publishing house will facilitate the spreading



of scientific results at international level.

Another partnership was achieved to promote economic development through the Technological and Business Incubator and ASTRACONSULT from Forbach, France and Saarbrücken, Germany. The purpose is to implement academic research in German and French spaces, as well as to favour economic exchanges between the two structures.

"The educational and methodological multimedia laboratory" was the result of a \$10,000 "Matching Grant", financed by the International Rotary Foundation. The results of the project were: purchase of high tech computers, printer, scanner, and video projector, class room, furniture; upgrading of the classroom and internet connection were provided by UAV. The laboratory was and is still used not only by the members of DPPD (Informational Didactics and Computer-Assisted Training), but also by the member of the Faculties of Economic Sciences, Engineering, and Exact Sciences. Students from day courses, those in low-frequency courses, and graduate programs have access to this highly equipped laboratory.





Rector

Prof. Vlad Ulmanu, PhD

Historical Overview of the University

Petroleum and Gas Institute was founded in Bucharest in 1948 by the Decision of the Public Ministry no. 249/26.10.1948. The institute has functioned in Bucharest until 1975 when it was completely transferred to Ploiesti on the basis of the State Council of the Socialist Republic of Romania's Decree no. 702/1973, which stated the unification of the Petroleum, Gas and Geology Institute of Bucharest with the Petroleum Institute of Ploiesti. After 1990, the institute changed its name into the Petroleum - Gas University of Ploiesti.



The university teaching staff have conceived and put into practice the entire structure of the petroleum and gas university courses which they have continually improved in order to respond to international requirements. During 58 years of existence, our university has benefited from the contribution of remarkable personalities: S. Stefanescu, Gh. Murgearu, Al. Codarcea, N. Petruian, Gh. C. Suci, V. Robu, V. Vantu, S. Raseev, D. Raseev, R. Woinaroski, T. Oroveanu, Gr. Ioachim. The entire leadership structure in the Romanian petroleum and gas industry is made up of UPG Ploiesti graduates. Our university trained over 25000 specialists, out of which approximately 4000 from 85 countries.

Faculties and Departments

- 5 faculties (Mechanical and Electrical Engineering, Petroleum Engineering, Petroleum Refining and Petrochemistry, Economic Sciences, Letters and Sciences);
- 3 colleges (Câmpina, Primary School Teachers, Technical);
- 5 departments (Research, Open Distance Learning, Information Technology and Communications, International Relations, Teacher's Training).

Master and Doctoral Programs

MASTER - 13 master programs in all 5 faculties; 2 master programs in partnership with foreign universities (INDE Ploiesti, MBA-FESE); 4 postgraduate courses;
Doctoral Programs - 3 fundamental fields, engineering = 7 fields; exact sciences = 2 fields; natural sciences=1 field.

Patrimony

A campus of 63.500 sqm: 85 lecture halls; 135 laboratories; library with over 500.000 volumes and 66 periodicals; a publishing and printing house; sports facilities; 7 student hostels with 2500 places; canteen - restaurant with 500 places, Students' House; 2 medical facilities; a productive workshop; a training base in the field of drilling and oil production.

Fields in which human resources are trained

Mechanical Engineering; System Management and Engineering; Electrical Engineering; Electronic Engineering and Telecommunications; Computers and IT; Mines, Petroleum and Gas; Geological Engineering; Chemical Engineering; Environmental Engineering; Economy; Finance; Accountancy; Statistics and Economic Informatics; Management; Romanian Language and Literature; English Language and Literature; French Language and Literature; Mathematics; Informatics; Chemistry; Physics; Administration Sciences; Education Sciences.

Presentation of research activity chart

The research activity is performed in the Departments and Research Centres of our university. The Scientific Council, that is subordinated to the UPG Senate, coordinates the research activity and the executive leadership is ensured by the Vice Rector with Research and by the Director of the Research Department.

Structures	
Research Institutes	0
Research Centers	9
Research Laboratories	78
Multi-user Research Centers	0

Human Resources

Professors	64
Senior Lecturers	71
Lecturers	96
Assistant Lecturers	109
Teaching Assistant	32
Research Fellows	-
Administrative Staff	419
Students	10891
of which:	
Undergraduate	9502
Master	994
PhD - full attendance	23
PhD attendance not required	372

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LABORATORY OF PHYSICAL - CHEMICAL ANALYSIS

- FTIR spectrometer-Avatar 360 Nicolet, 400-4000 cm⁻¹ spectral range, 0,5 cm⁻¹ resolution, with HATR and software TQ Analyst accessories for quantitative analysis;
- UV-VIS spectrometer- Jasco V550 with double beam, 190-900 nm spectral range, 0,3 nm resolution and integrating sphere;
- gas-chromatograph Agilent 6890N, with PIONA software for complete gasoline analysis;
- X-Ray Fluorescence spectrometer / 3 PC, Pentium IV, HDD 40 GB; /Mettler balances AG204, 0,0001 g precision;
- Magnetic blender, thermo resistant glass-ware;
- scanner Bear Paw 2400;
- capacity: 40 places - 2 hood work points;
- 2 apparatus with 20 000 BTU each, for acclimatization.



Web address: <http://www.merlin-project.info>;
Contract value (Romanian partner): 29794 euro;

Project Co-ordination (Romanian partner):
Prof. Mihaela Oprea, PhD;

Research Project FP5

Project title: Multi-Pollutant Multi-Effect Modeling of European Air Pollution Control Strategies - an Integrated Approach;

Project type: RDT;

Contract number: EVG3-2002-00506 - MERLIN-NAS;

Project duration: April 15, 2002 - October 31, 2004;

Partners: University of Stuttgart, Stuttgart, Germany (Co-ordinator); University 'Petroleum-Gas' of Ploiesti (UPG), Ploiesti, Romania; University College London (UCL), London, United Kingdom; The Norwegian Meteorological Institute (DNMI), Oslo, Norway; Institute for Ecology of Industrial Areas (IETU), Katowice, Poland; Ecofys B. V., Holland; Aristotle University of Thessaloniki, Greece; University of Ostrava - Energy Research Centre (ERC), Ostrava, Czech Republic; National Institute of Meteorology and Hydrology (NIMH), Sofia, Bulgaria;

ABSTRACT: The aim of this proposed project is the development of a computer-based model system to determine the bundle of air pollution control measures, that is capable of achieving compliance with air quality limit and target values (for emission, concentrations and deposition) for specific pollutants at least-costs. Furthermore, the model will be used to calculate benefits, i.e. avoided damage costs by implementing air pollution control measures, first in a physical way, and second - as far as possible - in monetary terms. Thus, costs and benefits of different bundles of measures can be estimated and cost-benefit analysis can be applied. In addition, macroeconomic effects and distributional impacts of pollution control strategies are determined.

Financial resources obtained for research

	National millions ROL	Internat. EU/RO
2004	18045	5200
2003	14214	25636
2002	6929	214602
2001	4754	549543
2000	2069	228274
1999	1062	158544
1998	394	141848
1997	288	158271
1996	180	91140
1995	131	0



The project is designed for duration of three years, matching the plans for setting up a Clean Air for Europe (CAFE) strategy. During the first year, data collection and the definition of interface within the project and to external sources/users will be the focus. Throughout the second year, model adoption and the development and enhancement of the assessment tools will prevail, resulting in the availability of a complete instrument for integrated assessment at the beginning of the third year. This last year will be used for testing and applying the model framework, adapting to upcoming issues and providing policy support to the EC bodies involved in developing air pollution control strategies for Europe.

Regarding the overall objectives described above, the following tasks have to be carried out in the project:

- preparation of input data;
- development and application of an integrated assessment model;
- development of a methodology to assess macroeconomic and distributional effects;
- application of the model framework.

Modeling and assessment will be conducted at all necessary levels, from atmospheric dispersion modeling on European and urban scale to macroeconomic impact assessment of optimized control strategies for all relevant pollutants and the assessment of distributional effects and burden sharing issues.

Besides being applied to a base case and future trends within the project, the instrument developed will be designed to serve as a tool for policy support.

Major milestones will be the completion of a data collection after 12 months and the availability of the full integrated modeling instrument after 24 months. A final milestone will be the completion of the analysis and defining recommendations for policy deployment and implementation after 36 months. Results from this project will be tools and methods to assess European air pollution control strategies, their efficiency to achieve air quality targets and impacts on economic indicators.



Prof. Ion Cucu, PhD

Historical Overview of the University

Higher education in Targoviste is rooted in the century of the Romanian humanism, during Matei Basarab's rule.

It was formalized and institutionalized again in 1991, when the Technical and Economic College was founded and, later on, "Valahia" University of Targoviste appeared as a result of the Romanian Government Decision no. 288/01.06.1992. Originally, the university comprised two faculties, one college, with 14 specializations and now there are 9 faculties, 3 colleges and 4 departments.



Faculties and Departments

- 9 faculties: Economic Sciences, Juridical Sciences, Humanities, Theology, Letters, Environmental Engineering and Biotechnologies, Electrical Engineering, Engineering and Science of Materials, Music;
- 3 colleges: Technical College, Pedagogical College, Economic and Administration College;
- 4 departments: Scientific Research Department, International Relations Department, Pedagogical Training of the Teaching Staff Department, Continuing Education and Distance Education Department.

Master and Doctoral Programs

MASTER - 20 programs. MBA organized by the National Institute for Economic Development (INDE), DESS "Gestion

d'Entreprise" in cooperation with Paris XII - Val de Marne University.

Doctoral Programs: 2 fundamental fields: History, Science and Materials' Engineering.

Patrimony

16 buildings endowed with 250 laboratoires, 21 amphitheatres and over 200 classrooms: 10 student hostels of 2065 beds, 1 canteen of 250 seats, 8 libraries totalling approximately 50000 volumes, Student's Club (800 seats), The University Aula, "St. Ionica" Chapel.

Fields in which human resources are trained

Economic Sciences, Juridical Sciences, Social and Political Sciences, Sciences of Nature, Physical Culture and Sport, Theology, Exact Sciences, Arts, Engineering Sciences.

Presentation of research activity chart

Research at Valahia University of Targoviste is being done at the research institute, centres, divisions and departments. The operative management is ensured by the Vice Rector and by the Management of the Department for Scientific Development and of the Institute for Multidisciplinary Scientific and Technological Research, subordinated to the University Senate.

Structures

Research Institute	1
Research Centers	13
Research Laboratories	25
Multi-user Research Centers	-

Top Priority Research Directions

To stimulate the research activities in our university, in 2005 there was introduced the internal competition for grants of type T (for Doctorate candidates) and type S (for seniors), financed from the university's own resources.

The main research directions are:
Engineering and nano-sciences, Durable development, ecological systems, Technologies for a knowledge-based society, Alimentary quality and security, Romania's integration into the Euro-Atlantic structures, Social-Human dynamics.

Human resources

Professors	46
Senior Lecturers	43
Lecturers	118

Assistant Lecturers	88
Teaching Assistant	47
Research Fellows	5
Administrative Staff	37

Students	10432
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of which:

Undergraduate	8903
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Master	1403
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PhD - full attendance	8
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PhD - attendance not required	118
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Outstanding Research Infrastructure

Mobile station for monitoring the environmental factors, Risograph RP 3500, Laser NdYAG, electronic microscope, mobile device of measuring photosynthesis and evapo-transpiration, Laboratory for data acquisition, experimental stand for solar equipment (monitoring synoptic pane, image acquisition system), over 1000 computers connected to the Internet, Virtual Library with access to the Springerlink data base.

International Scientific Activities

(the most 10 important ones)

- CEDIMES European Workshop
- "Management of transition" International Workshop;
- The third International Balkan Workshop on Applied Physics, 2002;
- International Symposium on Electrical Engineering;
- "Mechatronics, micro-technologies and new materials" International Symposium";
- International languages, cultures and civilizations in contact" International Symposium.

Products created/homologated/ capitalized/Inventions/Patents

(maximum 10 significant products)

6

- Method of obtaining consistent greases, Jipa Silviu, 2001;
- Method of plasticizing vulcanized butylic rubber, Jipa Silviu, 2001;
- Method of obtaining agglomerate magnets with organic binder, Jipa Silviu, 2001;
- Method of obtaining a fluorescent magnetic dust, Jipa Silviu, 2002;
- Method of determination glucose in cellulose materials, Jipa Silviu, 2002;
- Special refractory monolithics, Angelescu Nicolae, 2003.

Number of papers published in ISI - quoted journals

87

(the most cited 10 papers)

- *Kinetic study on thermal degradation of low density polyethylene stabilized with chalcone derivatives*, Dinoiu V., Gorghiu Laura, Jipa S., Zaharescu T., Stenescu R., Dumitrescu Crinela, *Polymer Degradation and Stability*, 2004.
- *LDPE protected by secondary amines from dehydroabietic acid methyl ester*, Jipa S., Zaharescu T., Gorghiu Laura, Dumitrescu Crinela, *Polymer Testing*, 2004.
- *Laser surface hardness*, Oros C., *Journal of Optoelectronics and Advanced Materials*, 2004.
- *Heteropolysalts of organic bases*, Radulescu Cristiana, Constantinescu Gh., *Revista de Chimie*, 2004.
- *Photovoltaic behaviour of weakly interacting P₆₁*, Wrobel D., Boguta A., Waskowiak A., Ion Rodica, *Non linear Optics Quantum*, 2004.
- *Kinetic approach on stabilization of LDPE in the presence of camosic acid and related*, Zaharescu T., Jipa S., Stenescu R., Gorghiu Laura, Dumitrescu Crinela, *Journal of Polymer Science, Polymer Chemistry*, 2003.
- *Methylene-blue modified polypyrrole film electrode for optoelectronics applications*, Ion, R.M., Scarlat, F., Pavel, E., *Romanian Journal Optoelectronics and Advanced Materials*, 2003.
- *Thermal stability of additivated isotactic polypropylene*, Jipa S., *Polymer Bulletin*, 2002.
- *Investigation involving shock waves generation and shock pressure measurement in direct*, Oros C., *Shock Waves*, 2001.
- *He improved point matching method for triangular metal gratings*, Scarlat F., *Nucl. Instr. Phys. Res.*, 2001.

The number of papers published in journals from the main stream of publications

617

(the most cited 10 papers)

- *Gravetian of Pitra-Neamt*, Carciumaru M., Lucas G., Angheliniu M., Carstina O., Cosac M., Margari M., Nita L., Plesa M., Dumitru F., *Memoaria Antiquitas*, 2004.
- *Characterisation of physical properties of polymeric blends, utilising diferent polyurethanes*, Enescu, C., Garda, M.R., Saiter, J.M., Fairlieb, A., *Metalurgia*, 2004.
- *Space monitoring of the ocean - atmosphere interaction*, Loghin, V., *Annals of "Al. I. Cuza" University of Iasi*, 2004.
- *Spectrofluorimetric method for impurities detection in tungsten tetraphenyl-porphyrin*, Ion, R. M., Scarlat, F., Scarlat, Fl., Niculescu, V.I.R., Macau, C., *Romanian Journal of Physics*, 2003.
- *Characterization and comparing between silicon and cuisne2 photovoltaic modules*, Ivan, I. A., Cimpoca, V., Olariu, N., Grottko, M., Dogaru, V., Jelea, A., *Romanian Journal of Physics*, 2003.
- *Comparative study of some calix[n]arenes and other phenolic compounds influence on the thermal stability of LDPE*, Gorghiu, L.M., Dumitrescu, C., Oteanu, R.L., Bumbac, M., Jipa, S., *Romanian Reports of Physics*, 2003.
- *An Application of the degree theory to bifurcation problems with bounded perturbation*, Mortici C., *Studia Universitatis Babeş-Bolyai. Mathematica*, 2002.
- *The Ciocarei-Borosteni: Middle Paleolithic finds and technological analysis*, Carciumaru M., *Antiquity*, 2002.
- *Paleobotanical contributions to the knowledge of economical and spiritual life of the gumeinita's communities*, Carciumaru, M., *Annals of Valahia University of Targoviste*, 2001.

(Continued on page 73)



Laboratory of Quaternary Paleography and Inter- disciplinary Archeology

Audio/video and computing equipment:

- 10 computers (2 Pentium III systems, 8 Pentium IV systems or equivalent); 1 laptop (Pentium IV), 2 LCD monitors, 8 CRT monitors, integral radio Internet connection; 6 printers (1 colour laser Minolta, 3 HP laserjet, 2 HP deskjet), 3 scanners (2 HP 3500 series, 1 Epson Perfection 3170 Photo), 3 copiers (2 UTAX 237, 1 Toshiba 1550);
- Sanyo PROxtrax video projector, 2 digital cameras (1 Olympus C-359 CAMELIA, 1 Sony DSC-7717 Cyber-Shot), 1 digital video camera (Panasonic NV-GS 4 EG), 1 DVD player Philips DVD 640, 2 TV sets (1 Panasonic Quintrix), 3 video players (Samsung SV 251 GX, Sony SLV-SE 450, Philips VR 230), 2 projector screens, JVC audio line, GENA retro projector, EnnaMat 12003 diaprojector, Philips Multimedia speaker system, Philips Ucam II Webcam.

Research equipment:

- 2 IOR biological microscopes, 1 T 32 C Janetzki centrifuge, 1 binocular magnifying glass, 1 electronic callipers, 2 mechanical callipers;

Field archeological research equipment:

- Yamaha Generator (220 V; 500 W), Zeiss Theodolite, Velbon Tripod, 8 tents X 4 persons, 1 aluminum telescopic scale



(Continued from page 72)

- *Du contract social chez Jean-Jaques Rousseau*, Mares P., Revue Roumaine de theorie sociale, 2000.

The number of papers published in volumes of international scientific conferences with reviewers

925

(10 papers presented at the most prestigious events)

- *Le paleolithique moyen de la grotte Cioarei-Borosteni (Carpatas Meridionales Roumanie)*, Carciumaru M., Moncel H.M., Carciumaru R., Actes du XIVth Congress UISPP, Liege, Belgium, 2004.
- *La television et l'identite de la femme, etude realisee a partir de cas roumains et francais*, Popescu Delia, Documents de travail, Universite du Litoral Cote d'Opal, 2004.
- *Cationic dyes derivatives from heterocycle system 2-aminothiazolo [5,4-b]-quinoxalin-7-carboxylic acid*, Radulescu Cristiana, Ionita Ionica, Hossu Ana-Maria, 10th International Conference Colorchem'04 - Pardubice, Czech Republic, 2004.
- *A new topological method for determination of the network reciproca land symmetrical multipol circuits*, Andrei H., Cepisca C., Spinel F., Dogaru V., International Conference on Circuits, Signals and System CSS, Florida, USA, 2004.
- *Study of postharvest physiology and resistance at diseases of some ornamental plants*, Teodorescu Gabriela, Qualiflor Conference, Olanda, 2003.
- *Comportament dinamic des structures mecanique complexes. Application pour un essai sismique*, Marin C., DESS-LECAP, Laboratoire d'etude et de caracterisation des amorphes et polymers, University of Rouen, France, 2003.
- *Pitfalls of numerical methods in evaluation of multibody dynamics*, Zaharia S.E., Stroe I., Iordache

Stefania, Tache Carmen, International Conference on Advances in Computational Multibody Dynamics, Lisbona, 2003.

- *Le paleolithique moyen tardif en Roumanie*, Carciumaru M., Plesia M., "Topical Issue Of The Research Of Middle Palaeolithic Period In Central Europe", Tataburg, Ungaria, 2003.
- *Une nouvelle maniere de penser et agir en metier de apolitique pour une Federation Regionale Europeenne (1930-1933)*, Sbarna Gh., Les Conferences des Balkans/ Annuar of "Democritus" University, Comotini, Greece, 2003.
- *A multimedia laboratory in mechanics*, Zaharia, S., International Symposium on Engineering Education IGIP, Klagenfurt, Austria, 2001.

The number of scientific books published by publishing houses acknowledged abroad

2

(maximum 10 significant books)

- *Large scale system: theory and applications*, Filip Florin, 588 p., Elsevier Science LTD (Pergamon) Oxford, UK, 2001.
- *Intellectual and industrial propriety*, Gheorghiu Gheorghe, 197 p., Ed. Kluwer, Netherland, 2001.



Success Stories

International Cooperation

International Affiliations of the University



International Relations

A constant concern of "Valahia" University of Targoviste, in the context of European integration and agreement with the imposed educational standards, has been the strengthening and diversifying of international cooperation. For a viable activity in this direction, the International Relations Department has been created. Its main mission is to initiate, carry on and finalize European inter-university projects, partly or completely subsidized by the European Community.

International Cooperation

In 1998, "Valahia" University laid the foundations of a partnership with universities from France, Great Britain and Spain for five projects within the TEMPUS Programme.

"Valahia" University is also a promoter or partner in pilot-projects or projects of mobility within LEONARDO DA VINCI Programme, alongside universities from France and Italy.

Starting with the academic year 1999-2000, "Valahia" University has been a member of the SOCRATES/ERASMUS Mobility Programme for teachers and students. The number of bilateral cooperation agreements has grown each year, reaching, in the academic year 2004-2005, 29 contracts with universities from France (13),

Finland (4), Greece (3), Italy (3), Spain (3), Great Britain (1), Belgium (1), Denmark (1).

"Valahia" University participates in the FRANCODE Programme initiated by the Francophone International Agency and the National Conservatoire of Arts and Crafts (CNAM) from Nantes, whose director is Dr. Maria Niculescu, a full professor at our university.

"Valahia" University has inter-academic agreements with universities from Canada (2), USA (3), China (3), Germany (1), Algeria (1), Bosnia-Herzegovina (1), Israel (1), Kazakhstan (1), Moldova (6), Morocco (1), Portugal (1), San Marino (1), Albania (1), Ukraine (1) and Turkey (1).

International Affiliations

"Valahia" University is affiliated to the Research Institute for International Development and Social-Economic Modifications (CEDIMES). The President of the Romanian CEDIMES branch is Prof. Dr. Ion Cucui, the Rector of the university.

"Valahia" University is affiliated to the Association of European Training in Accountancy and Audit (AFECA) and to the European Association of Law Schools (ELFA). In 1997 a branch of the National Institute for Economic Development (INDE) was founded, an institute created by the Academy of Economic Studies from Bucharest in cooperation with the National Conservatoire of Arts and Crafts from Paris.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	9295.478	-
2003	7678.7	198700
2002	1432.3	71300
2001	2249.5	34000
2000	942	7300
1999	585	-
1998	431.5	-
1997	200	-
1996	57.2	-
1995	-	-

Success Stories

Poiana Ciresului site-school, Piatra-Neamt

In 1998, the Paleolithic research crew from the History-Archeology Department of "Valahia" University inaugurated the systematic research of Poiana Ciresului Paleolithic settlement. This archeological site lies on a terrace of Bistrita river, a few kilometres from the city of Piatra-Neamt. Its high, sheltered position, surrounded by natural springs, explains why Paleo-lithic hunters chose to settle in this place for good, at long periods of time, between 27000 and 14000 B.C. The human communities that settled in Poiana Ciresului belong to the so-called Gravettian culture (the name comes from a French settlement). They were mobile groups, of small dimensions, skilled in reindeer, wild horse and big herbivore hunting. Their halts left substantial

archeological evidence, which stirred the interest of archeologists all over Targoviste and turned this Paleolithic site into a site-school for young people fond of archeology from Romanian or foreign universities. The richness and degree of conservation of the archeological vestiges have facilitated the implementation and improvement of modern archeological research techniques, interested in fully recovering and interpreting archeological documentation. Every year, over five campaigns, more than 700 Romanian and foreign students have had the opportunity of actively participating in this site research, together with the Master and Doctorate candidates. Beginning with 2004, the site has become the object of an international research contract which involves "Valahia" University, the Pre and Protohistory Institute of Erlangen (Germany) and Aix-de-Provence University (France), whose specialists take part in excavations alongside with the students and their Romanian teachers.

Some of the Poiana Ciresului discoveries are already famous across Europe. In addition to the hearth relics and numerous stone tools, the remains of the oldest pierced snail necklace in Romania as well as the oldest mammoth ivory spear spike were recovered from Poiana Ciresului archeological levels. Many other objects are rarities for the Paleolithic archeology in Romania (adornments of pierced wolf or stag teeth, bones decorated with incisions). These artifacts as well as the vestiges discovered in other archeological sites of the university are studied in the university's laboratories in compliance with the highest scientific standards. The foreign specialists' interest for the discoveries made by the Targoviste group confirms the quality of their scientific act and the remarkable richness of the Romanian cultural patrimony in whose knowledge and protection all history lovers are invited to take part.



Rector

Prof. Adrian Graur, PhD

Historical Overview of the University

1963 - Foundation of the Pedagogical Institute offering courses on a 3-year basis on Maths - Physics, Philology, History - Geography, Physical Education. 1976 - Foundation of MTC (Machine Construction Technology), training assistant engineers, day courses and evening courses, and the preparatory year for foreign students. 1977 - foundation of MCT training engineers, day and evening courses; Four-year Humanist



Studies programs are temporarily suspended. 1988 - The following specializations are introduced: Industrial Energetics, Machine Tools, Technological Tools, Computers and Automation, training engineers, evening courses; Humanist Studies are temporarily suspended. 1990 - By government decree (March 7th, 1990), it becomes a university with technical departments, as well as specializations dealing with economics, social sciences, and forestry.

Faculties and Departments

- Faculty of Physical Education and Sports; Faculty of Food Engineering; Faculty of Electrical Engineering; Faculty of Mechanical Engineering; Faculty of History and Geography; Faculty of Letters and Communication Sciences; Faculty of Forestry; Faculty of Economics and Public Administration; Faculty of Education Sciences Departments: Education Department, Distance Learning Department, Quality Management Department, Communications and Information Technology Department.

Master and Doctoral Programs

MASTER - 32 master programs: Informatics, Computer Engineering and Process Control, Process Control Intelligent Systems, Computer Science and Engineering, Computer Assisted Visual Art, Design and Image, Computer Assisted Mechanical Engineering, Biomechatronics, Technical and Financial Valuation, Modern Wooden Buildings, Management of Trade, Tourism and Services Firms, Management of the Public Administration of the European Union Countries, History of the Romanian Language, Theory and Practice of Translation, Heritage and Multiculturality, Communication and Public Relations.

Doctoral programs - 7 doctorate fields: Mechanical Engineering, Electronics and Telecommunications, Electrical Engineering, Science and Engineering of Materials, Computer Science, Forestry, History.

Patrimony

Educational facilities (in square meters): Body A - 3, 593; Gym - 648; White House - 203; Body B + hall - 3704; Body C - 1800; Body D - 2.287; Continuing Education Department - 89; Body E - 516; Body F - 693; Body G - 198; Body H - 1029; Sipotel Chalet - 457; 4 Student hostels - vacancy: 1044.

Fields in which human resources are trained

Mechatronics and robotics, Industrial Engineering, Engineering and Industrial Management, Mechanical Engineering, Study of materials, Computers and Information Technology, Study of Systems, Power Engineering, Electrical Engineering, Electronic Engineering, Telecommunications, Forestry, Language and Literature, Communication Sciences, Economics, Accounting, Economics: International business, Management, Finances, Administrative Sciences, Geography, History, Philosophy, Physical Education, Education Science.

Presentation of research activity chart

The research activity is carried on in research centres, research groups, and departments, under the guidance of the Rector in charge of the scientific research and the Senate Chancellor.

Human resources

Professors	44
Senior Lecturers	44
Lecturers	120

Assistant Lecturers	81
Teaching Assistant	40
Research Fellows	0

Administrative Staff	28
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Students	9721
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of which:

Undergraduate	8866
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Master	742
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PhD - full attendance	17
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PhD attendance not required	96
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Structures	
Research Institute	0
Research Centers	12
Research Laboratories	3
Multi-user Research Centers	0

Top Priority Research Directions

Pattern Recognition, Distributed Artificial Intelligence, Intelligent Habitat Structures, Unconventional Electrical Microengines and Microdrives, Solar Energetics, Tribology and Contact Mechanics, Structures Mechanics, Study of materials, Optimisation of Fabrication Technology and Equipment, Productics, Modern Processing Technology, Forest Dendrochronology, Integrated Forest Monitoring, The Impact of the Society on the Geographical Landscape, European and Euroatlantic Integration and the destiny of the Romanian Community from Ukraine, Food additives: food preservation and safety norms, Communication skills improvement.

Outstanding Research Infrastructure

Electronics and telecommunications laboratory, Pattern recognition laboratory, Machines and electrical drives laboratory, Tribological fundamentals laboratory (atomic power microscope, laser profilometer UBM14, Vishay Polariscope 500, SPECOL spectrometer 1100, experimental stalls).

International Cooperation

- 4 COST projects;
- 4 French-Romanian projects;
- 1 COPERNICUS project;
- 1 COMENIUS project;
- 2 LEONARDO da VINCI projects;
- 21 bilateral agreements.

International Scientific Activities (the 10 most important ones)

- International Conference on Development and Application Systems
- Annual International Computers Contest for Students HARD & SOFT
- Distributed Systems Seminar
- Inventics - Conference and Exhibition
- VAREHD

Number of papers published in ISI - quoted journals

15

(the most cited 10 papers)

- Strugariu, T., Naim, S., Fayt, A., Bredohl, H., Brouillard, F. (1998). *Fourier transform spectrum of 180 and 170 enriched OCS from 1800 to 2700 cm⁻¹*, Romanian Journal of Physics, vol. 43, nr. 7-8, Bucharest.
- Filote, C., Graur, A., Antonesei, G. (1998). *Speech Recognition Algorithm Implemented with a DSP*, The International Conference - UKROBRAZ, Kiev - Ukraine.
- Graur, A., Filote, C. (1998). *Voice Controlled Vehicle*, The International Conference - UKROBRAZ, Kiev - Ukraine.
- Potorsac, A., Graur, A. (1998). *Some Aspects of Implementing Multimedia Services on Networks*, The International Conference - UKROBRAZ, Kiev - Ukraine.
- Dasu, A., Toma-Dasu, Iuliana, Karlsson, M. (2003). *Theoretical simulation of tumour oxygenation and results from acute and chronic hypoxia* Physics in Medicine and Biology 48:17 2829-2842
- Radoane M., Radoane N. (2003). *Geomorphological evolution of river longitudinal profiles*, Geomorphology, 50, Elsevier, Holland.
- Radoane, Maria, Radoane, N. (2005). *Dams sediment sources and reservoir siltation in Romania*, Geomorphology, vol. 71, Elsevier, Holland.

The number of papers published in journals from the main stream of publications

1910

(the most cited 10 papers)

- Turcu, C. (2003). *A Multi Agent System for Train Ticket Booking*, Acta Electrotehnica published under the aegis of the Romanian Academy of Technical Science, Cluj-Napoca Technical University, volume 44, no. 1, Cluj - Napoca.
- Milescu, I., Horodnic, S., Miron-Onciul M., Niculitel, L. (2002). *The Estimation of the Consequences of Acidification of the Perturbations Caused by the Anthropogenic Factor on the Integrity and Stability of Forest*

Ecosystems in Bistrita Region, The I.C.A.S. Annales, Bucharest.

- Horodnic S., Nichiforel L. (2002). *Limits of the Regression Equations Used for the Statistic Estimation of Silviculture Phenomena*, in the papers of "The Forest and the Future" session, "Transylvania" University, Brasov.
- Avacaritel, D. (2000). *The Auxologic Effect of Regeneration Cuts on Trees in the Beech Brushes*, at the Technical Age of Exploitation, pp.38-44, Forest Journal, no.5. Bucharest.
- Maciuca A. (2003). *Aspects Regarding the Wood Certification in Romania*, Environmental Engineering Journal, Bucharest.
- Oprea, I. (2000). *Elements for Determining the Characteristics of Creation, Existence and Development of Romanian Specialised Languages, Languages and Communication*, vol. IV, University of Suceava Publishing House, Suceava.
- Balinisteanu, T. (2003). *Meaning and Significance in Beckett's The Unnamable, Applied Semiotics / Sémiotique appliquée*, A Learned Journal of Literary Research on the World Wide Web (Issue No 13, 02/2003) Toronto: University of Toronto 15/03/2002.
- Radoane, M., Radoane, N. (2001). *Reservoir siltation from Romania*, Revue Roumaine de Géographie, The Academy Publishing House, T 45, Bucharest.
- Brandus, C. (2001). *Natural Hazard and Risk Moldavian Tableland*, The Geomorphology Review, no. 3, Bucharest.
- Etros, V. (2004). *The Tourist Assessment of the Moldova Republic*, Landscape Science - Traditions and Trends, Lviv (Ukraine).
- Purici, St. (2004). *The Romanians and the Jewish People from 1918-1923 Bucovina: Together or Separately*, Studia et Acta Historiae Iudaeorum Romaniae, vol. VIII, Bucharest, 2003.
- Sahleanu, V. (2002). *The Influence of Maturation on Meat Proteins*, the Annals of "Ștefan cel Mare" University in Suceava, No. 2, Suceava.
- Avramiuc, M. (2002). *Testing Some Rapid Micromethods for Determining the Proteins from Seeds of Alimentary Interest*, the Annals of "Ștefan cel Mare" University in Suceava, No. 2, Suceava.

(Continued on page 77)

- TEHNOMUS
- International Conference on Language Studies
- International Symposium Taras Sevkenko
- Mankind and Myths
- Bukovina - a space of interculturality
- Messages, Sages, and Ages - An International conference on Anglo-American Studies
- Romanian-American Studies Congress
- Romanian-Italian Geomorphology Workshop
- Romanian Economy: Present State and Future Prospects
- Rural Tourism: Present and Future
- International Conference on Education Sciences: dynamics and prospects



Bienal Conference
International Computers on Development
and Application Systems

(Continued from page 76)

- Gutt, S. (2000). *Removing Salts through Electrolysis*, the Annals of "Ștefan cel Mare" University in Suceava, No. 1, Suceava.
- Gutt, S., Gutt G. (2004). *Beitrage zur material strukturanalyse durch rontgen-diffraktometrie*, the Annals of "Ștefan cel Mare" University in Suceava, No. 2, Suceava.
- Gutt, S. (2000). *Mass Transfer through Packaging*, the Annals of "Ștefan cel Mare" University in Suceava, No. 1, Suceava.
- Hlaciuc, E., Tulvinschi, M. (2004). *Characteristics of the Import of Goods and their influence on Accounting*, pp. 62-65, Public Finance and Accounting Journal, no.11-12, published by the Ministry of Public Finance, Bucharest.
- Nedelea, Al., Dolipachi, O. (2004). *Public Administration, Tourism and Sustainable Development*, pp. 107-110, Transylvanian Review of Administrative Sciences, no. 1, Cluj-Napoca.
- Viorescu, R. (2004). *The Statutory Regulation of Public Service - II, Economy and Local Administration*, Economic Tribune Publishing House, no.1, Bucharest.
- Diaconescu, F. (2000). *Mihai Eminescu, "Ode in ancient metre" - stylistic approach on the pronouns*, the Annals of "Ștefan cel Mare" University in Suceava, Section "Education Sciences", No. 1, Suceava.
- Diaconescu, F. (2001). *Aspects of Communication Skills Development with the Primary School Pupils*, the Annals of "Ștefan cel Mare" University in Suceava, Section "Education Sciences", Suceava.
- Diaconescu, F. (2003). *The Language of Sciences - Didactic Aspects*, the Annals of "Ștefan cel Mare" University in Suceava, Section "Education Sciences", year IV, No. 3, Suceava.

The number of papers published in volumes of international scientific conferences with reviewers

572

(10 papers presented at the most prestigious events)

- Diaconescu, E.N., Giovnea, M.L., Petrosel, O. (2003). *A new experimental technique to measure contact pressure*, Proceedings of 2003 STLE/ASME Joint International Tribology Conference Ponte Vedra Beach, Florida, USA.
- Prodan, D., Diaconescu, E.N. (2003). *Theoretical and experimental investigations of an elasto-plastic/circular contact bounded by real rough surfaces*, Proceedings of 2003 STLE/ASME Joint International Tribology Conference Ponte Vedra Beach, Florida USA.
- Diaconescu, E.N. (2004). *An extension of Hertz theory*, ASME/STLE International Joint Tribology Conference, paper TRIB 2004-64125, Long Beach, USA.
- Diaconescu, E.N. (2004). *Solid-like properties of molecular liquids subjected to EHD conditions - theoretical investigations*, ASME/STLE International Joint Tribology Conference, paper TRIB 2004-64161, Long Beach, USA.
- Diaconescu, E.N., Giovnea, M. (2004). *Visualization and measurement of contact area by reflectivity*, ASME/STLE International Joint Tribology Conference, paper TRIB 2004-64174, Long Beach, USA.
- Giovnea, M., Diaconescu, E.N. (2004). *A general solution for optimized circular contacts*, ASME/STLE International Joint Tribology Conference, paper TRIB 2004-64132, Long Beach, USA.
- Pentuc, St.Gh., Milici, D., Pentuc, R., Milici, M. (2004). *Unsupervised learning algorithm for decision making support in physical education*, First European Conference on the Use of Modern Information and Communication Technologies, KaHo Sint-Lieven, Department of Industrial Engineering, Electronics, 1-2 aprilie 2004, Belgium.
- Mahalu, G. (2004). *Fractal Techniques in Pattern Recognition and Software Compression*, The Embedded Signal Processing Solutions Event, GSPx2004, October 24-27 2004, Santa Clara Convention Center, Santa Clara CA-USA.
- Mahalu, G., Graur, A., Ciuludean, C. (2003). *Virtual Video-Sensitive Interface Used in Robotic Control*, Proceedings of the 20th International Symposium on Automation and Robotics in Construction ISARC2003, 21-24 September 2003, Eindhoven, Netherlands.
- Diaconescu, E., Giovnea, M. (2004). *Pressure distribution in a rounded edge circular surface contact*, 4th AIMETA International Tribology Conference, Rome.
- Diaconescu, E., Cerinca, D. (2003). *The pressure distribution in a hertz circular contact affected by a central circular dent*, STLE-ASME International Joint Tribology Conference Florida, USA.
- Chirita, V. (2002). *Environment Disfunctions and the Sustainable Development in The Dorna-Calimani Region Of The Eastern Carpathians*, The XVIIth AESOP Congress, Volos, Greece.

(Continued on page 78)



**Products created/homologated/
capitalized/Inventions/Patents**
(maximum 10 significant products)

52

- Cernomazu, D. et al., Asynchronous microengine. Letters patent no. 116234;
- Cernomazu, D. et al., Solar engine. Letters patent no. 115375;
- Milici, D., Milici, M., Temperature magnetic relay. Letters patent no. 116127;
- Pentiu, R. et al., Low-speed electrical drive system equipped with a hybrid engine for belt conveyers. Letters patent no. 118508;
- Milici, D., System for measuring the temperature of bodies in rotary motion. Letters patent no. 117817 B.

**The Research Activity
at "Stefan cel Mare"
University of Suceava**

The scientific research activity within the Faculty of Electrical Engineering is internationally recognized, as demonstrated by its showcase of medals won in International Competitions of Invention, by faculty professors who have participated in international scientific research programs such as DIVILAB (Distributed Virtual Laboratory), UVF (Universite Virtuelle Francophone), CEEPUS, Leonardo da Vinci - ECASME, and by the faculty's relationships with foreign contractors and beneficiaries from Germany, Israel and Thailand.

The Faculty publishes two scientific journals, accredited by CNCSIS, featuring articles in the fields of electronics, automations, computer science, electrical engineering and power engineering. The articles that are received are sent to domestic and international reviewers, who approve them for publication. All articles are written in English.

Every two years, since 1994, the International Conference on Development and Application Systems (D&AS) organized by The Faculty of Electrical Engineering offers the opportunity of holding summits in the following fields: Digital Systems in Process Control, Electrical Drives Control, Data Transmission and Communication Protocols, Computer Aided Design, Information Technologies, Pattern Recognition.

(Continued from page 77)

- Radoane, M., Radoane, N. (2003). *Erosion and gulying in Romania, International Conference Gully erosion in Mountain Areas: Processes, Measurement, Modelling and Regionalization, Digne-le-Bains, France.*
- Pop, G. (2003). *The influence of some environmental factors on the inversion potential of bakery yeast, presented at the Euro - aliment 2003 International Symposium, The Academic Publishing House, Galati.*
- Stingheriu, R. (2003). *Techniques of assessing the viability and vitality of yeast cells, presented at the Euro - aliment 2003 International Symposium, The Academic Publishing House, Galati.*
- Stingheriu, R. (2003). *Research on the yeast reaction to the stress produced by ethylic alcohol, presented at the Euro - aliment 2003 International Symposium, The Academic Publishing House, Galati.*
- PRELIPCEAN, G. (2004). *Applications of the convergence concept, Conference New Challenges in the fields of Economic Sciences, oct. 2004, Budapest, Hungary.*
- PRELIPCEAN, G. (2004). *Some new initiative towards sustainable tourism in Romania, International Congress of Faculty of Tourism and Hospitality Management, 14-16 aprilie 2004, Opatija, Croatia.*
- NASTASE, C. (2004). *Factors of forest enterprises development in public regulated timber market, International seminar and workshop Challenges for enterprise development in forestry, 28-31 Octombrie 2004, Yundola, Bulgaria.*
- Diaconescu, F. (2002). *L'education dans la region multiculturelle de la Bucovine, vol. ICTE, Educational Technology, vol. 3, Badajoz, Espagne.*

- Diaconescu, F. (2002). *L'ordinateur et les competences de communication, vol. ICTE, Educational Technology, vol.3, Badajoz, Spain.*
- Balan, C., (2001). *The inter-war model of the university professor, The University of Oradea Annals, The Department for Training and Development of the Teaching Staff, Psychology - Pedagogy - Methodology, Oradea.*

**The number of scientific
books published by publishing
houses acknowledged abroad**

70

(maximum 10 significant books)

- Hiaciu, E. (2000). *Modern Methods of Cost Calculation, Polirom Publishing House, Iasi.*
- Prelipcean, G. (2002). *The Shaping of Decisions on the Foreign Exchange Financial Markets in the Context of Globalisation, The Didactic and Pedagogic Publishing House, Bucharest.*
- Hapenciuc, V. (2003). *Statistical research tourism - a study of the tourism on the phenomenon in the district of Suceava, Zolot' Litavry Publishing House, Cornaut, Ukraine.*
- Oprea, I., Sala M., Mihaila Gh. et al., (2002). *The Romanian Language Dictionary, Vol. XIII, Letter V, 2nd part, The Academy Publishing House, Bucharest.*
- V. Dospinescu, V. (2000). *Le Verbe: morphematique, semantique, syntagmatique, mode, temps, aspect e voix en francais contemporain, Junimea Publishing House, Iasi.*
- Dospinescu, V. (2002). *Didactique des langues, Junimea Publishing House, Iasi.*
- Masciniuc, C. (2002). *Towards a Poetics of Reading: Poststructuralist Perspectives, European Institute, Iasi.*

The papers presented at the conference are published in its proceedings. Starting with the 2002 edition, the DAS Conference is organized under the aegis of the IEEE Romanian Section.

The 7th edition of 2004 included papers written by 76 Romanian authors and 107 foreign authors. Seventy Romanian and thirty-seven foreign university teachers and researchers participated in the conference. The importance of scientific research within the Faculty of Mechanical Engineering is

Presentation of Faculties
Special Results in Research



reflected by the scientific recognition of its members, one of which is the distinguished member of the Romanian Academy, Professor Ph. D. Eng. Emanuel Diaconescu.

The results of scientific research are presented at the two alternating scientific conferences that the Faculty organizes and published in the two journals - ACTA TRIBOLOGICA, the only tribology journal published in Romania, and the "Ștefan cel Mare" University Annals - The Mechanical Engineering Section.

The frequent participation of faculty members in European and American International Congresses is equally notable. Natural Sciences have always been of interest to The Faculty of History and

Education Institute of Suceava was founded. Research areas include:

- a) Regional geographic researches, zoning, territory surveying;
- b) Dynamic and applied geomorphology;
- c) Natural and human hazards;
- d) Tourist assessment of the economic and natural environment;
- e) Researches in the field of human geography and applied economics;
- f) Natural resources and sustainable development;

Notable accomplishments include:

- Collaboration to the publishing of the Romanian Geography Treaty, a comprehensive monograph on Romanian geography, published by Editura Academiei (1983, 1987, 1992).
- Researches on the extrinsic geomorphologic threshold effect ("The Effect of Dams on the Dynamics of the Relief") produced by the dam in the fluvial morphodynamic system;
- Researches on regional geomorphology of the Sub-Carpathians and their relief idiosyncrasies such as age, structure, deposits, together with the longitudinal aspect of the hydrographic network and its disturbances through repeated underpinning have led to defining a unique geomorphologic unit (Brăduș, 1978, 1981, 1997).
- Experimental researches in the small hydrographic basins (N. Radoane, The Geomorphology of the Small Hydrographic Basins, Editura Universitatii Suceava, 2002).
- Applying the concept of alometric growth to the development of ravines in the Moldavian Plateau region (Radoane et al., Soil Erosion on Agricultural Land, Wiley & Sons, England, 1990; Radoane et al., Catena, Amsterdam, 1995).
- Methods and applications in the field of geomorphologic variable measurements, in the laboratory and in the field, as well as experimental data collection and analysis (Radoane et al., Quantitative Analysis in Physical Geography, Editura Universitatii, Iasi, 1995).



Geography, ever since the founding of the geographic studies program. This program was implemented in 1963 when the High



Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	814,086	-
2003	587,470	-
2002	548,671	-
2001	960,290	-
2000	531,384	-
1999	222,052	-
1998	188,000	-
1997	158,466	19135
1996	78,120	7445
1995	70,572	11626



- Geomorphologic evolution of river longitudinal profiles applied to the Carpathians rivers, with a view to evaluate long term evolution stages (Radoane et al., Geomorphologic Evolution of River Longitudinal Profiles, Geomorphology, Elsevier, Amsterdam, 2003).



The Faculty of Forestry

The designs of research spring from the current needs and the prospects of carefully managing the forests in this part of the country.

Main research interests:

- observing vegetation in European monitoring areas;
- determining the dynamics of the productive capacity of forest ecosystems and the specific indices in the evaluation of forests;
- promoting innovation and entrepreneurial initiatives in the long-lasting development of forestry;
- analysing public policy in forest management;
- improving the forest operation technology in order to reduce damage;
- evaluating the anthropic impact on forest

ecosystems and establishing the techniques of restoring the ecologically destroyed stands;
- characterising the structural biodiversity in forest ecosystems..

The Faculty of Letters and Communication Sciences

The philological series of the Annals of the University of Suceava (AUS) comprises the research activity and results conducted by the members of the three departments of the Faculty of Letters and Communication Sciences, covering a wide range of research fields such as: Linguistics, Romanian and foreign language and literature, general bibliography, Tome VIII (2000 - 2002) appeared in 2 different volumes: A. Linguistics (358 pages); B. Literature (420 pages) - a total of 778 pp.

The linguistics volume is dedicated to the memory of Eugen Coseriu, including a CV and the Coseriu bibliography, signed by the author himself and completed by co-workers. Of special interest: The Republic of Moldova - A Linguistic and Cultural Universe.

The literature volume deals with Comparativism and Historicism, Monographic Perspectives, Narrative Discourse Poetics, Drama Discourse Poetics, Literary Analyses, Metacritical evaluations, Cultural Identities, Students' contributions, book reviews, reports, the articles being written in Romanian, English, French, Portuguese.

The research activity takes place in two research centres (Discourse Analysis Centre, Inter Litteras Centre), in the Philological Seminar "Bucovina", and through contributions to national research topics financed by the Romanian Academy (e.g. Romanian Dictionary, The New Romanian Linguistic Atlas: Moldova and Bucovina. Vernacular texts).

The magazine "Atelier de Traduction", which appears twice a month, is the result of the activity of the translators' seminars held with translators all over the country, as well as from France, Belgium, Lebanon, Tunisia, Canada, Algeria, Latvia.

The first issue of "La Lettre R", a recent cultural magazine which brings together young researchers of the faculty (master students, assistants, instructors), deals with the French Romania.

UPET

UNIVERSITY OF PETROSANI



Rector

Prof. Eng. Nicolae Dima, PhD

Historical Overview of the University

University of Petrosani continues the mining higher education begun over 100 years ago in Bucharest. In 1864 was set up in Bucharest "School of Bridges, Roads, Mines & Agriculture". In 1948 Coal Institute is opened at Petrosani, and transformed in 1957 into Petrosani Mining Institute, concentrating the entire mining higher education. The structure in 1957 was preserved until 1994 when Faculty of Sciences was set up, leading to the change of the Mining Institute into The University of Petrosani.

Patrimony

The University of Petrosani is placed in a picturesque natural park, in a valley formed by the Parang, Vulcan, Retezat and Surianu mountains. The campus consists of 3 educational facilities with a total surface of 11200 square meters, 2 laboratories of 1780 square meters, a sports hall and a physical education complex with soccer, rugby, handball and tennis fields, a library with over 300000 volumes, 5 hotels, 2 canteens, an academic house, a guest house, all covering 34000 square meters.



Fields in which human resources are trained

Sciences: Mathematics; Informatics. Social sciences: Sociology and social assistance. Economical sciences: Economics; Finances; Accounting; Management Engineering: Computers and information technology; Civil engineering; Electrical engineering; Energetic engineering; Geological engineering; Industrial engineering; Mechanical engineering; Environmental engineering; Control engineering; Engineering and management; Transport engineering; Mining, oil and gases; Applied engineering.

Faculties and Departments

- 3 faculties: Mining, Mechanical and Electrical Engineering, Sciences;
- 1 college: University College;
- 6 departments: Scientific Research; Further Education; Teacher Training; International Relations and European Integration; Distance Learning; Studies, Research, Implementation and Small Scale Production.

Master and Doctoral Programs

MASTER - 25 Master programs available in the 3 faculties.

4 Doctoral Programs fundamental fields: Mining, oil and gases; Electrical engineering; System control; Industrial engineering.

Presentation of research activity chart

The research activity is focused on studies, fundamental and applied research for minerals extraction and material processing, automatic control of processes and plants, solutions for environmental, economic and social impact of technological processes. The research activity is carried out in departments, research laboratories and centers based on scientific research and technological transfer regulations and is coordinated by a Research Council, managed by the research vicerector.

Structures

Research Institute	0
Research Centers	4
Research laboratories	13
Multi-user Research Centers	0

Human resources

Professors	52
Senior Lecturers	60
Lecturers	49

Assistant Lecturers	34
Teaching Assistant	18
Research Fellows	1

Administrative Staff	254
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Students	6284
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of which:

Undergraduate	5422
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Master	488
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PhD - full attendance	12
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PhD attendance not required	362
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Top Priority Research Directions

The main objective is excellence promotion in research, as a major component of university education and part of European Research Area. The major directions are:

The information technology, nanoscience and nanotechnology; Engineering: Techniques for Extraction and processing; Mechanics; Electrical and system control; Environment: Systems, databases and services of cadastre; Environmental engineering, sustainable development; Natural and society sciences: Mathematics; Economics; Socio-humanistic sciences.

Outstanding Research Infrastructure

Research laboratories of Geotechnics, Survey and cadaster, Modelling, Simulation Prototyping (MatLab - Simulink-dSpace) for the automatic control of systems and processes; 10 modern computer networks; Environmental engineering; Electrical devices and installations for switching and adjustment; The design and testing of cutting devices; Mechanisms and mechatronics; Materials strength.

International Cooperation

On grounds of the 82442-IC-1-2002-1-RO-ERASMUS-EUC-1 Charter the Erasmus transnational Project grant is in progress, through the Socrates National Agency, in collaboration with Technical University of Clausthal and Ecole National Supérieure des Techniques et des Mines d'Als.

EU-Research Project TERRA2000 (WP8 from FP5).

Overcoming Technological Divides (TT30, Club of Rome). Software-Oriented Real-Time Controller for Intelligent Motion Control of Asynchronous Drive Systems (Deutsche Forschungsgemeinschaft).

The number of papers published in journals from the main stream of publications **295**
(the most cited 10 papers)

- *The Romanian University in the Process of the Reform*. Nicolae Ilias, Iosif Andras, Nicolae Dima, Alexandru Florea. Teoria i Praktika Upravlinea Sotialnimi Sistemami Jumai. Harkov, Ucraina, 2000.
- *The Safety Relief Valves Behaviour in Static and Dynamic Conditions in the Framework of the Hydraulic Mining Supports*. Paul Patrascu, Sorin Vatavu. Scientific Bulletin of University Politehnica Timisoara, Romania, 2000.
- *Software Control of Six Grades of Mobility Robot*. Emil Pop, Maria Pop, Monica Leba. Bulletin of Politehnical Institute Iasi, Romania, 2000.
- *Asynchronmaschine mit Aktiver Schwingungsdämpfung*. Adrian Tulbure. Scientific Bulletin of Electrotechnical Institute of Clausthal No.12, Germany, 2001.
- *Researches Regarding the Reliability of the Mining Equipments*. Alexandru Florea, Carmen Florea. Mining Journal, Romania, 2001.
- *Evaluarea Finantarii si Cresterii Economice a Firmei*. Mariana Man. Economical Tribune, Romania, 2001.
- *The Transcendental Role of the Godelian Nondecidable Propositions in the Diachronic Inclusion of Axiomatic Theories and Metatheories*. Ion Mirita. CASYS International Journal of Computing Anticipatory Systems, Belgium, 2002.
- *The Compensation of the Geodesic Networks Using Modern Methods Taking into Account the Precision of the Support Elements*. Nicolae Dima, Octavian Herbei, Horia Bendea, Ioel Veres. Annals of the University of Petrosani, Romania, 2002.
- *Mathematical Models Regarding the Study of the Longitudinal Vibrations in Ciscolastic Rods*. Wilhelm Kec, V. Benedic. Bulletin for Applied and Computer Mathematics, Hungary, 2003.

- *Analysis and Modelling of Scheduled Maintenance in Electric Distribution Stations*. Fotau Ion, Pana Leon. Annals of the University of Petrosani, Romania, 2004.

Number of papers published in ISI - quoted journals **13**

(the most cited 10 papers)

- *Magnetofluidic Effects Usable for Sensors Achievement*. Vasile Iusan, Aurelian Seratinceanu, Nicolae Ilias, Constantin Dan Buioca, Aurora Stanci. Journal of Magnetism and Magnetic Materials, 2004.
- *Nano and Microparticles Characterization Using Brownian Diffusion Measurements*. Constantin Dan Buioca, Sorin Noaghi, Vasile Iusan, Mariana Buioca, Aurora Stanci. Journal of Magnetism and Magnetic Materials, 2004.
- *Izotropic Three-Dimensional Oscillator in Relativistic Classical Mechanics*. Laurean Homorodean, Europhysics Letters, 2004.
- *A Relativistic Model of the Izotropic Three-Dimensional Singular Oscillator*. S.M.Nagiyev, E.I.Jafarov, R.M.Ivanov, Laurean Homorodean, Arxiv Math-Ph, 2004.
- *Computer Aided Design of a New Type Magnetofluidic Actuator*. Constantin Dan Buioca, Aurora Stanci, Vasile Iusan, Carol Zoller. Journal of Magnetism and Magnetic Materials, 2002.
- *Telluride and Sulphosalt Associations at Sacarimb*. Cristiana Ciobanu, Nigel J.Cook, Gherghe Damian, Floarea Damian, Grigore Buia. Iagod Guidebook Series 12, 2004.
- *Long Term Stability of Magnetic Fluids in Low Gradient Magnetic Fields*. Loredana Pop, Constantin Dan Buioca, Vasile Iusan, Maria Zimnicaru. Journal Of Magnetism And Magnetic Materials, 2002.
- *Okobilanz fur Brennstoffzellen*. Ildiko Tulbure, Simona Dragosch, Arne Dahms, Umwelt Magazin Nr.3, Springer, 2003.

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International Scientific Activities (the 10 most important ones)

The annual international multidisciplinary symposium ROPET;

Annual partnership with University of Harkov, Ukraine, annual;

Annual MicroCAD in collaboration with University of Harkov, Ukraine, annual;

The Third International Conference of Underground Constructions, 2000;

The ROMIN International Conference, Deva, 2000, 2002;

The Third International Conference Dunare - Cris - Mures "Environment and health";

The International Technical and Scientific Conference "Technical and Scientific Information and Documentation for Teaching, Research and Local Social-Economic Development of SME", 2002;

International Exhibition of Inventions in Georesources "INVENTICA-ROPET", 2003;

International Conference "Mining, Methallurgy and Geology", 2004;

The International Summer University "The Corvinesti Castle", annual, since 1999.

Products created/homologated/ capitalized Inventions/Patents

(maximum 10 significant products)

64

- Algorithm and Micro-system for Optimal Control of Autogenic Milling Machine Drive Power. Visalon Dan, Carol Zoller, Invention Patent, 2000.

- Method and Transducer for Autogenic Milling Machine Filling Grade. Visalon Dan, Invention Patent, 2000.

- Stand for Material Cutting using High Pressure Hydraulic Jet. Nicolae Ilias, Andrei Magyari, Sorin Radu. Capitalized Product, 2001.

- Software Oriented Inverter for Intelligent Control of Induction Motor Drive Systems. Emil Pop & Co. Capitalized Product, CNC-SIS Grant No. 74/2003.

- Protection Device for Remnant Voltages Produced by the Electro-pneumatically Ventilators Electrical Motors. Horia Semaschevici, Carol Szabo, Invention Patent, 2003.

(Continued from page 82)

The number of papers published in volumes of international scientific conferences with reviewers

1655

(10 papers presented at the most prestigious events)

• *Aspekti Raspolojenia Uciastkovah Transformatorah Punktov v Podzemnah Gomah Razrabotok*. Mihai Pasculescu. Interpartner High Technologies Development and Personnel Provision. Harkov, Alusta, 2000.

• *Inertia and its Implication in Technology and Life*. Emil Pop, Monica Leba. CASYS'01 Proceedings Liege, Belgium, 2001.

• *Determining the Best Stability Angle for Alges by using the Maxim Probability Criteria*. Ilie Mitran. International Section Mathematical Methods in Geology, The Mining Pribram Symposium, Praga, Czech, 2001.

• *The Fuzzy Command of the Ventilation Process*. Aron Poanta, Dan Dojcsar, ICAMC, Tampere, Finland, 2001.

• *Possibilities of Making Prognosis for the Displacements of the Terrestrial Area Influenced by the Underground Mining Exploitation*. Nicolae Dima, Octavian Herbei, Horia Bendea, Ioel Veres. Sixth Conference on Environment and Mineral Processing, Part II, Czech, 2002.

• *Ornamental Rocks in Romania*. Adrian Florea, Dumitru Fodor, Laurentiu Bogatu. 19th World Mining Congress, India, 2003.

• *The Futuristic Manager and the Role of University*. Ilie Rascolean, Gabriela Slusariuc. Microcad 2003 International Scientific Conference, Miscoic, Hungary, 2003.

• *Rock Mass Deformation Assessing in Accordance with Blesting Method in Hard Rock Quarries*. Ioan Dumitrescu, Aronel Matei, Eugen Traista. 7th Conference on Environment and Mineral Processing, Ostrava, Czech, 2003.

• *Strategies of Lasting Development with Applications at Coal Basin*

Level of the Jiu's Valley. Alina Dobrita, Mircea Georgescu. International Symposium on Environmental Issues and Wastes Management in Energy and Mineral Production, Turkey, 2004.

• *Theory and Practice of Galvanochemical Processing of Waste Waters*. Sanda Krauss, Piotr Solozhenkin. 6th International Conference on Clean Technology for Mining Industry, Chile, 2004.

The number of scientific books published by publishing houses acknowledged abroad

14

(maximum 10 significant books)

• *Compressed Air Energy Storage*. Ioan Iulian Irimie, Sabina Irimie, Ildiko Tulbure. John Wiley & Sons, New York, U.S.A., 2000, 75 Pages.

• *Static Converters and Their Applications*. Marius Marcu, Maria Orban, Yankiev Kiril, Eltim Kartzelin. St. Ivan Rilski Publishing House, Sofia, Bulgaria, 2001, 269 Pages.

• *Terra 2000 Report on Policy Oriented Input Scenarios for Sustainable Development of the Information Society*. Ildiko Tulbure, Christian Berg, Michael Jischa. Rend Europe Leiden, Olanda, 2001, 70 Pages.

• *Software-Oriented Real-Time Controller for Intelligent Motion Control of Asynchronous Drive Systems*. Emil Pop, Monica Leba. Deutsche Forschungsgemeinschaft Report. Clausthal, Germania, 2001, 50 Pages.

• *Netzgespeiste Asynchronmaschine mit Elektronischer Kaltumschaltung zur Aktiven Schwingungsdampfung*. Adrian Tulbure. Papierflieger, Clausthal, Germania, 2003, 135 Pages.

• *Introduction in the Management Philosophy*. Ladislau Tovazshni-ansky, Alexander Romanovsky, Nicolae Ilias, Iosif Andras, Sorin Radu. Harkov National Technical University Publishing House, Ukraine, 2004, 277 Pages.

Laboratory for modeling-simulation-prototyping and intelligent software-embedded control of machines, installations and processes



The laboratory is equipped with modern facilities as:

- 2 modern Internet connected computer networks;
- MatLab - Simulink - dSpace Software for modeling - simulation - prototyping;
- Borland C++ Buildervisual programming software;
- Intel 80C51, Motorola 68HC11, Siemens C167, Microchip PIC, Atmel AVR microcontrollers with simulation, design and development software;
- Programable automata Klockner - Moeller, Siemens, Omron with simulation, design and development software;
- Software embedded control systems with 80x86 microprocessors;
- Modelling - simulation equipment HIL of dSpace type;
- Fuji and Mitsubishi invertors with intelligent power modules;
- Programmable logic design systems of



CPLD, and FPGA type, as well as of Xilinx type with simulation, design and development software;

- Programmable educational robots of OWI, Robix and Fisher type;
- Mobile robots of Lego and Boe - Bot type.

Laboratory for the hydraulic and hydro - mechanic cutting of materials

This laboratory was conceived and experimented within the INCO COPERNICUS project entitled "Abrasive Water Jet Cutting, a Clean Technology" no. ERB IC 15 CT 98 0821, between 1999 and 2002. It is unique in Romania, being destined for teaching and research activities. It allows the accurate cutting of the following types of materials: wood, plastics, sandstone, marble, granite and soft metals



It includes the following components:

- WOMA high pressure pump of 1502 P type, which develops a maximum pressure of 157 Mpa at a flow of 33 l/min;
- Testing stand with the following facilities: adjustment of the sample motion speed; adjustment of the distance between the nozzle and the sample; use of normal, abrasive and chemically treated hydraulic jets;
- 5 types of fix and portable hydro-monitors;
- 4 types of nozzles with diameters between 0.1 - 3 mm, made of steel, glass, metallic carbons or industrial sapphire;
- Control devices through flexible pipes with pressures of up to 400 Mpa.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	3735,283	0
2003	1308	39000
2002	1195	22500
2001	458,868	0
2000	690,520	0
1999	740,905	0
1998	437,010	0
1997	527,803	0
1996	417,225	0
1995	248,868	0

Laboratory complex for survey, geodesy, photometry, mapping, cadastre and GIS

The internal and external facilities in the campus and the surroundings (survey networks connected to the national networks) ensure a training environment very similar to the in situ conditions specific to the surface and the underground.

The laboratories are equipped with the following facilities:



- optical and electromagnetic gauges of high accuracy (total stations Trimble, RecEita, Ni and Kony levels, Zeiss theodolites);
- complete line of photometric capturing and restoring (photo - theodolite, technochart);
- laser device for the orientation and control of underground diggings;
- gyrotheodolites for the orientation of underground and surface surveys;
- devices for data transmission in underground workings;
- hardware (modern computer network, scanners, printers, digitizing board) and licensed software (Autocad Map, Land Desktop, Civil Design, Raster Design, Survey) for the storage and processing of survey measurements;
- testing and adjustment stand for theodolites.



Geotechnics laboratory

This is a research and testing laboratory that functions in accordance with international norms and it is acknowledged by RENAR.

It is equipped with the following facilities:

- hydraulic presses from 10 to 300 tons;
- humidity measurement devices;
- three - axial devices for measuring pressure and stress within rock massifs;
- gauges for measuring the physical and mechanical characteristics specific to geotechnical research.

Success Stories

The Faculty of Sciences - fiction or reality?

The only institutions able to overcome time are the university and the church.



The almost 150 - year - old tradition of the school of higher mining studies begun in Bucharest and continued at Petrosani, created, after 1990, the background for the expansion of university education.

This faculty has developed within a space predominated by technical studies, in a period when the social and economical reality of the Jiu Valley and its surroundings, and especially the market demands called for a new orientation of the former Mining Institute. Starting from the departments of Management, Psycho - Sociology and Mathematical Engineering, the faculty has created its own managing structure, which is to underlie the Faculty of Sciences beginning with 1993, and then in 1995, the changing of the Technical University into the University of Petrosani.

Starting from this point, with the support of all those who have contributed to the survival of higher education in Petrosani, a number of new departments have been set up, as it follows:

- *Finance and Banking; Accounting and Computer - assisted Management since 1993;*
- *Mathematics - Physics since 1997;*
- *Informatics; Public Administration since 2003;*
- *The Economy of Commerce Tourism and Services; Social Assistance since 2004*

At the same time, there has been a diversification of the range of postgraduate studies, under the form of 8 MA fields and 2 fields for postgraduate specialization. Thus, the offer of studies has been largely diversified, meeting the needs of the young who want either to pursue an academic career, or to complete their training in fields demanded by the present social and economic reality. Figures speak for themselves, proving that it was worth the effort: if in 1990 there was a single group of students, today there are 3,600 students attending all the forms of study, and over 80 members of the teaching staff. In all these years, our efforts have been supported by the thought that the academic spirit means



knowledge and collaboration, and knowledge is a step taken towards our future. Ultimately, in order to build its future, Romania needs knowledgeable and open - minded people.



Prof. Gh. Moroianu, PhD

Historical Overview of the University

"Constantin Brancusi" University was founded in 1992, according to the Government Resolution No. 288/1.06.1992, by reorganizing some sections of the institute of engineering from the University in Craiova, into the specializations Electrical Engineering and Equipment for the Building Materials Industry, which had existed in Tg-Jiu since 1972, and the two sections of



engineering, Electrical Engineering and Mechanical Engineering, which were affiliated to the same university.

Faculties and Departments

- 4 Faculties: Engineering Faculty, Juridical and Administrative Sciences Faculty, Economic Sciences Faculty and Physical Education and Sports Faculty;
- 1 Pedagogical College;
- 2 Department for Teacher Training and Distance Learning Department.

Master and Doctoral Programs

MASTER - Master Programs: Management and Ensuring Quality; Modern Technologies of Production; Increasing Efficiency in Electrical Installations Functioning; Marketing of Commercial Business; Business Administration in Tourism and Catering; Banks and Insurance; European Economics and Finance; Public Law; Institutions of Romanian Private Law; Computing and Management of Energetical Processes; Computing of Management Systems;

Computer Assisted Technological Design; 7 Programmes of Postgraduate Training and Qualification.

Patrimony

5 buildings having a surface of 6700 sm - education areas; 2 students hostels with 150 beds; 1 gymnasium sports grounds with a surface of 15000sm.

Fields in which human resources are trained

Industrial Engineering; Environmental Engineering; Energetic Engineering; Engineering and Management; Systems Engineering; Law; Public Administration; Management; Finances; Accountancy; Economics; Physical Education and Sports.

Presentation on research activity chart

Scientific research activity in "Constantin Brancusi" University is carried out in departments, research centres. Their management is ensured by the vice - rector in charge with the scientific research.

Structures

Research Institutes	0
Research Centers	6
Research Laboratories	25
Multi-user Research Centers	0

Top Priority Research Directions

The strategic objective is given by promoting excellence in the process of scientific research.

The priorities in research are:

1. Research concerning the replacement of deficient metallic materials with other new materials;
2. Research concerning the tribologic phenomenon;
3. Research concerning the possibilities of reducing the ash deposit on the surface of the steam boilers heat exchangers;
4. Systems of data acquisition;
5. Developing the catering industry in Romania;

Human Resources

Professors	24
Senior Lecturers	20
Lecturers	53
Assistant Lecturers	31
Teaching Assistant	12
Research Fellows	0
Administrative Staff	46
Students	6188
of which:	
Undergraduate	5816
Master	372
PhD - full attendance	0
PhD attendance not required	0



6. Research concerning the European integration;
7. The role of the institutions and of the human rights in the context of European integration;
8. The status of national minorities in Romania;
9. The problem of the individual protection through legal agency;
10. The management of industrial processes.

Excellence Centers

Centres of research accredited by CNCSIS:
 Durability and feasibility of mechanic systems; UNI-CER-MED - research in the environment protection. The center of research for the economic knowledge and practice.

International Cooperation

Leonardo da Vinci Programme, Phare Program.

International Scientific Activities (the 10 most important ones)

The Congress of the American Romanian Academy of Arts and Sciences, 2002, International Conferences organized by the Engineering Faculty (2004, 9th Edition), The International Conference "Economics and Globalization", organized by The Faculty of Economic Sciences.

Products created/homologated/ capitalized/Inventions/Patents (maximum 10 significant products)

3

- Electronic device for operating the command system of the honing machines, Tauru Gh., 2001;
- Device for accomplishing the radial advance of the honing tool, Tauru Gh., 2001;
- The honing tool, Tauru Gh., 2001.

The number of papers published in ISI - quoted journals **13** (the most cited 10 papers)

- *Uniform exponential stability for linear discrete time systems with stochastic perturbation in Hilbert spaces*, Ungureanu V., Abolletino dell'unione matematica italiana(8) 7-B (2004);
- *Determining chromium and copper oxides in coloured glasses using spectrophotometric methods*, Capatana C. and others, The Chemistry Review
- *Complex anions of Cr (III) in the analysis and control of medicines. Determining Nicotinamide (VIT; PP)*, Ganescu I., Cirtina D.

The number of papers published in journals from the main stream of publications **128** (the most cited 10 papers)

- Buneci Madalina, *Consequences of the Hann structure theorem for Haar measure*, Mathematical Reports, 2002;
- Popescu L., *Applications of exact linearization by reaction at operating with continuous current engines*, EEA - Electrothnics, Electronics, Automatics, 2003;
- Chiritescu Dorel, *Currency denomination and its role in inflation control*, Economic Tribune, 2002;
- Medar L., *Improving the organizational structure of a bank*, Economic Tribune, 2001;
- Luca Liliana, *On real variantes of the prehensile biomechanism of human hand*, Machine Construction Journal, 2001;
- Ghimisi Stefan, *Transition of the partial sliding and total sliding in the fretting phenomenon*, Machine Construction Journal, 2004.

The number of papers published in volumes of international scientific conferences with reviewers **870** (10 papers presented at the most prestigious events)

- Paliță V. and other, *Influence of reduction of SO₂ pollution on heat exchange in steam generators*, 5th European Conference of Young Research and Science Workers in Transport and Telecommunications, Transcom 2003, Zilina Slovak Republic;
- Cîrîină L., *Best designing of a chain of dimensions made up when working a part*, 6th International Conference on Production Research - Icp 16, 2001, Cehia;
- Luca L., *Tribology and structural aspects in the function of the human hand*, World Tribology Conference, Viena, 2001;
- Dobrolă D., *Constituent equation used for the study of the break process of the composite materials with rubber matrix*, Congresul Junior-Euromat, Elvetia, 2002;
- Ghimiși Șt., *Study of transition in the fretting phenomenon based on the variable coefficient of friction*, 4th International Conference Of Tribology, Turcia, 2002;
- Olaru O. și alții, *Use of Pic 16f84 microcontroller in command of electrical movements*, 3rd International Carpathian Control Conference, Ostrava - Beskydy, Czech Republic, 2002;
- Chiritescu D., *Customs clearance procedures*, 5th European Conference of Young Research and Science Workers in Transport and Telecommunications - Transcom 2003, Zilina, Republica Slovacia;

(Continued on page 89)



Presentation of the University

"Constantin Brâncuși" University was founded in 1992, according to the Government Resolution No. 288/1.06.1992, through the re-organization of some sections of the Institute of engineering of the University in Craiova, into the specializations Electrical Engineering and Equipment for Building Materials Industry, which had existed in Tg-Jiu since 1972, and the two sections of engineering, Electrical Engineering and Mechanical Engineering, which were affiliated to the same university and which began to exist since the academic year, 1991/1992. Since 1992/1993, the university has functioned as a public institution of higher education and it is subordinated to the Ministry of Education and Research.

"Constantin Brâncuși" University in Tg-Jiu ensures mainly the higher qualification of specialists required by the development of the spiritual, social and cultural life in Gorj County and bordering counties.

The student training is accomplished through full-time program and open distance learning, in the following domains: **engineering studies, economics and management, law, psychology and education studies, physical education and sports and the interdisciplinary specializations.**

The entire activity is based on The Education Law, The Statute of Teaching Staff, Romania's Constitution and The University Charter.

"Constantin Brâncuși" University has 4 faculties and a college.

The Faculty of Engineering with its specializations: Mechanical Engineering, Machines and Production Systems, Electrical Engineering, Industrial Energetics, Automation



(Continued from page 88)

- Moroianu Gh., *Ravenstvo pri tretiraneto compensiroscioto neravenstvo i discriminažiata Po Otnoženie Na Maljinstvata*, Minno-Djeoloskii Universitet "St Ivan Rilski", Sectija "Humanitarii i Stopanski Manki", 2003, Sofia Bulgaria;
- Virtopu Sorin, *Enhancing motivation and best results at class using tim*, 4th International Conference for PhD Students University of Miskolc Ungaria, Institute of Inovation and Technology, 2003;
- Caruntu C., *The analysis of potential material*, "Universitaria Ropet 2002" International Symposium, Petrosani.

The number of scientific books published by publishing houses acknowledged abroad 1

(maximum 10 significant books)

- *Risky Antropogeneous factors*, Tomescu Ion , 402 pag, Ed. Minno-Djeoloskii Universitet "St Ivan Rilski".

and Industrial Computing, Economic Engineering and Environmental Engineering.

Within the Faculty of Engineering there are three postgraduate master courses: *Increasing Efficiency in the Functioning of Electrical Installations, Modern Technologies of Production, Management and Ensured Quality.*

The Faculty of Economic Sciences with its specializations: *Finance and Insurance, Accountancy, Tourism and Catering and Firm Management.* Also, within the Economic Sciences Faculty, there is the *Accountancy and Financial Administration College*, as



well as three postgraduate master courses: *Business Administration in Tourism, Banks and Insurance, Marketing of Commercial Business, European Economics and Finance.*

Presentation of Faculties

International Affiliations of the University

Scientific Research



The Faculty of Juridical and Administrative Sciences with its specializations: *Law and Public Administration*. Within the Faculty there is also a *College of Local Public Administration* in Slatina affiliated to the university in Tg-Jiu, as well as two post-graduate master courses: *Public Law and Institutions of Romanian Private Law*.

Pedagogical College with its specialisms: *Primary School Teacher and Pre-Primary School Teacher, Pedagogy Fine Arts*.

Within the university there is also a *Department of Teacher Training*, where courses for training the teaching staff in primary and pre-primary school are periodically organized, as well as courses for Tenure in



Education and Education Degrees I, II for primary and pre-primary school teachers.

Within "Constantin Brancusi" University the educational process takes place in purpose-built areas.

The Faculty of Engineering is situated in 3 Geneva Street having 4 lecture rooms, 10 classrooms for courses and 15 classrooms for seminars, 15 classrooms for practical activities, the university library, a book storehouse.

There is also an area situated in 7 A.I. Cuza Street, where there are 7 laboratories equipped for the practical activities of the Automation and Industrial Computing specialism.

The Faculty of Juridical and Administrative Sciences as well as the Economic Sciences Faculty are located in 24 Victoria Street, with 4 lecture rooms of roughly 90 seats, 4 classrooms for courses, 6 classrooms for seminars, 3 laboratories, a library, other offices for the teaching staff.

The Pedagogical College situated in 3 Geneva Street with 4 modern lecture rooms as well as classrooms for seminars and a laboratory.

The administrative activity takes place within the Rector's Building in 1 Republicii Street, whereas the students' accommodation is in the Student Complex in "The Wharf". This building has a students' hostel, canteen, swimming pool, multifunctional sports grounds (tennis, basket, football), gymnasium, recreation-lake.

All the university buildings have Internet connection provided by RoEduNet national network.

Scientific Research

The scientific research is carried out within three scientific centers accredited by CNCSIS: *Durability and Feasibility of Mechanic Systems; UNI-CER-MED- Research in Protection of Environment; Research Center of Economic Knowledge and Practice*.

In the last 5 years the teaching staff within the "Constantin Brancusi" University has presented over 1000 papers at International Conferences, has published over 300 of books in different domains, at well-known publishing houses, has brought their contribution in scientific research.

Also a great number of students participate in scientific research through research activities in 30 Student Debating Societies, in all the three domains: Engineering, Economics, Law.

The university has developed partnerships in: Italy, Germany, France, Bulgaria, Denmark or Brazil sharing with them a lot of common programs.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	310	-
2003	260	-
2002	140	8000
2001	60	15000
2000	20	20000
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Rector

Prof. Liviu Marian PhD

Historical Overview of the University

"Petru Maior" University of Targu Mures was founded in 1960 as a pedagogical institute accredited by The Ministry of Education and Culture through the written order no. 3243/1960. It experienced various changes: from 1960 to 1977 it was the Pedagogical College; from 1977 to 1984 the Higher Education Institute (Decree of the State Council no. 209/1977); from 1984 to 1990 the Engineering College (Decree of the State Council no. 213/1984); from 1990 to 1991 the Higher Education Institute (the Order of the Ministry of Education and



Sciences no. 7751/1990); from 1991 to 1995 the Technical University (the Order of the Ministry of Education and Sciences no. 4894/1991); from 1995 to 1996 the University of Targu Mures (Government Decision no. 568/1995); from 1996 to the present Petru Maior University of Targu Mures (G.D. no. 676/1996).

Faculties and Departments

- 3 faculties (The Faculty of Engineering, the Faculty of Sciences and Letters, The Faculty of Law and Economics);
- 1 University College;
- 3 departments (the Department for Long Distance Learning, the Department for Teacher Training, the Centre for Training and Development).

Master and Doctoral Programs

MASTER - 14 programs within the three faculties (the Engineering and Management of the Quality of Industrial Products, the Management of Quality Systems, the

Management of Labour Safety and Health, Industrial Graphics and Design, Automatic Systems for the Management of Industrial and Energetic Processes, Elites and Projects for the European Development, Gender Studies and Management Performance, the History of Literature and the Literary Criticism System, the Management of Public Administration, Legal Consultancy and Business Management, the Financial and Accounting Management, Business Management, Health Management, Project Management).

Doctoral programs - the university does not possess the quality of "Institution accredited for organizing PhD programs", the professors who are in a position to supervise doctoral theses (in the field of economics and industrial engineering) carry on their activities within Babes-Bolyai University of Cluj-Napoca, and the Technical University of Cluj-Napoca respectively.

Patrimony

- 7 buildings with a total area of 13,522 m²;
- a students hostel with 350 seats;
- 1 sports hall;
- 1 sports ground made of bitumen.

Fields in which human resources are trained

Mathematics, Information Technology, Philology (Romanian, English, French), History, Educational Sciences, International Relations, Administrative Sciences, Law, Economics, Finance, Accountability, Management, Industrial Engineering, Mechatronics, Systems and Computers Engineering, Electric Engineering, Economic Engineering, Engineering of Environment, Mechanics, Industrial Technologies, Electronics, Physical Education and Sport.

Presentation of research activity chart

According to "The rules of the academic management staff of the University, their positions and prerogatives" adopted in the meeting of the Senate of 25.03.2004, the activity of scientific research is coordinated by the Scientific Vice-Rector, who supervises the Scientific Committee of the University Senate, the reviewers, the scientific vice-deans, the manager of the publishing house, the heads of the centres and the executives of the research groups.

Human Resources

Professors	31
Senior Lecturers	21
Lecturers	45
Assistant Lecturers	28
Teaching Assistant	20
Research Fellows	0
Administrative Staff	130
Students	5575
of which:	
Undergraduate	4979
Master	596
PhD - full attendance	0
PhD attendance not required	0

Structures	
Research Institutes	0
Research Centers	2
Research Laboratories	38
Multi-user Research Centers	0

Top Priority Research Directions

The construction and technology of gears; Non-conventional technologies of plastic distortion at low temperature, plasma jet and electro-erosion processing respectively; Improvements in electro-energetics; Non-conventional electric machines; Electronic equipment for non-conventional technologies; Modern processing with electron beam; Research in the field of algebra (lattices, topological and ring algebras); Neuronal nets; Digital methods; Psycho-pedagogical research; Sociological problems; Ancient world history; Political economics and economic policies; Trade insurance; Financial accounting; English literature.

Outstanding Research Infrastructure

- Research laboratory for welding technologies with electron beams;
- Research laboratory for thin layers;
- Regional centre for RoEduNet communications

Excellence Centers

- Advanced technologies for designing and processing of gears (TAPFA)-NURC;
- The management of energy and electro-technologies (MEE) - NURC;
- Centre of critics and literary history; Modernity and post-modernity in the Romanian literature of the 20th century;
- Centre of scientific research of the history of Romanian elites.

International Cooperation

- COST 532: Superior friction and wear control in engines and transmission;
- FPS - "NANOCOMP" Project: Nanocomposite - based wear - resistant and self-lubricating PVD - Coating for future applications in tools and components

International Scientific Activities

(the 10 most important ones)

- International Conference on Economics, Law and Management (ICELM);
- IConférence Internationale "Roumains en France, Français en Roumanie";

The number of papers published in ISI - quoted journals (the most cited 10 papers)

10

- Biro, D., Kovacs, A., Misjak, F., Suts, T., Barna, P., B., "Formation of Al₂O₃/Al₂C₃ composite structures in co/deposited thin films", Oral presented at EMRS/ Conference 2003, European Materials Research Society Spring Meeting, June 10- 13, 2003 Strasbourg Symposium G, Protective Coating and Thin Films - 03, Published by Elsevier Editor in Surface and Coatings Technology 180-181(2004) 425-428;
- Enăchescu C., Rădoi D., Osei A., *Theoretical aspects of learning in neural networks*; International Journal for Computer-Aided Engineering and Software, ISSN: 0264-4401, (ISI ranked journal), 10 pag., 2004;
- Rădoi D., Enăchescu C., Osei A. *On The Scientific Visualization Process*; International Journal for Computer-Aided Engineering and Software, ISSN: 0264-4401, (ISI ranked journal), 10 pag., 2004;
- Petrescu A., *H- derived polyadic semigroups*, In Beitrage zur Algebra und Geometrie, 2004;
- Petrescu A., *On homomorphisms of polyadic semigroups with skew elements*, In Beitrage zur Algebra und Geometrie, 2004;
- Petra C., *The manufacture technology of tube models realised by Selective Laser Sintering*, Product Engineering: Eco - Design, Technology and Green Energy, published by Kluwer Academic, 2005, ISBN 1-4020-2932-2, pag. 313 - 319.

The number of papers published in journals from the main stream of publications (the most cited 10 papers)

366

- Cistelean Al., *Dio - il mio vicino. La dimensione religiosa nella poesia di Tudor Arghezi*, In Il Nuovo Arcopago, (Forlì, Italia), an. 23, nr. 1/2004, ISSN 0394-8846, pp. 93-101;
- Cozac, I., *Branch and Bound method for Independent and Dominated Sets*, Studia Universitatis "Babeş-Bolyai" Informatica, pag. 31-37.;

- Finta, B., *Characterization of the isosceles and the equilateral triangle by algebraic relations*, In Annales Mathematicae, Universitatea Eötvös Loránd din Budapest, Nr. 43 2000, pag 49 - 60.;
- Szabo, Zs., *Error Analysis in Multi-Grid Method*, Bull. for Applied Math., Hungary, BAM 1744 XCII - A, pag.129-136, 2000 ISSN 0133-3526;
- Szilagyfi, M., *Activity of Janos Bolyai*, Acta Phys. Hungarian Academy of Sciences, Heavy Ion Physics, vol. 11, nr. 1-2, 2000, pag. 99-108;
- Mánálá, R., Devenyi, A., Biro, D., David, L., Barna, P.B., Kovacs, A., "Multilayer TiAlN coatings with composition gradient", Surface and Coatings Technology, 151-152(2002), pag. 21-25;
- Stefanovici, S., "Form and Style: Dissertations, Research and Conference Papers" in Prosper Newsletter, Issue No. 13, March 2001, ISSN 1224-3361, p. 34-39;
- Pozdircă Al., Maros, D., *Undercutting of the helical surfaces manufactured by the enveloping method*, Vol. Tehnologii - Calitate - Maşini - Materiale, Ed. Tehnică, Bucureşti, 2000, ISBN 973-31-1492-8, 973-31-1494-4 p. 455-460;
- Finta, B., "Characterization of the Isosceles and the Equilateral Triangle by Algebraic Relations", Annales Univ. Sci. Budapest, 43 (2000), Budapest, Ungaria, pag. 49-60;
- Finta, B., "A Generalisation of a Network-Kantorovich-Seidel-Type Theorem", PU.M.A. (Pure Mathematics and Applications), Volume 11, Nr 2/2000, Budapest, pag. 231-242.

The number of papers published in volumes of international scientific conferences with reviewers

1188

(10 papers presented at the most prestigious events)

- Iaţcu T., *Semantic Relationships in the D-Structure of Phrasal Verbs*, in Proceedings of the 23rd International Conference, Leon, Spain: Leon University Press, 2004, ISBN: 84-688-4658-9, pp. 1-8;

(Continued on page 93)

- Scientific Conference " Interdisciplinarity in Engineering - Inter-Ing";
- International Conference "The Cultures of Post 1989 Central and Eastern Europe;
- International Conference of the Romanian ethnic communities from abroad - "National Identity - European Spirit".

**Products created/homologated/
capitalized/Inventions/Patents**

5

(maximum 10 significant products)

- Matrix for inverse extrusion at low temperature (bronze medal at The International Inventions Exhibition, Geneva 2002);
- Double spiroid worm gear;
- Tribological nanocomposite layers Ti-Al-C-N additive-processed with MoS₂;
- Patent: 118683/2004 "System for automatization and monitoring of industrial processes";
- Patent: 119572/2004 "Automatized electromagnetic method and system for the proper production of reactive energy, in static conditions and the diminishing of active energy consumption in dynamic conditions".

**International Cooperation
The Programme COST 532**

The title of the project Action COST 532: "Superior friction and wear control in engines and transmissions".

This activity comprises the project proposed by Petru Maior University with the title: "Optimisation of the multilayer nanocomposite hard coatings developed in graded composition of transition metal carbon-nitride phases".

Coordinator: Petru Maior University of Targu Mures, Romania.

Petru Maior University is the national representative in the Management Committee of the Programme.

Period of activity: 2002-2006.

The partners of Petru Maior University in this project are:

The Technical Physics Institute of the Hungarian Academy, Budapest;

The National Research Institute for the Physics of Materials, Bucharest

Forschungszentrum Karlsruhe, Institute for materialsforschung IMF, Germany.

The partnership is open throughout the whole project.

(Continued from page 92)

- Săteanovi, A., *The Theme of Fear in Nathaniel Hawthorne's Romances*, Volume The Journal of American Culture and Literature, (Shadows that Stalk: Representations of Fear in American Culture and Literature), Hacettepe University, Ankara & State University of New York at Buffalo, Buffalo, New York, ISSN: 1300-3976, pag. 73 - 81, 2002 Issue;
- Boloş, V., Boloş, C., "Consideration concerning the roughness resulted from milling plan spiroid worm gear", in: Proceeding. The 4th International Scientific Conference "Development of metal cutting-DMC- 2002", Kosice, mai 2002, ISBN 80-7099-796-6, pag. 247-249;
- Georgescu, M., "A higher Quality of the Academic Education", in vol. "microCAD 2002 International Scientific Conference", 1-8 March, University of Miskolc, Hungary, Tom L, 2002, ISBN 963 661 515 2 - 963 661 527 6, pag. 21-24;
- Chiriac, L., *Procedural aspects regarding romanian administrative law - MICRO CAD*, International Computer Science, Law Section, Hungary, University of Miskolc, nr. 639/2003, ISBN 963-661-566-7, pag.101-107;
- Brezeanu, L., C. Mate, M., *The study of the influences of cutting forces on the edge of Fellows cutters through finite element method*, Proceeding of the international conference on gearing, transmission and mechanical systems, 3-6 July 2000, Nottingham, UK, ISBN 1 86058 260 5, pag. 921-928;
- Marian, L., *Les risque dans les projets de creation d'entreprises en Roumanie* - 4th Congres International Pluridisciplinaire Qualite et Surete de Fonctionnement Qualita 2001, Annecy Franta, 22-23 martie 2001, ISBN 2-9516453-0-9, pag. 175-176;
- David, L., Biro, D., Kutasi, N., Bama, P., B., Berger, M., *Adaptiv fuzzy-logic control in reactive magnetron sputtering process for thin film deposition*, Proceedings of the 3rd COST 516 Tribology Symposium, Eibar, Spain, 18-19 May 2000, pag.155-162;
- Grama, L., *Technological aspects of the adaptive control in the*

assisted plasma jet processing - The 25th Congress of the American Romanian Academy of Arts and Sciences (ARA)-Cleveland, Ohio, U.S.A., July 12-16, 2000, Proceedings ISBN: 2-553-00806-6, pag. 249-251;

- Enăchescu Călin, *Neural Networks learning using a priori information*; 29th Annual Congress of the Romanian American Academy of Arts and Science (ARA), University of Applied Sciences, Bochum, Germany, September 7-12, Alma Mater Publishing House, ISBN: 973-632-140-1, pp. 479-482, 2004;
- Dogaru L., "Criteria of delimitation between normative acts and individual acts", MICRO CAD, International Computer Science, Law Section, Hungary, University of Miskolc, 229/2002, ISBN 963 - 661-515-2, pag.7-10;
- Enăchescu C., "Learning strategies for improving the performances of neural networks", 26th Annual Congress of the Romanian American Academy of Arts and Science (ARA), Ecole Polytechnique de Montreal, Quebec, July 2001, Polytechnic International Press, pag. 593-598.

**The number of scientific
books published by
publishing houses
acknowledged abroad**

4

(maximum 10 significant books)

- *English in Europe*, Jasone Cenoz, Ulrike Jessner, Tatiana Iajcu s.a., 271 pag., Multilingual Matters Ltd, Clevedon, Buffalo, Toronto, Sydney, 2000;
- *Mathematical Gems From the Botyal Chets*, Elemér Kiss, 200 p, Akademiai Kiado, Budapest, 2000;
- *Complex Surfaces Singularities and Resolution Graphs. Methods of Solving Nonlinear Operator Equations*, Alexandru Horvath, Béla Finta, 124 pag., Budapest University of Technology and Economics, 2001;
- "Raising the Accuracy of Finite Element Approximations" to Elliptic Boundary Value Problems, Zsuzsanna Szabo, 130 p, Muegyetemi Kiado, Budapest, 2000.

The Framework Programme 5 (FP5)

"NANOCOMP" PROJECT

It is part of the Framework programme FP5, a research programme funded by the European Union, carried out throughout 2000-2004 with the theme of research: "New Nanocomposite-based Wear-resistant and Self-Lubricating PVD-Coatings for Future Applications in Tools and Components".

The research activity developed at Petru Poni University is carried out as a subcontractor of the working group WP4, coordinated by the Research Institute for Technical Physics and The Science of Materials, the Hungarian Academy from Budapest.

According to the research contract no. G5RD-CT-2001-00578, drawn up between Petru Poni University and the project general coordinator, Material Forschungsinstitute Karlsruhe from Germany, approved by the European Committee on 26.11.2001.

Within the project, Petru Poni University has collaborated at the research programme for the processing and characterization of nanocomposite materials in view to investigating the influence of the methane reactive gas, acetylene respectively, as carbon carrying gas:

- The Institute for Physical Technique and the Science of Materials of the Hungarian Academy, Budapest
- Material Forschungsinstitute Karlsruhe, Germany
- CSEM - Neuchatel, Switzerland
- GMBH, Austria
- S.C. Dürkopp - Adler SRL, Targu Mures

Research Laboratory for Welding Technologies with Electron Beam

1. The description of the experiment equipment

The equipment for processing with electron beam is achieved with the following components:

- electron source - the electronic cannon which comprises:
 - the electronic emission cathode - the thermo cathode;
 - the acceleration electrode - the anode;
 - the electrode of directing the beam - Wehnelt;
 - equipment for focusing the beam;
 - equipment for deflexion of the beam;

- the workshop
- system of voiding the cannon and the workshop
- supplying system
- command and adjustment system

The processing equipment with electron beam, achieved at Petru Poni University of Targu Mures, in collaboration with I.C.P.E. Bucharest has the following technical characteristics:

- Axial electron cannon, with command electrode, indirect heating:
 - triode type CTW 5/60 (CTW 10/60)
 - acceleration tension 60kV
 - adjusting utility power 5 kW (up to 10 kW)
 - beam current 85 (170) mA
 - maximum diameter of the beam in the centre 0.3 mm
- The workshop:
 - exterior limit gauge 690x690x530 mm
 - interior limit gauge 650x650x500 mm



2. Electro-technologies based on the use of electron beam

- *thermo-processing*: welding, melting, refining, evaporation, thermo-treatment, drilling, cutting, milling;
- *non-thermo processing*: lithographing, polymerizing, sterilizing, food preservation etc.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	512	5000
2003	259	2000
2002	652	-
2001	215	-
2000	190	-
1999	70	-
1998	86	-
1997	72	-
1996	33	-
1995	14	-

**Research Laboratory
for Thin Layers**

A versatile PVD (Physical Vapor Deposition) coating system provided with three independent DC driven UM magnetron sputtering sources has been designed and developed by the researchers from Thin Films Laboratory of "Petru Maior" University. Research interest was focused on development of nanocomposite self-lubricated tribological hard thin film coatings based on transition metal nitride and carbo-nitride. Efficient plasma ionization and beam focusing on the surface of coated substrates are controlled by adequate configuration of magnetic fields generated by the NdFeB permanent magnets



and by auxiliary electromagnets. The UV radiation heated substrate components are mounted inside of the octagonal shape high vacuum chamber and are rotated in planetary motion by external driven supporting table. The substrates can be biased to a highly negative voltage up to 1150 V during surface cleaning by inert gas ion etching, respectively for controlled ion implantation during of

adhesive seed-layer deposition. Process parameters are continuously saved to a PC buffer and are used in forward estimation of the reactive gas partial pressure. Optical emission of sputtered target atoms are excited in plasma and the spectral intensity of characteristic radiation is used as state parameter in reactive gas flow control. Mass flow gas controllers are used for reactive gas admission and dynamic controlled pressure adjustment. Power and/or current controlled DC supply units are used in exciting the glow discharge plasma provided by the special designed sputtering plasma guns. The rectangular planar targets of hot pressed high purity binary materials of TiC, TiAl and MoS₂ (sizes of 12x85x160 mm³) are reactively co-sputtered in Ar and CxHy gas mixture at a power density of 30-50 watt/cm² giving a deposition rate of cca. 2 μm/h at a target-substrate distance of 250 mm. The state-of-the-art UM magnetron sputtering units provide high density ion current on the substrate's surface by optimised magnetic field limitation of plasma and very efficient control of accelerated electrons in their trajectory inside of plasma beam pushed towards the substrate for a distance greater of 300 mm. MoS₂ doped TiAlCN nanocomposite thin films in graded composition were developed as self-lubricated tribological wear protective hard coatings characterized by extreme low friction coefficient, high stiffness and very strong adhesion to steel substrates.

Success Stories

- the Romanian Academy Prize "Nicolae Iorga" for the paper "Romanians in Europe's Consciousness" awarded to Prof. Grigore Ploesteanu;
- the Romanian Academy Prize "Constantin Radulescu-Motru" for the paper "Treaty of Education Pedagogy" awarded to Prof. Ioan Nicola;
- the Romanian Academy Prize "Vasile Pârvan" for the paper "Celts and Germans in the Roman Dacia", awarded to Prof. Adrian Husar;
- the Romanian Academy Prize "George Barițiu" for the paper "The History of the Formation of the Romanian Intellectuality from Transylvania and Banat in the Modern Epoch", awarded to Prof. Cornel Sigmirean.



Rector

Prof. Gogu Ghiorgheșă, PhD

Historical Overview of the University

In 1961, the founding of the Pedagogical Institute represented the beginning of the academic activity in this geographical region. In 1976, the name of the Pedagogical Institute was changed into the Higher Education Institute of Bacău, an institution which was transformed into the Engineering Institute under the coordination of the Technical

laboratories (88, 3947 m²); Student hostels (3, 1124 places); Sportive facilities: gym halls (2, 372 m²), sportsgrounds - handball, field tennis (1500 m²), sport games hall (210 m²), winter sports base - Vatra-Dornei chalet Micro-hall of production (1100 m²).

Fields in which human resources are trained

Industrial Engineering (3 specializations), Mechatronics and Robotics, Bio -Chemical Engineering, Industrial Management and Engineering (2 specializations), Energetics, Mechanical Engineering (2 specializations), Environmental Engineering, Computers and Information technology, Language and Literature (3 specializations), Mathematics, Computer Science, Biology, Marketing, Accounting, Physical Culture and Sport (2 specializations).



Institute of Iasi. In 1990, the Engineering Institute regained its autonomy and the University of Bacău was set up.

Presentation of research activity chart

The research activity at university level is co-ordinated by the Vice-rector in charge with the research activity, the Department of Research and Technological Transfer, and the Research Committee of the University Senate. The scientific secretaries and the departments co-ordinate the research at the level of each faculty. The university structures implied in the research activity are: the research centers, the research teams and the research laboratories.

Faculties and Departments

- 5 Faculties: Engineering, Sciences, Economic Sciences, Letters, Physical Education and Sport;
- University College;
- 5 Departments: Postgraduate Studies, Scientific Research and Technologic Transfer, Teaching staff training, International Cooperation, Open Distance Learning.

Master and Doctoral Programs

MASTER - 17 master programs in the following fields: Mechanical Engineering, Chemical Engineering, Industrial Engineering, Industrial Energetics, Process equipment, Environment protection, Letters, Biology, Economic Sciences, Physical education, Kinesytherapy

Patrimony

Educational spaces:course rooms (17, 1706 m²), seminar rooms (17, 620 m²)

Structures

Research Institute	0
Research Centers	4
Research Laboratories	34
Multi-user Research Centers	0

Top Priority Research Directions

- Developing the scientific research component at the national and international standards.
- Developing powerful research teams which can carry out competitive research activities.
- Integration of the own research teams into national and international research consortia.

Human resources

Professors	39
Senior Lecturers	33
Lecturers	62
Assistant Lecturers	67
Teaching Assistant	38
Research Fellows	0
Administrative Staff	157
Students	5552
of which:	
Undergraduate	5127
Master	417
PhD - full attendance	0
PhD attendance not required	0



- Sustaining the strengthening and modernization of the material basis for research.
- Approaching the research themes focused on solving the problems imposed by the present and further requirements concerning the Romanian society development
- Increasing the number and quality of the research projects and programmes, in view of obtaining substantial financial support for the research activity.

Outstanding Research Infrastructure

Specific installations and equipment: Hotinger installation for determination of the residual stress in worked parts, Marcinia device for CLD study, devices for study of specific phenomena at deep drawing of multi-shaped parts, devices for metal sheets forming, microscopes, ultrasonic fault detector, uniaxial stress measuring device, Hotinger load cell 25t, video camera for image analysis. Computing technique: Ultra Sun 5 design station, computer network for technological computer aided design (7 unit); 2 computer networks for building design (8 unit), 2-processor computers (4). Software: ABAQUS, Proengineering, Catia, Mechanical Desktop, Catman. Specific achievements: 2 international research programs (Copernicus Programme: Intelligent System for the Metal Sheets Forming Design, 1997-2000; V Frame Programme: The intelligent system for net shape forming of sheet metal products, 2002-2005), 8 research grants funded by CNCSIS, 4 contracts with industrial partners, more than 350 scientific papers published by prestigious international and national journals.

International Cooperation

Programmes founded by the European Communities:

1. Inco-Copernicus Programme: The System for Metal Sheet Forming Design, Collaborators: Université de Savoie (France), Technical University of Wrocław (Poland), University of Porto (Portugal), Period of time: 1998-2001;
2. V Framework Programme: The intelligent system for net shape forming of sheet metal products, Collaborators: Metal Forming Inst. Poznan-Poland, Societe d'Ambutissage Precis-France, Auto Tools Warszawa-

Number of papers published in ISI - quoted journals

27

(the most cited 10 papers)

- Influence of the substrate-electrode applied bias voltage on the properties of sputtered a-C: thin films, G. Lazar, J. Phys.:Condens. Matter 13(2001)
- Strong dependence of IR absorption in a-SiC:H dc magnetron sputtered thin films on H₂ partial pressure, M. Stamate, Appl. Surf. Sci, 172(1-2) (2001)
- Vapor phase aldol condensation over fully ion-exchanged montmorillonite-rich catalysts, Azzouz A., s.a, Applied Catalysis A: General, 8390, Vol. 241, Issues 1-2, 2003
- R characterization of a-C:H:N films sputtered in Ar/CH₄/N₂ plasma, Lazar G., Lazar I., Journal of Non-Crystalline Solids, vol.331, 2003
- On the non-linear IV characteristics of dc magnetron sputtered TiO₂ thin films, M.Stamate, Applied Surface Science, 205 (2003)
- An analysis of the shearing stresses distribution on the cross-section of the twisted round bars, Brabie G., J. of Mat. Proc. Techn., Elsevier, vol. 142, 2003
- Une synthèse facile d-aminochromanols disubstitués en position 6 et 8, Finaru, A s. a, J. de chimie organique, Societe Francaise de Chimie, Paris-France, 2001.
- Optimized procedure for clay pillaring with aluminium species used in depollution, Nistor D., s. a Journal of Thermal Analysis and Calorimetry, Vol.78(2004)
- Functionalisation of dihydropyridopyrazine involving palladium-catalyzed coupling reaction, Grig I., s. a, Tetrahedron Letters, Vol. 45, nr. 11, 2004
- Band tail hopping conduction mechanism in highly conductive amorphous carbon nitride thin films, G.Lazar, s. a., Applied Physics Letters 85(25), 2004

The number of papers published in journals from the main stream of publications

850

(the most cited 10 papers)

- Influence of the torsion moment on the column-type apparatus stability, Bibire, L., Judele, A., Cobrea, C., Constructia de Masini, 2002 (54), nr. 1-2;
- Utilization of bakery yeast B, practical considerations, Dabija A., The Romanian Food Industry Journal, no.23 (2001);
- Some considerations on "in vitro" and "ex vitro" behaviour of *Sedum hybridum* species. Ghiorghita G., Gille E., Nicuta D., Hirtan M., The Journal of Medical and Surgery Issues, 2003, 107-2;
- Merchandise cost accounting under the impact of specific methods of the input-output analysis, V. Patrut, Finance and Accounting Review, no.1 and 2/2001;
- Newtonian spaces with zero boundary values, Mocanu M., Rev. Roumaine de Mathematiques Pures et Appliques, 47, 5-6 (2002);
- Particularities of the dual-phase steels, D. Ciucescu, Gh. Simionescu, The Foundry Journal, no.3, Bucharest, 2001;
- The influence of the vibrations level on the wear of the machine tool guiding couples, Brabie G., Romanian Journ. Of Tech. Sciences - Applied Mechanics, The Romanian Academy, vol. 47, 2002;
- Reading Illustrated Women in Dickens's *Dombey and Son*, Cmečiu C., "Cultural Perspectives", nr.7/ 2002;
- Bodily Movements. Transcending Cultural Barriers, Bonta E. "The Semiology of Culture", nr.7/ 2002;
- From Dealings with the Firm of *Dombey and Son* to the Shaping of Male Selves, Cmečiu D. "Cultural Perspectives", nr.7/ 2002;

(Continued on page 99)



Poland, Aerostar Bacău-Romania, WMW Bacău-Romania, PJ Ferramentas-Portugal, Techn. Univ. of Wrocław - Poland, Université de Savoie-France, University of Porto-Portugal, Period: 2002-2005.

Research programmes with French universities:

- Solid support synthesis under microwaves of some derivatives with inhibiting action upon melatonin, Collaborators: Institut SERVIER, Université d'Orléans, Université de Caen, Université La Rochelle, period: 1999-2000.
- Synthesis of some heterocyclic compounds with antitumoral action, Collaborators: Institut SERVIER, Université d'Orléans, Université de Caen - period: 2000-2002.

International Scientific Activities

(the 10 most important ones)

- National Conference with international participation: "Design and Technologies Optimization in the Machine Building" (OPROTEH), 2001, 2003 editions;
- Scientific Communications Session: "Ecology and Ecosystems Protection", 2003 edition;
- The French-Romanian Colloquium on Applied Chemistry - COFROCA, 2000, 2002, 2003 editions;
- International Conference: "Therapy of Pain: Desiderate or Reality?", 2003 edition;
- International Symposium: "Semiology of Culture", 2002, 2004 editions;
- National Conference with international participation: "Industrial Energetics", 2001, 2003 editions;
- National Symposium with international participation: "Medicinal Plants - Present and Perspectives", 2003 edition;
- International Conference "Sport - A Social Phenomenon", 2003 edition;
- International Conference on Mechanics of Fracture, 2004 edition.

Products created/homologated/ capitalized/Inventions/Patents

(maximum 10 significant products)

14

- Procedure and installation of combustible gas burning, Sajin T., Gheorghiu I., Craciun A., Anghelut M., Duca Gh., Gaba

(Continued from page 98)

The number of papers published in volumes of international scientific conferences with reviewers

235

(10 papers presented at the most prestigious events)

- *Natural 2- structures in Lagrange spaces of higher order*, Blanuta V., Journal of the Egyptian Mathematical Society Cairo, Egypt Vol. 9(2), 2001
- *Aspects of the in vitro behaviour of *Withania somnifera* Dun. II. Biomass accumulation in in vitro and ex vitro cultures*, Ghiorghita G., Gille E., Prisecaru M., Nicuta D., Pislariu I.C., Proceed. 1-st Int. Pharmaceutical Congress, Atena 26-29 April, 2001.
- *Some connections between the supernormal cones, generalized dynamical systems and Choquet boundaries*, Postolica V., Nimitet V., Nonlinear Analysis Forum, vol. 6 (2), Kyungsu University, Coreea, September 2001.
- *On the definitions of some generalized forms of continuity under minimal conditions*, Popa V., Memories Fac. Sci. Kochi Univ., Ser. Math. 22(2001)
- *The Analyse of Factors Influencing the Intrinsic Yield Limit of Metallic Materials*, D. Ciucescu, Gh. Simionescu, The 14th International DAAAM Symposium "Intelligent Manufacturing & Automation: Focus on Reconstruction and Development" 22-25th October 2003
- *Intelligent System of Control for Industrial Robots*, Livinti P., Stan Gh., 7th International Research/Expert Conference TMT 2003, Lloret de Mar, Barcelona, Spain, 15-16 September, 2003
- *Influence of particles condition surface and humidity of mixture, towards separation degree in vertical flow air*, Nedeff, V., Mosnegutu, E., Savin, C., The 14th International DAAAM Symposium, Sarajevo, Bosnia and Herzegovina, 2003;
- *Characteristics of Steel Tailored Welded Blanks for Panels and*

Structures, Schnakovszky, C., 7th International Research/Expert Conference TMT 2003, Lloret de mar, Barcelona, 2003

- *Some characteristics of experimentally determined forming limit diagram (FLD's) and forming limit stress diagram (FLSD's) for A5182 aluminium alloy sheet*, Ungureanu V., Judele A., Masinostroenie i tehnosfera XXI veka. Sbornik trudov X Mesdunarodnoi naučno-tehničeskoj konferencii. Tom 4, Doneck, 2003
- *Residual stresses and their effects in elastic-plastic and plastic twisted bars*, Brabie G., Proc. of ESAFOR-2002, Krakow-Poland, 2002

The number of scientific books published by publishing houses

acknowledged abroad 56

(maximum 10 significant books)

- *Bakery Yeast. Utilizations B, perspectives*, Dabija, Adriana (2001), 123 p., Tehnica-INFO, Kishinev;
- *Food Products Chemistry*, D. Ciobanu, R. Ciobanu, 317 p., Tehnica-INFO Kishinev, 2001;
- *Quality Engineering, Evaluation, Measurement, Validation*, I. Cristea, C. Schnakovszky, 264 p., Tehnica-INFO, Kishinev, 2001;
- *Zeoilic Materials in New Technologies*, Azzouz A., Sajin T. (2002), 259 p., Tehnica-INFO, Kishinev;
- *Bases of Cutting Tool Design*, M. Gherghel, I. Cristea, V. Pavel, 274 p., Tehnica-INFO, Kishinev, 2002;
- *Methods and Modern Techniques in Organic Chemistry*, Finaru, A., 257 p., Tehnica-INFO, Kishinev, 2002;
- *Waste Waters: Sources, Characteristics, Utilizations*, Gavrilă, L. and Gavrilă D., 226 p., Tehnica-INFO, Kishinev, 2002;
- *Computer-Aided Design*, Ungureanu, V., 570 p., Tehnica-INFO Publishing House, Kishinev, 2002;
- *Strength of Materials*, Pintilie Gh., 320 p., Tehnica INFO, Kishinev, 2002;
- *Mechanical Vibrations*, Zichil V., 382 p., Tehnica INFO, Kishinev, 2002.

Key Role Played in Certain Fields
Presentation of Laboratories



- A., patent MD no. 1622, B.O.P.I., 2001 no. 2, 29;
- Procedure and installation of burning the combustible mixture, Sajin T.M., Craciun A.T., patent MD no. a2000-0201;
- Burning process of the liquid hydrocarbons, Sajin T.M., Craciun A.T., Duca Gh., patent MD no. 1750, B.O.P.I., 2001, no. 9, 29;
- Procedure and installation for combustible burning, Sajin T.M., Craciun A.T., Botez C.N., patent MD no. a2001-0112;
- Procedure, clay (varieties) and preparation process of clay for milk catalytic coagulation, Azzouz A., Sajin T., patent MD no. A2002-0164, 12.02.2004;
- Inside grinding device, Stan G., patent RO- 119134, 24.02.2004;
- Multipositional palletizing mechanism, Stan G., patent RO-119113, 20.02.2004
- Balance device, Stan G., patent RO-119131, 24.02.2004;
- Meshing backlash absorption device, Stan G., patent RO-118479, 1.03.2003;
- Balance-compensation device, Stan G., patent RO-119132, 24.02.2004.

Key-role played in certain fields:

- *Optimization of cold plastic deformation processes of metal sheets by the achievement of a system of deformation tools correction within the design period, system which takes into account the errors determined by the instability phenomena of the part shape and dimensions (folding and elastic annealing). The research results were materialized in two research themes funded by the EU.*
- *Utilization of natural mineral supports for the synthetic organic compounds with active role in the plant growth and development, which allowed the obtaining of some derivatives of 2- and 3-substituted 4-chromanons (Mannich-Werner bases), testing the pharmacological and biological free activity of synthesized compounds, immobilization of the new synthesized compounds upon natural mineral supports and testing their pharmacological and biological activity. The research results were materialized in two research themes funded by the Centre Region of France.*

**Research Laboratory:
 Physics and Unconventional
 Technologies**

The main research theme: The obtaining and study of electric and optical properties of the amorphous and oxide thin films.
Equipment and specific computing techniques: Deposition device with radio-

frequency and direct-current magnetron sputtering, deposition device with vacuum resisting evaporation, equipment and Leybold-Hareus software for experimental data acquisition and processing, UV-VIS and IR spectrophotometers, gases purification device, electric conductivity measuring system at various temperatures in a controlled



medium, measuring systems for layer thickness determination.

Connected study themes: Determination of optimal condition of amorphous C-films deposition with radio frequency magnetron sputtering, determination of optimal condition of titanium dioxide (TiO₂) films deposition in direct-current plasma magnetron sputtering, study of deposited films electric and optical properties preparatory to identifying some possible applications.

Specific achievements: Obtaining some deposition devices using plasma sputtering and disintegration hybrid method, elaboration of four doctoral theses based on the research results, publishing 10 scientific papers in ISI journals.



**Research laboratory:
Chemistry of Natural and
Synthesis Products**

The main research theme: Utilization of some natural mineral supports for the synthetic organic compounds with active role in plant growth and development.

Equipment and specific computing techniques: Heidolph Laborota 4000 rotative evaporator, distiller, portable turbid meter, Drel 2010 set, vacuum oven, Selecta analytical balance, Stuart CB 162 magnetic hot plate stirrer, spectrophotometer, sterile hood for biological material handling, PACKARD 417 gases chromatograph, organic synthesis devices, XP 16000 computer, Cannon N-670-U scanner.

Connected research themes: Synthesis of useful intermediates for obtaining the Mannich-Werner bases, followed by their cyclization. Purification and confirmation of the new synthesized compounds. Comparative



study of the biological and chemical structure-reactivity relationship. The choice of solid support for the compounds with biological activity. Study of the required conditions for the synthesis transposition upon solid support and the obtaining of the new biological synthesized compounds immobilization. Testing the pharmacological and biological activity of the support-immobilized compounds.

Specific achievements: 2 international research projects with the Institute of Organic and Analytic Chemistry and the University of Orleans, France; 1 project funded by the World Bank, 3 projects at national level, and 8 scientific papers published in ISI journals.

**Research Laboratory: Plant Genetics
and Biotechnologies**

The main research theme: Experimental mutagenesis and in vitro cultures on plants

Specific equipment: variable conditions room for in vitro cultures, magnetic stirrer, laminar sterile air flow hood, sterilizers, drying stoves, UVVIS spectrophotometer, orbital stirrer, analytical balance, electric water baths, rotavaporizer.



Connected study themes: Inducing of the experimental haploidy in some vegetable species; complex studies (morphogenetic, cytogenetic and biochemical) in vitro and ex vitro in some aromatic and medicinal plants; experimental mutagenesis in some medicinal plants.

Specific achievements: 1 grant funded by the World Bank and the Romanian Government, 2 grants with CNCIS financing, 75 scientific papers published by the national journals and 25 papers published abroad. Periodical organization of a national symposium with international participation.

International affiliations

- EUA (European University Association - Due to the affiliation to the National Council of Rectors and to BSUN, which are EUA members); BSUN (Black Sea University Network); AUF (University Agency of Phrancophonie); ENHPE (European Network of Physiotherapy in Higher Education); ENOTHE (European Network of Occupational Therapy in Higher Education);
- AMAPSEEC (Association for Medicinal and Aromatic Plants of Southeast European Countries).

**Financial resources
obtained for
research**

	National millions ROL	Internat. EURO
2004	1320	3200
2003	520	63500
2002	470	196000
2001	157	50000
2000	400	90000
1999	87	30000
1998	52	15000
1997	43	0
1996	52	0
1995	34	0



Success Stories

- The winning of the Romanian Academy's Simion Stoilov Prize by PhD. Prof. Valeriu Popa.
- The cooptation of the Managerial and Technological Engineering Research Centre by the International Consortium of Research INETFORSEMP.

International Cooperation

Cooperation within academic programmes:

ALGERIA: University of Tlemcen;
 BELGIUM: Open University of Brussels;
 CANADA: École de Hautes Études Commerciales de Montréal, Quebec University of Montreal; DENMARK: Engineering College of Aarhus; EGYPT: University of Cairo; FINLAND: Tampere University of Technology; FRANCE: University of Belfort, "Michel de Montaigne" University of Bordeaux, Caen: University of Caen, Basse-Normandie, University of Pharmaceutical Sciences (Université des Sciences Pharmaceutiques), Centre de Recherches sur les Médicaments de Normandie, SINTEVAL Institute, Blaise Pascal University of Clermont-Ferrand, Joseph Fourier University of Grenoble, Rudology Institute of Le Mans, University of Lille 2, University of Paris-Sud, Institut de Formation des Maîtres (IUMF) - Lille, INSA

Lyon, University of Metz, ENIM Metz, University of Montpellier, University of Orleans, University of Paris-Sus, Poitiers - University of Poitiers: Business Administration Institute, Faculty of Economic Sciences, "Paul Sabatier III" University of Toulouse; GERMANY: Fachhochschule Bielefeld, Fachhochschule Darmstadt, Fachhochschule Fachhochschule Dortmund, Fachhochschule Jena, Fachhochschule Stralsund; HUNGARY: University of Budapest; GREECE: University of Patras; ITALY: Technical University of Ancona, University of Ferrara, University of Parma, University of Perugia; MORROCO: Hassan I University of Seltat; NORWAY: University of Trondheim; THE NETHERLANDS: University of Groningen, Wageningen University, Hogeschool van Amsterdam; POLAND: Technical University of Wrocław, University of Wrocław; PORTUGAL: University of Aveiro, Technical University of Porto; REPUBLIC OF MOLDOVA: University of Kishinev; SPAIN: Complutense University of Madrid, University of Valladolid, University of Zaragoza; SWEDEN: University of Linköping; UKRAINE: Technical University of Vinnitsa.

Cooperation within research programmes

Technical University of Wrocław-Poland; University of Porto-Portugal; University of Savoie - ESIA Annecy-France; Institute of Organic Chemistry of Orleans-France; SERVIER Institute-France; SINTEVAL Institute-France; Metal Forming Institute Poznan-Poland.



Rector

Prof. Dan Călin Peter, PhD

Historical Overview of the University

In 1961 the Pedagogical Institute is founded and in 1969 the Institute for Sub-engineers; these two merge on October 1, 1974, thus founding the Institute for Higher Education in Baia Mare. In March 1991, the Institute for Higher Education, through Governmental Decree, is transformed into the Baia Mare University. In 1996 it receives the name North University of Baia Mare.



Gears Manufacturing; Mining Engineering; Mineral Processing.

Doctoral programs:
 Mechanical Engineering, Philology.

Patrimony

North University of Baia Mare holds 4 buildings for educational purposes, with a total useful surface of 10.719 m². The useful surface for one student is 2,65 m². The 3 hostels can accommodate 764 students, and guarantee accommodation for all students. The canteen can provide for 600 students/ 2 series.

Fields in which human resources are trained

Human resource is educated and formed within the North University of Baia Mare in the following domains: Engineering, Environment, Mathematics, Physics, Chemistry, Biology, Philology, Economy, Theology, Philosophy, Journalism, Arts, Geodesy, Informatics.

Faculties and Departments

At present, the North University of Baia Mare has 4 faculties, 1 college, 2 departments:

- The Faculty of Engineering;
- The Faculty of Mineral Resources and Environment;
- The Faculty of Letters;
- The Faculty of Sciences;
- The Pedagogical, Technical and Economic University College;
- The Department for Teaching Staff Education and Improvement;
- Department of Open Distance Learning and Low Frequency Attendance.

Master and Doctoral Programs

MASTER - Master studies are organized in the following domains: Human Rights, Democracy, Peace and Tolerance; Ethnology and Social Anthropology; Folk culture and language; Romanian literature and the European modernism; Canadian Studies;

Presentation of research activity chart

The scientific research develops in five CNCISIS accredited research centers: the Research center for gears, Applied and fundamental Mathematics, Environment Engineering and Quality Control, the Center for Mineral resources and waste processing, the Research center for mineral resources, Environment and sustainable development. Within each department an annual program is created, based upon the scientific research topics approached by every member of the teaching staff.

Structures

Research Institutes	0
Research Centers	5
Research Laboratories	16
Multi-user Research Centers	0

Human Resources

Professors	32
Senior Lecturers	43
Lecturers	81
Assistant Lecturers	35
Teaching Assistant	19
Research Fellows	1
Administrative Staff	120
Students	5222
of which:	
Undergraduate	5047
Master	146
PhD - full attendance	-
PhD - attendance not required	29



Top Priority Research Directions

The strategic objective of the North University of Baia Mare is to develop the scientific research at a European level by attracting funding according to competitive criteria; encouraging and stimulating scientific research activities, projects, expertise and consulting, financed by extra-budgetary means; organizing multidisciplinary and interdisciplinary research teams. The priority directions are the protection and rehabilitation of the environment, and the development and promotion of new technologies.

Outstanding Research Infrastructure

In the domain of environment engineering and protection there exists an advanced research infrastructure: UV-VIS spectrometer, atomic absorption, photocolimeter, Jenapol microscopes, microspectrophotometer, Phillips diffractometer, mechanical testing press for rocks of 300 tF, Sartorius scales, viscous-meter, electronic theodolites, leveling indicator. All these have allowed us to receive national as well as international research grants and have also ensured the development of excellence in this domain.

International Cooperation

The international cooperation was developed under projects such as FP5, NATO: Using zeolites to remedy heavy-metal contaminated soils, (NATO); Metal transport and ore deposition, (SCOPE5 project); Ore Mining and Environmental Technology Information Network (FP5); Tisza River Project, (FP5); Investigation of the risk of cyanide in the gold leaching on health on environmental in central Asia and Central Europe, (CP5); Telluride and selenide bearing gold-silver deposits (UNESCO-IUGS).

The number of papers published in ISI - quoted journals

(the most cited 10 papers) 9

- *New models of the generalized minimum spanning tree problem*, Pop Petrică, Journal of mathematical modelling and algorithms, Kluwer, vol. 3, issue 2, pp. 153-166, 2004;
- *Structural investigation of $x\text{Fe}_2\text{O}_3(100-x)[\text{P}_2\text{O}_5 \text{CaO}]$ and $x(\text{Fe}_2\text{O}_3 \text{V}_2\text{O}_5) (100-x) [\text{P}_2\text{O}_5 \text{CaO}]$ Glass systems by IR*, I. Ardelean, C. Andronache, C. Cimpean, P. Păscuța, Modern physics letters B, vol. 18, no. 1 (2004) pag. 45-49;
- *Magnetic behavior of Al_2GdNi compound*, M. Coldea, V. Pop, I. G. Păscuț, Daniela Todoran, mod. Phys. Lett. B, (2004);
- *Deriving exact energy solutions to the symmetrized Q-difference harper equation*, Papp E & Micu Codruța The physical review e 65, 046234 (2002) 1-8;
- *Revisiting density of state calculations for the harper-equation*, Papp E, Micu Codruța & Szakacs Zsint. J. Mod. Phys., b 16, (2002), 3481-3489;
- *On the description of electrons on a noncommutative plane threaded by a transversal magnetic field*, Papp E. J., Phys. A 35 (2002) 3337-3341.

The number of papers published in journals from the main stream of publications

(the most cited 10 papers) 829

- *Liquidus equilibria and solution thermodynamics an copper-oxygen*, V. Hotea, Gh. Iepure, M. Zsigmond, E. Pop, Revista Metalurgia International vol. 9, nr. 6, 2004, pag. (48-54);
- *The genesis of the base metal ore deposit from Herja*, Gh. Damian (2003), Studia universitatis Babeş-Bolyai Cluj-Napoca Geologia, XIVIII, 1, 85-100;
- *The types of the mineralized structures from the Baia Mare ore*

district, Damian Gh., 2000 Romania, Mineralia Slovacia, 32, p. 269-271;

- *E-mailing between necessity and addiction*, Olos Ana, in Human and computer, Europolis, 2001, pp. 224-244;
- *The Need for Consistency in Gramatical Analysis*, Felecan Nicolae, in The Romanian Language Review, no. 3-5, 2000, Kishinev, The Republic of Moldova, pp. 199-202;
- *Numerical simulations for the 3rd frictional contact problems* Pop P., *ingenerare. Revista de la facultad de ingenieria de la pontificia universidad catolica de valparaiso - Chile*, numero 17, pp. 33-38, 2004;
- *Kantorovich-Stancu type operators*, Bărbosiu Dian, Journal of inequalities in pure and applied mathematics, vol. 5, issue 2 (2004), 1-6, Australia;
- *On the convergence of ishikawa iteration for a class of quasi contractive operators*, Vasile Berinde, Acta Math. Univ. Comen., 73 (2004), no. 1, 119-126;
- *Generalizing the 4-symmetrized harper equation*, Micu, E. Papp, Romanian Journal of Physics Editura Academiei, 48, 757-762 (2004);
- *Delegation of authority and leadership in small industry Romanian firms*, Lobontiu Gabriela, Ungureanu N., Journal of manufacturing engineering - vyrobne inzinierstvo, vol 3, nr. 1 p. 64-69, 2004.

The number of papers published in volumes of international scientific conferences with reviewers

713

(10 papers presented at the most prestigious events)

- *Numerical simulation of the particle motion in a nonuniform magnetic field*, D. C. Peter, E. Micu, I. E. Petrean, Optim '04, PROCEEDINGS of the 9th International Conference on Optimization of Electrical and Electronic Equipment, Poiana Brasov, Romania, 20-24 May 2004, 133-136;

(Continued on page 105)



(Continued from page 104)

- Gradient magnetic force estimation for pole shoe profiles construction in magnetic separators, I. E. Petrean, E. Micu, D. C. Peter, Optim '04, PROCEEDINGS of the 9th International Conference on Optimization of Electrical and Electronic Equipment, Romania, 20-24 May 2004, 129-132;
- Tehnological research regarding the processing of gears wheels with the tool fellow cut, Tiplea V., International scientific conference 18-19 march 2004, University of Miskolc, Hungary;
- The HD lubrication limits of radial bearings, Pay, E., Alexandrescu, I. M., The 8-th Conference on Tribology, Veszprem, 2-3 june, 2004;
- Comparative analysis of theoretical and experimental values of rolling worm gears efficiency, Cotețiu R., Cotețiu Adriana, International Meeting of the Carpathian Region Specialists in the field of gears, (2004) 5th edition, Advanced Methods and Trends in Production Engineering -1st Edition, may 21-22, 2004, North University of Baia Mare, 53-56;
- Lead-bismuth tellurides and related minerals in the upper cretaceous Băița Bihor CU-MO-ZN-PB-AG-AU Skarn, North Apuseni MTS., Romania, Damian Floarea, Ciobanu C. L., Cook, N. J., Damian Gh., (2004), in the gold-silver - telluride deposits of the golden quadrilateral, South Apuseni mts., Romania, Cook, N. J., Ciobanu C. L. Editors, 221-225, international field workshop of IGCP;
- Cleaning of mining waste waters using the electrocoagulation process, M. Podariu, P. Ilie, I. Straut, G. Filip, al IX-lea Congress Balcanic de procesarea mineralelor, Istanbul, Turcia, 2001, 599-603;
- Conversational Language Under the Influence of the New Means of Communication - View into the Future, Comita Georgeta, in the volume Institutional Communication and Translation Science. Conference with international participation, 4-5 October, 2001, Timisoara, Politehnica Publishing House, 55-59;
- Promises and challenges of the digital editing device. Digital editing of old medieval diplomas of Maramureș, Corniță Constantin, Oana Mitrea, in Linguistica Computazionale, vol. XX-XXI, Digital Technology and Philological Disciplines, Pisa, Roma, 2004, 103-109;
- Romanian Christian Terminology, Felecan Nicolae, in Actes du XXII-e Congres International de Linguistique et de Philologie Romanes, vol. IV, Bruxelles, 1998, Max Niemeyer Verlag Publishing House, Tubingen, 2000, 199-212.

The number of scientific books published by publishing houses acknowledged abroad 2
(maximum 10 significant books)

- Surveying Technologies for Monitoring Tail Construction's, executions and exploitation, Gh. M. T. Rădulescu, 241 pag., Ekspermental Forlag Denmark, ISBN 87-91142-34-2;
- Exploring, Investigating and Discovering in Mathematics, Vasile Berinde, 246 pagini, Birkhauser Verlag, Basel-Boston-Berlin, 2004; ISBN 3-7643-7019-X.

International Scientific Activities
(the 10 most important ones)

7th Balkan Conference on Mineral Processing Romania - Vatra Dornei 26-30 May 1997;

International Meeting of the Carpathian Region Specialists in the Field of Gears, (2000, 2002, 2004) 5th Edition, Advanced Methods and Trends in Production Engineering - 1st Edition, May 21-22, 2004, North University of Baia Mare;

The National Meeting with International Participation, NORDTECH 2004, 21- 22 oct. 2004, Baia Mare;

International multidisciplinary conference, May 23-24, 2003;

ICAM4 4th International Conference on Applied Mathematics Baia Mare-Suior (biannuală), 23-26 sept. 2004.

Products created/homologated/ capitalized/Inventions/Patents

(maximum 10 significant products) 12

"Lead Recovery Procedure from the Sulphated Paste of Outworn Accumulators", V. Hotea "Patent no. 98 - 01546 A2.;

Intensification of the Base - Metal Ores Flotation Process by Continuous Electric Current Treatment of the Limous Flotation, Straut Ioan., Ilie Paraschiv, Lungoci Victor, Podariu Mihaela, Zaharia Aurel, Tarta Radu, no. 11791, 21.08.2002;

Intensification of the Base - Metal Ores Flotation Process by Continuous Electric Current Treatment of the Limous Flotation, Straut Ioan., Ilie Paraschiv, Lungoci Victor, Podariu Mihaela, Zaharia Aurel, Tarta Radu, no. 11791, 21.08.2002;

Certain Materials Expoitation, Granulation, Activation and Depollution Procedures, Volcovinschi Gh. Patent 09.04.2001.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	317	16922
2003	96,4	92700
2002	512	35634
2001	476	38000
2000	482	10267
1999	221	-
1998	194	-
1997	101	-
1996	134	-
1995	75	-



Success Stories

The development of zeolitic deposits in the north-west of Romania with the aim of industrial usage and environment protection, financed through the program RELANSIM (2000-2003) by the Ministry of Education and Research. The main objective of the project was obtaining zeolitic products at great demand on the worldwide market where these are used in agriculture and the environment protection domain. All activities were finalized by the elaboration of a study regarding the mineralogical composition, as well as the physical-chemical features, and the possibilities of quantitative determination of zeolites. The tufts in the investigated area were used in order



to obtain high quality zeolites which can be used for depollution and gas retention, soil depollution, water purifying etc. Organo-zeolitical materials were produced, which helped perform some tests for heavy-metal contaminated soils. Through these experiments it was demonstrated that the soils polluted with heavy metals, especially lead, can be stabilized.

International Cooperation

In the field of Mineral Resources and Environment Protection scientific research there were numerous scientific contracts with international partners:

- Department of Earth Sciences of Cambridge University;
- Facult  des Sciences de St. J r me Universit  Aix-Marseille III - Fran a
- ETH Zuerich Isotope Geochemistry and Mineral Resources - Elvetia;
- Terra Environmental Technologies Budapest (Hungaria);
- CENTEK Institute - University of Lulea (Sweden);
- The Regional Environmental Center for Central and Eastern Europe, Division of Environmental System Engineering Analysis - University of Leoben (Austria);
- VITUKI (H) - Research center for water resource / national center for aquatic research- Hungary;
- MAFI (H) - Geology institute of Hungary;
- TERRA (GEONARDO) (H) - Environmental Technologies/ Consultancy and Environment Research Society - Hungary;
- VUVH (SK) - Slovakian Water Research Institute/ National Water Research Center, Bratislava;
- SHMU (SK) - Slovak Hydrometeorological Institute, Bratislava / National Hydrometeorological Institute
- ICIM (RO) - National Research Institute and Environment Engineering Bucharest;

- VUB (B) - University of Vrije - Bruxelles, Belgium;
- FSU (D) - Friedrich Schiller Universitat from Jena, Germany;
- IECB (A) - University of Vienna, Austria (Ostriches);
- CEH (JK) - Centre for Ecology and Hydrology from Manchester University;
- Geological Survey of Norway (NGU), Trondheim, Norway;
- Geological Museum, University of Oslo.

Scientific research cooperation also developed in the mechanical field with the following foreign universities:

- Technical and Economic Sciences University of Budapest, Hungary;
- "St. Istvan" University of Godollo, Hungary;
- University of Zilina;
- University of Kosice, Presov Faculty;
- Polytechnic University from Poznan;
- Collaborations in CEEPUS programme.





Rector

Prof. Ion Vela, PhD

Historical Overview of the University

The technical higher education in Resita has its origin in 1971, when the Engineering Institute (4-years education) was founded, initially subordinated to the "Traian Vuia" Polytechnic Institute of Timisoara. In 1990, after a natural development process, the Engineering Institute (3-years education) was transformed into the Faculty of Engineering (5-years education), offering the following specializations: Machine Building Technology, Welding Equipment and Technology, Electromechanics, Plastic Deformation, Heat Treatments and Metal Casting. In 1992, the "Eftimie Murgu" University was founded and it became



autonomous from the Timisoara Polytechnic Institute. The new University had two Faculties: the Faculty of Engineering and the Faculty of Law and Economic Sciences, which became the Faculty of Economics and Administrative Sciences on the 1st of October 1995.

Faculties and Departments

- 2 Faculties: the Faculty of Engineering and the Faculty of Economics and Administrative Sciences
- 2 Departments: the Department for Teachers' Training and the Department of Open Distance Learning

Master and Doctoral Programs

Doctoral Programs - 1 fundamental domain: Mechanical Engineering = 3 domains.

Patrimony

The University has 8 buildings: 4 buildings A, B, C, D for the teaching activity (11981.43

sqm. serviceable surface) with amphitheatres, lecture rooms, laboratories, teachers' study rooms and offices, library, one students' hostel for 400 students; one canteen with serving capacity for 1000 students, one cultural club for students; a tourist house on the Danube bank.

Fields in which human resources are trained

Economics; Social Sciences and Humanities; Industrial Engineering; Electrical Engineering; Material Engineering; Applied Engineering Sciences; Engineering and Management.

Presentation of research activity chart

The scientific research activity is carried on according to a clearly-stated regulation within the departments of the two faculties and within the existent research centres. In the university, there are 5 financially autonomous research centres: The Research Centre in Hydraulics, Automation and Heat Processes; The Centre of Technological Transfer; The University Centre for Professional Training Enhancement; The Centre of Research in Social Sciences and Humanities and the Universities - Enterprises Centre. Within the departments there are 6 professional associations affiliated to the national associations in the domain. The research activity is coordinated by the scientific secretaries of the university and faculties.

Structures

Research Institutes	0
Research Centers	5
Research Laboratories	30
Multi-user Research Centers	0

Top Priority Research Directions

The main directions of research are: Material Science; Theoretical and Experimental Hydraulics and Specific Equipment; Mathematical Modelling and Numerical Simulations in the Mechanics of Continuous Environments; Strength of Materials and Material Testing; Vibrations; Industrial Automations and Electrical Machines; Heat Processes; Quality Engineering; Applied Computer Science; Regional Projects; Technological Transfer; Professional Training Enhancement; Studies on Territorial Sustainable Development; Impact Surveys on Life Quality and Social Communication; Audience Surveys and Marketing Research.

Human Resources

Professors	17
Senior Lecturers	18
Lecturers	15
Assistant Lecturers	17
Teaching Assistant	17
Research Fellows	3
Administrative Staff	85
Students	3492
of which:	
Undergraduate	2610
Master	254
PhD - full attendance	0
PhD - attendance not required	8



Outstanding Research Infrastructure

Mobile laboratory for the real time determining of parameters and performances of high-power energetic equipment. The laboratory contains state-of-the-art measuring transducers and devices for mechanical and electrical measurements, real time acquisition and data processing systems, process computers, micro-controllers and dedicated software. Electronic microscope with deflection type JEOL JSM - 35 which enables microstructural examinations with increases up to 200.000 x.

International Cooperation

- TEMPUS, 2 programmes, 1995 - 1997;
- ERASMUS, 14 programmes, 1998 - 2005;
- Open Society, 1 programme, 1999;
- Phare Partnership, 2 programmes, 1999 - 2001;
- LEONARDO DA VINCI, 16 programmes, 1999 - 2006;
- FOND FRANCOPHONE, 1 programme, 2002;
- CULTURE 2000, 1 programme, 2003 - 2004;
- YOUTH, 1 programme, 2003 - 2004.

International Scientific Activities

(the most 10 important ones)

1. International Symposium for the Protection of Cultural Goods
2. The Economist's Day
3. International Symposium of Ethno-Religion
4. The Banat - historical and cultural background
5. The 4th international symposium of Regional Multidisciplinary Research, Romania - Yugoslavia - Hungary, 16-18 November 2000, Timisoara - Resita;
6. The Didactic International Conference;
7. Thermotechnics International Conference 2003;
8. Robotics International Conference 2004

Products created/homologated/ capitalized/Inventions/Patents

(maximum 10 significant products) 2

- **Products:** 1. Optimization system for the operation of hydrounits and pumping stations; 2. Excitation and automation equipment for hydrounits and pumping stations 3. Software for processing the characteristics of hydraulic machines
- **Brevets (licences):** 1. "Equipment for the increase of the charge of synchronous hydro-generators" no. 119426B1, Ruja Ioan, 2004; 2. "Installation for monitoring the parameters of thermal water sources", Ruja Ioan, 2003

The number of papers published in journals from the main stream of publications 93

(the most cited 10 papers)

- *New solutions in the induction motor control drive.* Ruja Ioan, St. Garlasu, Teodor Gavrila, Bulletin of the Polytechnic Institute of Yassy - Department: Electrotechnics, Energetics, Electronics, 2004;
- *The determination of the magnetic flux density at a power magnet with the finite element method.* Tătuclu I., Annals of the University "Eftimie Murgu" Resita, Book I Faculty of Engineering, 2004;
- *Structure of the parallel topology mechanism of robotic guiding devices with flexible (wire-type) links.* Kovacs Francisc, Miclosina Calin, Robotica&Management, 2003;
- *Study of the deformation of a flexible short toothed wheel of a double harmonic transmission.* Sava Iancu, Miclosina Calin, Robotica & Management, 2003;
- *Contributions to the elaboration of austenitic manganese steel.* Gillich Rainer, Marta Constantin, Annals of the University "Eftimie Murgu" Resita, Book I Faculty of Engineering, 2002;
- *Mathematical modulation of the transition regime by network connection of an open-circuit transformer.* Piroi I., Berinde F., Bulletin of the Polytechnic Institute of Yassy - Department: Electrotechnics, Energetics, Electronics, 2004;
- *Banatica 2004 - "Particular features of the social and juridical status of Romanian noblemen in Banat" - Boldea Ligia;*
- *Review of Technics and Technology 2004 - "Data Management" - Popovici Gheorghe;*
- *International Law Notebooks 2005 - "The Protection of patrimony Assets through the Insurance System" - Mirela Minica;*
- *Annales Universitatis Apulensis 2003 - "Romanian teachers from the Serbian Banat region delegated to the Great National Assembly of Alba-Iulia" - Zaberca Vasile Mircea.*

The number of papers published in volumes of international scientific conferences with reviewers 215

(10 papers presented at the most prestigious events)

- *Finite element analysis through Cosmos M/Design Star.* Nedelcu Dorian, Manescu Tiberiu, Câmpian Viorel, Fme Transactions, Belgrade, New Series, Vol 32, no. 1, 2004;
- *Optimum operation of hydrounits.* Câmpian C.V., Nedelcu D., The 6th international conference on hydraulic machinery and hydrodynamics Timisoara, October 21-21, 2004;
- *Software for computing the hydraulic turbines' characteristics.* Câmpian C.V., Nedelcu D., The 6th international conference on hydraulic machinery and hydrodynamic Timisoara, October 21-21, 2004;
- *Double harmonic transmission (DHT) used in industrial robotic drives.* Iancu S., Vela I., Miclosina C., Iancu D., The 2nd International conference on robotics, Timisoara-Resita, 2004;
- *A new model of training, a new model of selection - the GLODEV project.* Potoceanu N., Perini G., Gillich G.R., Gillich N., 3rd International seminar of quality management in higher education, Yassy, 2004;
- *Constructive and technological particular features in the manufacture of bearing boxes.* Lungu Ioan, Prasic 2002 Brasov, 2002;
- *Economy 2004, Bulgaria, "Evolution of the Bucharest Stock Market (BVB)".* Minica Mirela Minica;
- *International Conference of Marketing 2004, New Mexico, "Selective Marketing Research regarding the use of the promotional activities",* Fekete Ildiko;
- *The RCRF Congress, Namur, 2004, "The Late Roman Ceramics of Praetorium",* Benea Doina;
- *International Symposium: The Banat - the historical and cultural past, Novi Sad, 2003, "A recently*
(Continued on page 111)

Key-role played in certain fields
Presentation of Research Centers
Presentation of Laboratories



Key-role played in certain fields

The Centre of Research in Hydraulics, Automation and Heat Processes (CCHAPT) performs consulting and expert survey in measurement on models of hydraulic turbines and does performance measurements on hydro-aggregates (hydrounits) as a neutral and independent institution.

The system for optimising the hydro-aggregates' operation is a unique product in Romania



PRESENTATION OF CENTRES-LABORATORIES



CENTRE OF RESEARCH IN HYDRAULICS, AUTOMATION AND HEAT PROCESSES (CCHAPT)

The Centre of Research in Hydraulics, Automation and Heat Processes (CCHAPT) performs consulting and expert survey in

(Continued from page. 110)

discovered document of the initiative committee for the publishing of the newspaper Nadejdea (The Hope) - Vârset (1927), Zaberca V.M.

The number of scientific books published by publishing houses acknowledged abroad

3

(maximum 10 significant books)

- *The Romanians from the Yugoslavian Banat - historical writings*, Zaberca Vasile Mircea, 175 pages, Libertatea Publishing House, Panciova, Serbia and Montenegro, 2002;
- *The Romanians beyond the Borders*, Zaberca Vasile Mircea, 200 pages, Libertatea Publishing House, Panciova, Serbia and Montenegro, 2003;
- *Capital Markets*, Minica Mirela, ASEM Publishing House, Kishinau, Moldova, 2005

measurement on models of hydraulic turbines and does performance measurements on hydro-aggregates (hydrounits) as a neutral and independent institution.

The system for optimising the hydro-aggregates' operation is a unique product in Romania.

UNIVERSITY CENTRE OF PROFESSIONAL IMPROVEMENT (C.U.P.P.)

In January 2003 the University Centre of Professional Improvement (CUPP) was founded within "Eftimie Murgu" University, with the financial assistance of the European Community through the Agency of Regional Development V West, project financed by the PHARE 2000 Programme - "Economic and Social Cohesion - Development of Human resources in the context of industrial restructuring".





Services provided:

1. Improvement courses
2. Consulting in the CAD field (computer-aided design)
3. Development of software and Internet sites
4. Multimedia presentations

Endowment and Equipment:

- Capacity: 44 seats;
- 16 PC, Pentium IV, HDD 40GB, Internet connection;
- 2 pcs. Mitsubishi Video-Projectors, permanently installed in the classrooms.

MOBILE LABORATORY

Mobile laboratory for the real-time determining of the parameters and performances of high-power energetic equipment. The laboratory is endowed with last-generation measuring transducers for electric and mechanic dimensions and features, real-time data acquiring and processing systems, process computers and dedicated software.

System of achizition and data entry procedures



Measuring system of the powers, tensions and electricitys



Partnership programs:

- Phare Partnership - Life-Long Training, 1999, Senior Lecturer Eng. Constantin Marta, PhD;
- Human Resources Training, 2001, Senior Lecturer Eng. Constantin Marta, PhD.

LEONARDO DA VINCI programs

Partnership programs:

- I/98/1/69251/P I/1, 1, 1, a/FPI (The quality of educational system from process to certification), 1999-2001, Senior Lecturer Eng. Constantin Marta, PhD;
- Evaluation and self-training software, 2000, Senior Lecturer Eng. Constantin Marta, PhD;
- EURAMUL (European Cross-cultural Apprenticeship), 2000, Senior Lecturer Eng. Constantin Marta, PhD;
- Resources - Training - Territory Crossroad, 2000, Senior Lecturer Eng. Constantin Marta, PhD;
- *EURO - PLACEMENTS 2000 / Exchange of Students and Graduates: Strand II.1.2.a, 2000, Senior Lecturer Eng. Doina Frunzaverde, PhD;
- *Learning by training in Europe 2000 - 2002/ Exchange of Students and Graduates, 2000 - 2002, Senior Lecturer Eng. Doina Frunzaverde, PhD;
- INES - Internships for European Students, 2001, Senior Lecturer Eng. Constantin Marta, PhD;
- Open Distance Learning, 2001, Senior Lecturer Eng. Constantin Marta, PhD;
- Euro DRH - Human Resources Managers, 2001, Senior Lecturer Eng. Constantin Marta, PhD;
- Creation of a methodological guide for the accompaniment of support projects in rural devitalised areas, 2001, Senior Lecturer Eng. Constantin Marta, PhD;
- Human Work, 2002, Senior Lecturer Eng. Constantin Marta, PhD;
- CIEL, 2002, Senior Lecturer Eng. Constantin Marta, PhD;
- Agreement No. 2002-I-02-B-F-pp-120040 (GLODEV - Training Program for Global

- Development), 2002-2004, Prof. Eng. Nadia Potoceanu, PhD;
- 2003-DK/03/B/F/PP-145.313 (Best practice in multicultural European Institutions), 2003-2005, Senior Lecturer Eng. Gilbert - Rainer Gillich, PhD;
- RO/2003/PL91229/EX (Engineering Training of Mechatronics Type - a necessity for the informational society), 2003-2006, Prof. Eng. Ion Vela, PhD;
- No. 2004 (IT/04/C/F/RF 81505) (WEES - Working in an European Environmental System), 2004-2006, Prof. Eng. Nadia Potoceanu, PhD;
- DE/04/B/F/PP 146151 (DESSQual_Defining European Standards for Security Staff Qualification), 2004-2006, Prof. Eng. Nicoleta Gillich, PhD;
- I/04/B/F/PP-154070 (E.S.S.ENT.IAL-European Social Services ENTail Immigrants Alliance), 2004-2006, Senior Lecturer Eng. Gilbert - Rainer Gillich, PhD;
- I/05/B/F/PP-154096 (Free Learning), 2005-2007, Prof. Eng. Nadia Potoceanu, PhD.

Other type of programs

Partnership programs:

- OPEN Society (OPEN Society - Implementation of an informational system in public institutions, 1999, Senior Lecturer Eng. Constantin Marta, PhD;
- FOND FRANCOPHONE (EVA), 2001, Senior Lecturer Eng. Constantin Marta, PhD;
- Culture 2000 CLT 2003/A1/IT-282-A_D_E_2003 (A.D.E. - Digital Art Era), 2003-2004, Senior Lecturer Eng. Gilbert - Rainer Gillich, PhD;
- SOCRATES 2004 - 0881 / 001 - 001 SO2 - 81AWC (S.T.A.R.S. - Strategy To Accomplish Research in Socrates program), 2004-2005, Prof. Eng. Nadia Potoceanu, PhD;
- YOUTH (My Place on the Internet - A Training Course for Young Teachers), 2003-2004, Prof. Eng. Nicoleta Gillich, PhD;
- YOUTH (ARTNAT), 2005-2006, Prof. Eng. Nadia Potoceanu, PhD



Rector

Prof. Victor Ciupinã, PhD

Historical Overview of the University

When founded in 1961-1962 The Pedagogic Institute (with a duration of studies of 3 years) comprised the following faculties. The Faculty of Philology, The Faculty of Physics and Mathematics, The Faculty of Physics and Chemistry, the Faculty of Nature and Agricultural Sciences, followed by the establishment of the Faculty of Sports in 1983. Starting with the academic year 1974-1975, the philology section was changed into the Russian-English specialization, having a four-year duration and an academic profile. In June 1974, the 3-year



Pedagogic Institute became the Pedagogic Institute of Constanta. In 1977 this was transformed into the Institute For Higher/Academic Education Constanta, and comprised one faculty only. Subsequently, in 1984, this became the Engineering Institute, being then transformed into Ovidius University of Constanta by the government decision no 225/1990.

Faculties and Departments

The Faculty of Arts, The Faculty of Letters, The Faculty of Theology, The Faculty of Law, The Faculty of Economic Sciences, The Faculty of Nature and Agricultural Sciences, The Faculty of General Medicine, The Faculty of Dental Medicine and Pharmacy, The Faculty of Mechanical Engineering, The Faculty of Civil engineering, The Faculty of History, The Faculty of Psychology, The Faculty of Mathematics and Information Technology, The Faculty of Physics, Chemistry and Petroleum Technology, The Faculty of Sports and Physical Education, The Kemal Attaturk Teacher Training College, The Staff Training Department, The Modern Languages Department For Non-Philology Faculties.

Master and Doctoral Programs

MASTER: in Philology (3), Law and Administrative Sciences (8), History (2), General Medicine, Dental Medicine and Pharmacy (4), Physics, chemistry and Petroleum Technology (6), Mathematics-Information Technology (4), Economic Sciences (6), Mechanical Engineering (5), Civil Engineering (3), Nature and Agricultural Sciences (3), Theology (3). The Executive MBA programme (Diploma for Postgraduate Studies granted by ASE Bucharest in partnership with "Ovidius" University of Constanta and the Executive MBA Diploma, granted by CNAM Paris are also worth mentioning). **Doctoral programs** in Philology, Theology, Nature Sciences, Exact Sciences, Medicine and Engineering.

Patrimony

The major resources contain the Students' Central Library with 5000 volumes, IT laboratories, intranet and internet connections, teaching resources, equipment and facilities for laboratories and offices, multimedia laboratories for computer assisted learning, three student hostels (accommodating over 1000 students), a university cafeteria, a student club with all the necessary equipment, a sports center by Mamaia lake for nautical sports.

Fields in which human resources are trained

The priority domains of the social and economic life in Dobrogea are: shipyard and navigation activities, hospitality industry, spa and health recovery activities, the protection of the marine and sea coast environment. There are also activities connected with chemistry and chemical industry, nuclear energy, law and public administration and international economic relations. To these, other activities are added: accounting, finance, banking, economy and business management, medicine and pharmacy and last but not least, activities concerning education, arts and culture.

Presentation of research activity chart

Research is mainly carried out by means of research centers established within each faculty. These centers are coordinated by the University Research department, run by the Vice-Rector in charge with scientific activity.

Human Resources

Professors	75
Senior Lecturers	93
Lecturers	211
Assistant Lectures	226
Teaching assistant	96
Research Fellows	0
Administrative Staff	211
Students	19971
of which:	
Undergraduate	17661
Master	1914
PhD - full attendance	10
PhD - attendance not required	386



Structures	
Research Institutes	0
Research Centers	9
Research Laboratories	20
Multi-user Research Centers	0

Top Priority Research Directions

The strategic directions upheld by the university focus on promoting the criterion of excellence in research and the capitalization on the whole potential offered by the social, economic and biological features of the Black Sea and Dobrogea.

Outstanding Research Infrastructure

A computer network formed by 3000 terminals (out of which 10 servers cover all the university buildings), Philips transmission electronic microscope, Shimadzu atomic absorption spectrometer, chromatograph - HPLC, digital ortopantomograph with cephalostat, ARGUS EPIC gamma camera, stenoscope, angiograph, echographs, hyperbaric precincts, equipment for microbiology, genetics, histology and biochemistry laboratories.

Excellence Centers

The Research Centre for Applied Mathematics, Scientific Interdisciplinary Research Centre for Micro- and Nano-Structures, Modern Technologies Developed to Recycle the Residues in order to ensure a long lasting development, Economy and Business Management, The Centre of Study and Research on Discrimination and Human Rights, The Research Centre on resources from the marine ecosystem and from the spontaneous flora, The Centre of study and research in the field of history and civilization of the Black Sea area.

International Cooperation

"Ovidius" University is the founding member of the Black Sea Universities Net (BSUN). The university has international cooperation agreements with 22 universities from the entire world, among which: The University of Hamburg, Germany; The University of Bari, Reggio Calabria, Italy; The University of Brest, Bretagne Occidentale, France; The University of New York, USA; The University of Moncton, Canada, etc.

The number of papers published in ISI-quoted journals

(the most cited 10 papers)

110

- On the determination of some electrical conduction parameters of GaAs-n by magneto resistance measurements, V.Ciupina, Journal of optoelectronics and advanced materials;
- Diamond like nanostructured carbon film deposition using thermionic vacuum arc, G.Musa, I.Mustata, V.Ciupina, R.Vladoiu, G.Prodan, E.Vasile, H.Ehrich, Diamond and related materials;
- Synthesis of complex sulfides nanoparticles from complexes of cadmium and iron, A.Dumbrava, V.Ciupina, B.Jurca, G.Prodan, Advanced in micro-and nono-engineering, The Romanian Academy Publishing House;
- Positive absolutely summing operators on the Kothe spaces, Popa D., Positivity, Kluwer Academic Publishers;
- General solution in terms of complex potentials for incremental anti-plane states in prestressed and prepolarized piezoelectric crystals. Application to Mode III fracture propagation, E.M. Craciun, E. Baesu, E. Soós, IMA J. of Appl. Math.;
- On the Management of Solid Waste Generated at the Constanta Shipyard, Romania, NATO ARW, Perde N., Hartescu P., Goşan A., 2000 Kluwer Academic Publishers, Printed in the Netherlands;

The number of papers published in journals from the main stream of publications

(the most cited 10 papers)

720

- Electrical conduction parameters measurements on GaAs optoelectronic structures, V. Ciupina, Proceedings of SPIE (The International Society for Optical Engineering).
- Assimilation of the organic substrates versus hydrolytic activity within bacterial communities from the Romanian coastal waters of the Black Sea, F. Aonofresel, Proceedings of Roumanian Academy;
- Perceptions of the cold war: Dobrogea in the first post-war

decade, M. Cojoc, The Archives of Totalitarianism;

- Control of grain size and morphology of cds particies by the synthesis route, A. Dumbrava, V. Ciupina, G. Prodan, Romanian Journal of Physics;
- The prevention of insulin diabetes post pancreatectomy through auto transplant of pancreatic isles, V. Sârbu, S. Dima, Chirurgia;
- High-resolution transmission electron microscopy study of calcium phosphate apatites, I. Carazeanu, V. Ciupina, E. Chirilă, M. Girtu, G. Prodan, Romanian Journal of Physics.

The number of papers published in volumes of international scientific conferences with reviewers

210

(10 papers presented at the most prestigious events)

- Negative Corona Discharges in Pure CO₂ and/or N₂O Gases and their Mixtures with Oxygen, J.D. Skalny, T. Mikoviny, R. Vlădoiu, Romanian Journal of Physics;
- Nanostructured hybrid organic-inorganic magnets - new materials and new potential application, M.Gârţu, Revue Roumaine de Sciences Technicques;
- Dosage de Certains Métaux Lourds dans la Mer Noire et le Golf Persique aux Aalentours des Plate-Formes Marines, S. Birghila, A. Dumbravă, S. Dobrinaş, Troisième Colloque Franco-Roumaine;
- Applications of Ultrasounds in order to Optimise Pharmaceutical Emulsion Preparation, V. Mârza, M. Mititelu, M. Hirjău, V. Ciupina, F. Konceac, International Symposium - New Resources in Farmaceutical Industry.
- Geopolitical Implications of the Soviet Presence in the Low Danube and the Black Sea Coast Area after 23 August 1944, Arhivele Totalitarismului.
- Geopolitical Implications of the Soviet Presence in the Low Danube and the Black Sea Coast Area after 23 August 1944, Arhivele Totalitarismului.

(Continued on page 117)



International Scientific Activities
(the 10 most important ones)

The International Balkan Workshop on Applied Physics, The International Colloquium on Culture and Civilization, The European Congress of Morphogenesis, The Bilateral Commission of Romanian and Russian Historians, The International Congress - The Modern Pharmacy in the Black Sea Countries, The Black Sea Conference on Analytical Chemistry, The National Symposium on Climatology with international participation, The International Symposium on Environment and Life Sciences.

**Products created/homologated/
capitalized/Inventions/Patents**
(maximum 10 significant products) **10**

Colorectal, uterine cervix and vaginal cancer treatment equipment through the method of hyperthermic perfusion with cytostatic solutions;

Maradent- merchandised during 1996-2000;
Armadent - merchandised during 1996-2000;
Antirheumatic Aflutop gel - merchandised in 2004.

(Continued from page 116)

- *Educative Distributed Virtual Environments For Children*, M.D. Popovici, J.P. Gerval, P. Chevallier, J. Tisseau, L.D. Serbanati, The International Journal of Distance Education Technologies.
- *Maradent - Alternative in the Treatment of the Oral Mucosa Affections*, N. Roşoiu, The Official Archives of Balkan Medical Union.

**The number of scientific books
published by publishing houses
acknowledged abroad** **6**
(maximum 10 significant books)

- *Criss-Cross. Essays in Romanian and Comparative Literature*, Cap-Bun Marina, 120 pg. München, Verlag;
- *Latvijas Arlietu Dienesta Darbinieki, 1918-1920*, Biografiska Vardnica, Anghel Florin, 437 pg., Zinatne, Rīga, Letonia.
- *Exercises in functional analysis*, Popa D., Costara C., Kluwer Academic Publishers, 451pp.;
- *W.G.Boskoff, Hyperbolic Geometry and Barbillian Spaces*, Hadronic Press Advanced Monographs in Mathematics, USA.

Research Infrastructure

The Solid Physics research laboratories contain equipment which allows for a wide range of measurements under high temperature conditions and at different electromagnetic and ultrasonic field intensity levels. For the measurement of the conduction parameters of the semi-conductive nanostructures in the presence of a magnetic field, a 2T electromagnet is used. This electromagnet is produced by IFA Bucharest and generates up to 2T magnetic fields. It is provided with an operational oven which can reach up to 500° Kelvin and it also has a cooling system which can drop near 4.2° Kelvin, the temperature of liquid helium. The measurement system is also equipped with a Keithley digital nano voltmeter, an Oxford Instruments temperature controller and a Lake Shore Cryotronics gauss meter. The samples which are used for the study of the metal-semi conductor association are produced with a thin metallic layer vacuum deposition system which is produced on the University's premises.

The CM 120 transmission electron microscope produced by Philips with an up to 2A resolution was purchased in 1997, being one of the most modern and effective systems. The microscope and the sample preparation equipment form a complex system which enables the study



of thin layers either in semi-conductive nanostructures or in biostructures. This system is developed through cooperative research between the members of the Faculty of Medicine and Pharmacy and those of the Faculty of Natural Sciences.

The sample preparation laboratory is equipped with a complete living tissue preparation line, a Leica ultramicrotome used for sectioning biological samples, a Leica KnifeMaker which allows the knife preparation for the ultramicrotome, as well as improved optic microscopes. There is also a laboratory where nanosamples are produced by means of electrochemical corrosion, which is provided with an electrochemical corrosion device.

**Financial resources obtained
for research**

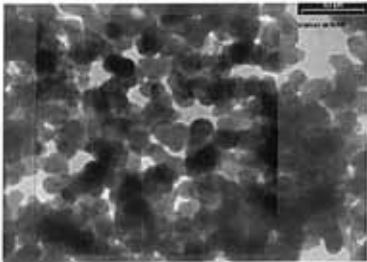
	National millions ROL	Internat. EURO
2004	10302	-
2003	8081.2	-
2002	7731	-
2001	4284.4	-
2000	1553.6	-
1999	452.6	-
1998	283	-
1997	234.3	-
1996	112.3	-
1995	26.6	-



The photo laboratory is provided with a Gatan CCD video camera and a PC remote control software package. A Sony graphic printer for snapshots, the classic photo device, positive and negative film processing equipment, all of them connected to computers.

The materials research laboratory is equipped with ultrasound-based investigation systems such as the Namicon and Krautkammer flaw detectors and the 250 TESLA quartz crystal electrostrictive ultrasound generator. The data acquisition process is done automatically and measurements in the magnetic field generated by a solenoid are also possible. Ultra acoustic cavitation is studied as well as sonoluminescence, pressure waves and the effect of the cavitation phenomenon on some chemical reactions. The ultrasonic microscopy device is provided with high performance acquisition boards and transducer displacement systems with interface possibilities, while the specialized software for the data acquisition and processing was produced by the faculty members of "Ovidius" University. Radiation examinations are done in the gamma-rays chamber with a tomography system and an X-ray generator.

The research activity in atomic and nuclear physics is carried out using X-ray fluorescence



spectrophotometers with Si-Li detectors having the excitation source and the detection systems based on multi channel analyzers with scintillation detectors. In this way the type and level of contamination can be determined and the radioactive dating can be accomplished. The Shimadzu atomic absorption spectrometer is provided with a unit for the determination of mercury concentration, a second unit for the analysis of hydrides, and a data acquisition, processing and analysis PC system.

The research into plasma physics is carried out with the support of a 10-6 mbar high vacuum system which enables the study of plasma in mixtures of gases and the study of the influence of the magnetic field on low temperature plasmas.

Black Sea Universities Network

The Black Sea Universities Network (BSUN) represents a Romanian initiative launched by Academician Mircea Malitza on the occasion of the Culture, Public Relations and Youth Commission and PABSEC Youth and Culture Commission Session which took place in August, 1997 in Bucharest. On PABSEC's recommendation this network was founded in 1998, during the second Conference of the Black Sea Universities Rectors, organized by the "Ovidius" University of Constanta. Later on, benefiting from the Romanian Government support the network has developed by itself, nowadays including over 1000 universities from the 11 participant countries at the Black Sea Economic Cooperation (BSEC).

The Black Sea Universities Network (BSUN) has a partner status in The Black Sea Economic Cooperation (BSEC) and an associate member status in the European Universities Association. This initiative, unanimously acknowledged as being a remarkable Romanian contribution to the cooperation in the Black Sea area, benefited from the support and appreciation of the institutions in the region. Thus, the General Assembly of BSEC drew up a report on the activity of the network, a report which was analyzed during the PABSEC General Assembly held in 2001 in Sofia. Appreciations and recommendations have been made to the ministries and the governments in the region in order to sustain this initiative.

Since 2004 BSUN has been developing a special partnership with the NATO Scientific Programmes Division and with the European Committee in charge with Education and Scientific Research Problems.



International Cooperation

As part of the TEMPUS programmes there have been established cooperation relationships with 15 universities. TEMPUS II JEP has as contracting party the University of Toulouse (France) and as coordinator for Romania the Academy of Economic Studies (AES) in Bucharest. The IAI subsidiary in Constanta, founded in 1995, has as a mission the permanent training in the business management field. Three series of students have graduated the courses of post-academic studies obtaining a University Diploma in the field of Business Management and the teaching staff have done training courses of 1 up to 3 months at: The University of Athens, The University of Granada, The University of Toulouse, The University of Aix-en-Provence or they have held conferences on economic problems. TEMPUS JEP 9498 /1995 (contracting party: Bethune - France) has as main objective the foundation of a new college in the field of touristic activity management. The partners of this programme are: The University of Lille, The University of Athens, Institute Universitaire de Technologie, Bethune, The University of Perugia. TEMPUS ECONOMICS for Romania-Temper (contracting party: The University of Nottingham; coordinator: The Faculty of International Business and Economics from AES Bucharest) is a cooperation which has as main objective the improvement of the training in economic sciences by means of common courses. Up until now this partnership has been signed with The Universities of Nottingham, Paris, Barcelona, Vienna. TEMPUS PHARE JEP 29544/1995 (contracting party: The University of Leicester - England; coordinator: AES Bucharest) pursues the improvement of the specialization in the following branches: banking, finance, accountancy and also the creation of consultancy centres. The partner universities are from England, France, Holland and the ones from our country are those from Timisoara and Craiova. CRUFOC (contracting party: AES Bucharest) offers consultancy in management problems within the regional training centres. EPROM (contracting party: AES Bucharest) has as main objective the organizing of MBA courses in the field of project management. The partner universities are from Vienna, Athens, Stockholm. Since 1995 within the Faculty of Economic Sciences the Banking and

Finance Centre has also been functioning, established through a TEMPUS programme, together with the Universities of Manchester, Toulouse, Nejminger, Haga, AES Bucharest, Timisoara, Craiova, Iasi.

The Centre has as main objective facilitating the connections between the universities and the banking and finance institutions in order to train the students in accordance with the requirements of the international market, the new agreements and contracts. In 1998, the Faculty signed a convention of academic cooperation with The University of Auvergne Clermont - France, having as main goal the mobility of the teaching staff and of the students for the training courses. The Faculty also administers a 2-year TEMPUS programme which aims at the development of some permanent training courses in the field of regional development. The Italian universities of Padova, Friuli Venezia Giulia, Veneto and Murcia (Spain) have adhered to this programme. Institutions of permanent training with postgraduate orientation have therefore been created (The permanent training Centre in the field of regional development; The permanent training Centre in the field of customs techniques and procedures; The Consultancy Centre for Small and Medium Sized Enterprise Management; a 2-year MBA programme in "Business Project Management"; Elaborate Studies "Intra-European Transactions"). Grant CEEPUS from Ceepus Austria for studies and research in the field of plasma oscillations at the University of Innsbruck, in the field of deposits on thin layers, with the University of Bratislava (Slovakia) but also with the University of Ljubljana (Slovenia) within the A103 network between 2000 and 2004. Within this grant, the mobility of professors and students was possible. During 2004-2006 Grant Humboldt will cooperate with Italy, Turkey, England (coordinator: Germany) in the field of plasma physics on how to obtain thin layers of DLC (diamond like carbon) and a characterization of them. There is a very tight cooperation, materialized through scientific research papers published in international magazines and presentations during conferences with the University of Eskişehir, Turkey, in the field of plasma physics. There is also a cooperation agreement signed with the Universities of Nevada, Las Vegas and with the University of Monton, Canada.



Recteur

Prof. Gheorghe Secară Ph.D

Historical Overview of the University

1962 - The Pedagogical Institute of Pitesti is set up.

1969 - The Sub-engineer Institute of Pitesti, subordinated to the Polytechnic Institute of Bucarest is set up.

1974 - The Higher Education Institute of Pitesti is created, with an autonomous statute,



counting 1324 students and 136 members of the teaching staff.

1984 - The Sub-engineer Institute of Pitesti, subordinated to the Polytechnic Institute of Bucarest reappears.

1990 - By MI order no.7751/04.05.1990, one approves the functioning of the Higher Education Institute of Pitesti.

1991 - By MI order no.4894/23.03.1991, the Higher Education Institute becomes the University of Pitesti.

Faculties and Departments

- 9 Faculties: The Faculty of Mechanics and Technology, The Faculty of Electronics and Electromechanics, The Faculty of Economics, Juridical and Administrative Sciences, The Faculty of Mathematics and Informatics, The Faculty of Letters, The Faculty of Sciences, The Faculty of Physical Education and Sports, The Faculty of History, Philosophy and Journalism, The Faculty of Theology;
- 4 Colleges: The Schoolteachers University College, The Informatics College, The Medical College, The Music College;
- 7 Departments: Scientific Research Dept., International Relations Dept., European Integration Dept., Quality of Education Dept., Teaching Staff Training Dept., Part Time Education Dept., Dept. of Strategy and Curricular Marketing.

Master and Doctoral Programs

MASTER - 30 Master Programs within the 9 faculties;

Doctoral programs:

- 3 main domains in Engineering Sciences: Eletronic Engineering and Telecommunications, Mechanical Engineering, Industrial Engineering, Materials' Science and Engineering;
- Exact Sciences with two domains: Mathematics and Informatics;
- Arts with 1 domain: Physical Education and Sports,
- Humanities with 1 domain: Philology.

Patrimony

9 Buildings: Building T, S, I, B, A, C, D, H, O;
 45 lecture rooms;
 70 seminar rooms;
 135 laboratories - 40.000 sqm;
 4 hostels - 1000 accomodation places;
 Razboieni, Gh. Doja 2, Gh. Doja 3, Stefanesti;
 1 sportive basis (large sports hall, open air sportsgrounds for handball, basketball, royal tennis, tennis- cement, football, athleticism).

Fields in which human resources are trained

Engineering Sciences, Exact Sciences, Natural Sciences, Humanities, Juridical Sciences, Economic Sciences, Social and Political Sciences, Theology, Physical Culture and Sports, Arts, Agricultural and Forestry Sciences.

Presentation of research activity chart

The organizational framework is established by the system procedure called "The activity of scientific research in the University of Pitesti". This is accompanied by working procedures for programming, reporting and evaluating the scientific research activity, pursuing the research contracts, as well as by the functioning regulations for the Scientific Council, the Scientific Research Department, the PhD Department. The research activity is carried out in departments faculties, research centres and it is led by the Scientific Council of the University whose president is the vice-rector with scientific research. The Scientific Research Department settles current issues, being led by a director.

Structures

Research Institutes	0
Research Centers	3
Research Laboratories	23
Multi-user Research Centers	0

Human Resources

Professors	69
Senior Lecturers	58
Lecturers	121
Assistant Lectures	127
Teaching assistant	97
Research Fellows	1
Administrative Staff	107
Students	16911
of which:	
Undergraduate	15801
Master	1014
PhD - full attendance	22
PhD-attendance not required	274



Top Priority Research Directions

- Automotives and engines, materials' machinability and corrosion, manufacturing, repairing and diagnosing the automotives, road traffic;
- Electronics and applied computer science, measurement and control systems, programmable electronic systems, electronic industrial systems, robots;
- Vegetal, animal and human physiology, microbiology, horticulture, surfaces, interfaces and electrochemistry, plasm and the physics of solids, biophysics;
- Operational research, mathematical modelling and simulation, object-oriented programming, theory of operators and functional analysis;
- Elements of the personality profile, personal development of the individual, pedagogy;
- Strategic analysis, managerial consultancy, financial analysis.

International Cooperation

- NATO SCIENCE NIG 976762 Program - ROMANIAN NATIONAL R&D COMPUTER NETWORK INFRASTRUCTURE AUGMENTATION, 1999-2000 period;
- SKY NURSE European Space Agency Financing, 2004 - 2005 period;
- EUPEN European Physics Education Network, 2002 - 2004 period.

International Scientific Activities

(the 10 most important ones)

- CAR 2000 - Automotive and Environment, November 2000, under the aegis of FISITA;
- CAIM 2001 - Conference on Applied and Industrial Mathematics, October 2001;
- "From sentence to text: present issues of linguistics and literature", September 2001, in collaboration with "Ion Creanga" State University in Moldavia, French Alliance of Moldavia, Free International University of Moldavia;
- The 5th International Symposium on Microelectronics Technologies and Microsystems, June 2001;
- "European Integration within the economic globalization", May 2003 CAIM 2003;

The number of papers published in ISI-quoted journals

(the most cited 10 papers) **7**

- S. Ioniță - A Chaos Theory Perspective on Systems Failing, Information Sciences International Journal - Elsevier Publishing House, vol.127, no 3-4 Aug. 2000;
- Rizea Alin - Grain Boundary Conductivity of Yttria Doped Zirconia: Influence of the Microstructure and Composite Effect, International Journal of Ionics, no. 6, 2000;
- Rizea, Alin - Kinetic Demixing and Grain Boundary Conductivity of Yttria-Doped Zirconia, Part I Experimental Observation, International Journal of Ionics, no. 7, 2001;
- Rizea, Alin - KINETIC Kinetic Demixing and Grain Boundary Conductivity of Yttria-Doped Zirconia, Part II Theoretical Analysis, International Journal of Ionics, no. 7, 2001;
- S. Ioniță, E. Sofron - The Fuzzy Model for Aircraft Landing Control, 2002 AFSS International Conference on Fuzzy Systems, Calcutta, India Feb. 3-6, 2002, in Lecture Notes in Artificial Intelligence, Springer-Verlag 2002;
- Rizea Alin - Alumina Influence on the Microstructure and Grain Boundary Conductivity of Yttria Doped Zirconia, Solid State Ionics (IONICS) no. 146, 2002;
- Titchener, M.R., Gulliver, A., Nicolescu, R., Speidel, U. - Deterministic Complexity and Entropy, Computer Science, 2004.

The number of papers published in journals from the main stream of publications

(the most cited 10 papers) **801**

- Costel Balcau - Maxentropic Reconstruction of Some Homogeneous Markov Chain in the Countable Case, Mathematical Reports, 2004;
- Pandrea Nicolae - About Collision of Two Solids with Constraints, Revue Roumaine des Sciences Techniques, 2004;

- Tabacu S., Tabacu I., Pandrea N. - The Unidimensional Model of a Vehicle Frontal Impact with a Nonlinear Elastic Element, Buletin științific - seria "Mecanică Aplicată", 2004;
- Toma Alexandru-Dan - The Evaluation of the Drinking Spring-Waters in Pitești Regarding Their Total Hardness, Romanian Reports of Physics, 2004;
- Florin Bota, Anca Barbu, Corina Ghinea - Les Finances et la Reforme de L'Administration Publique Locale, Tribuna CASIM, 2004;
- I. Liță, M.A. Chiță, B.I. Cioc - SPICE Simulations of Current Sources Biasing of Low Voltage, Revue Roumaine des Sciences Techniques, Serie Electrotechnique et Energetique, 2003;
- Stefan Găitanaru - Aspects of Extension and Expansion, The Annals of the University of Bucharest, 2004;
- Cirstea Aniela - El Espacio en Las Novelas de G.G. Marquez, Annales Universitetea Apulensis, 2004;
- Oprescu Carmen - The role of the Ecclesiastic Institutions in Genesis and Evolution of Câmpulung-Muscel, Historia Urbana, 2004;
- Neblea M., Chiritoiu M. - The Ambietal Units and The Anthropic Influences in Ghimbav Masif (Leaota Mountains), Contributii Botanice, 2004.

The number of papers published in volumes of international scientific conferences with reviewers

890

(10 papers presented at the most prestigious events)

- Ciucurel, C. - The Evaluation of the Risk Factors and of the Diagnosis Proceedings in Presbycusis, 17th World Congress of the International Association of Gerontology, Vancouver, Canada, 2001;
- Hara, V., Cienci, A. - Adaptive Thermal Engine - An Automatic Self Regulation System with Fast Response Time, Global Powertrain Congress, Detroit, USA, 2001;

(Continued on page 123)



- Conference on Applied and Industrial Mathematics, October 2003;
- Contemporary economy - present and perspectives, April 2004 EDU-WORLD 2004;
- Education Facing the Contemporary World Problems, October 2004.

Products created/homologated/ capitalized / Inventions/Patents

(maximum 10 significant products)

8

- Mobile robot with electric drive;
- Manipulator with autonomous motion inside the cylindrical bodies;
- Procedure of conservating the anticorrosive protections, made up of iron sulphides;
- Procedure of chemical cleaning of the Ercosim steel pipes;
- Method and education for reducing the physical effort;
- Procedure of activating the sequenced fillings;
- Procedure of activating and reactivating the sequenced fillings, manufactured from phosphorous bronze.

FRENCH-ROMANIAN MASTER

"The Science and technology of materials"

The Science and Technology of Materials (STM) Master is an interdisciplinary specialization, coordinated by the Faculty of Mechanics and Technology and by INP-ENSIACE Toulouse, with the whole activity of teaching, research and writing the dissertation in the French language.

The courses are taught by PhD coordinator professors from the University of Pitești and from the partner French universities: Institut National Polytechnique de Toulouse, Institut National de Sciences Appliquées Lyon, Ecole Centrale Paris, Université de Metz, Ecole Nationale d'Ingénieurs Tarbes, Ecole de Mines de Nancy.

The graduates of this formation are conferred the master's degree diploma of the University of Pitești and the master-research diploma of the National Polytechnic Institute of Toulouse.

(Continued from page 122)

- State, L. - On a Certain Class of Algorithms for Noise Removal In Image Processing: A Comparative Study, ITCC 2002, Las Vegas, USA, 2002.
- State, L. - Nonparametric Approach to Learning the Bayesian Procedure for HMM, SCI 2002, Orlando, USA, 2002;
- Georgescu, L. - Winter Sport Injuries, 6th IOC World Congress on Sport Sciences, Salt Lake City, USA, 2002;
- Hara, V., Cienci, A. - The Adaptive Thermal Engine - The Best Suitable for Turbocharging - Powertrain Congress, Michigan, USA, 2002;
- Nicolae, V., Crivac, Gh. - Transferring the Virtues of Divided Combustion Chamber to Direct Injection Chamber - A Way For Improving Diesel Engine Efficiency, FISITA World Automotive Congress, Helsinki, 2002;
- Cienci, A., Hara, V. - Variableness - A Major Key in Engine Development, FISITA Congress, Helsinki, 2002;
- S. Ioniță, E. Sofron - Field-Programmable Analog Filters Array with Applications for Fuzzy Inference Systems, 4th International Conference on Hybrid Intelligent Systems, Kitakyushu, Japan, 2004;
- Cienci, A., Ispas, N., Hara, V., Boboescu, Gh. - Research Regarding Efficiency Improving of

a Spark Ignition Engine at Part Load Through Variable Compression Ratio, FISITA World Automotive Congress, Barcelona, Spain, 2004.

The number of scientific books published by publishing houses acknowledged abroad

8

(maximum 10 significant books)

- *Fitzhugh-Nagumo Model: Bifurcation and Dynamics*, Georgescu A.ș.a., 237 Pg., Ed. Kluwer Academic Publishers, 2000;
- *Jogos Desportivos Coletivos - Teoria E Metodologia*, Colibaba E.D., Bota I., 420 Pg., Ed. Horizontes Pedagogică, Portugal, 2001;
- *Basketball at 8-12 years*, Fleancu J.L., 200 pp, Garnda Art Publishing House, Kishinev, 2001;
- *Gymnastics - Methodological and Terminological Guide*, Simion Gh., 180 pp., Garnda Art Publishing House, Kishinev, 2002;
- *Management Consultancy in a Central European Context*, Pleșoianu G. (Coautor), 6 pg., Ed. Feaco, Bruxelles, 2003;
- *Athletics: Professional training of Sports and Physical Education students*, Butnariu M., 194 pg., Valinex Publishing House, Kishinev, 2004;
- *Handball - Differentiated Specific Physical Training*, Mihaila I., 158 pp., Valinex Publishing House, Kishinev, 2004.



Corp I

Corp T

Corp S



The specialists trained during the 7 promotions, work in Higher Education, in research in industry, and very many of them are doctors or PhD students having their thesis coordinated by both Romanian and French professors.

The topics approached in the dissertation projects are all part of the priority fields of European research: nanomaterials, composite materials, materials with shape memory, semiconductors and superconductors, special alloys, corrosion and anticorrosive protection, wear-proof protective layers, corrosion with thermal barrier role.

THE LIBRARY OF THE UNIVERSITY OF PITESTI

The Library of the University was set up in 1962, along with the Higher Education in Pitesti, becoming an active presence in the academic life of Pitesti City. The library acquired an encyclopaedic character from the very beginning.

The Library of the University benefited from important donations of foreign book - from libraries in France (over 15.000 volumes), on the part of the German State through the endowment program of Eastern libraries, in 1996, amounting to 30.000 DM (with a selection of catalogues from over 300 scientific publishing houses in Germany) and from the Barcelona-Spain library (3000 volumes). The foreign books and the subscriptions to publications related to research and scientific topics have been procured from the own budget so that the collections of the library possess a valuable documentary stock.



On 31 December 2004 the total number of volumes was of 199.299.

At the end of 2002, the central library centre was finished, which contains 1 borrowing centre, 2 rooms for book stacks, 1 room for periodical magazines, 1 room for consulting the data base (catalogue on-line), an office for issuing permits, a 300-place reading hall with an encyclopaedic character and with free access to the book racks, an evidence-processing office, a 50-place reading hall of periodical magazines.

The library has a complete informational system, by using specialized software for library services. The software system, integrated in the library - TINLIB was implemented with the view to electronically register the bibliographical data



and the internal evidence. Thus, one facilitates the administration of the specific information the library operates with, and once the information is introduced in the system, it can be accessed and used by several compartments within the library and by external users as well. Using the web site of the University of Pitesti, one can consult the library data base, accessible through the on-line catalogue.

The book stock was processed in several stages, i.e.: bar-coding and applying the security magnetic wire on each library unity, applying the rack quota on each volume, arranging the stock scientifically according to the librarianship principle in order to find the requested documents faster. The reading rooms of the central section are monitored by video and the access is electronically controlled by security doors.



The Project: "VLS EUPECO" EXTENSION THROUGH A MULTILINGUAL TRANSLATION FACILITY OF THE TECHNICAL AND SCIENTIFIC TERMS, AVAILABLE ON-LINE - TECHTRANS

Co-financers:

- INFOSOC Program, INFOSOC 3 Subprogram, C110/03.11.2003 Contract;
- SOCRATES Program, GRUNDTVIG Subprogram, 90403-CP-1-2001-1-RO-GRUNDTVIG-G1 Contract;
- University of Pitesti;
- SC INFO MUSCEL DATA SRL.

The project pursued and achieved two important objectives of high complexity, i.e.:

1. Putting in use an on-line multilingual dictionary, with scientific and technical terms, simultaneously correlating four international languages and the Romanian language (MULTILINGUA 1).
2. Joining this virtual medium of learning and / or assisted research with another one designed within some projects with European financing (Socrates / Grundtvig - Ref. no.: 90403-CP-1-2001-1-RO-GRUNDTVIG-G1 and Socrates / Erasmus PROG - Ref. no.: 50387-IC-4-2000-1-RO-ERASMUS-EPS-1).

Other pursued objectives are:

- designing a data base with scientific and technical terms, in four languages: English, French, German and Romanian;
- providing technical service necessary to the anchoring and good functioning of the TECHTRANS web site;
- designing specific procedures of TECHTRANS junction with the VLS EUPECO virtual learning space;
- starting the process of adding a new equivalent list in Russian and Spanish languages.

The resulted platform, of the VLS (Virtual Learning Space) type, ensures a complex range of educational, formative and scientific research services, with a high degree of sustainability.

The final products to be achieved (MULTILINGUA 1, TECHTRANS and VLS EUPECO + TECHTRANS compound) will bring an offer with a high degree of novelty on the educational and training offer market.

The relevance of the project consists of:

- the perfect compatibility with the informational society development objective;
- opening the horizon towards Lifelong Learning;
- enlarging the real access to information through telematic and interactive systems, for various categories of public;
- enlarging and diversifying the latest scientific and technical information offer.

The present project meets the **national policies** in the field, by:

- its belonging to the orientations of the "National Strategy of implementation and informatization in an accelerated rhythm of the informational society" orientations.
- transposing in reality some practical actions with a view to creating the informational society;
- developing the computer science infrastructure, the way it was formulated by "The Forum for Informational Society", focusing first and foremost on school and research.

The **viability** of the project is a solid one, since it represents the continuation, by extension development of the two projects mentioned above, financed by the European Commission, projects which combine modern educational strategies with communicative-informational services, adapted to the demand of a knowledge-oriented and e-learning based society.

The **results** obtained within the project are:

- ten on-line technical dictionaries, with general and specific terms intercorrelated in four languages : English, French, German and Romanian (MULTILINGUA 1);
- TECHTRANS web site (www.techtrans.ro), which provides facilities of simultaneous translation of the scientific and technical terms existing in the ten on-line technical dictionaries.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	3662	35500
2003	6730	0
2002	974	13000
2001	2160	25000
2000	269	13000
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Automobile Laboratory



Television Laboratory



Biology Laboratory



Microsystems Laboratory



Vibrations Laboratory



Chemistry Laboratory



Public Universities

Technical Specialization

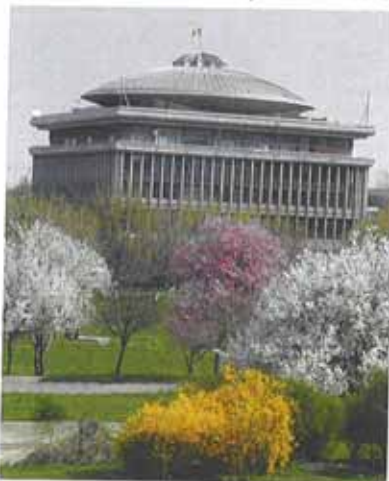


Rector

Prof. Eng. Ecaterina Andronescu, PhD

Historical Overview of the University

POLITEHNICA University of Bucharest is the oldest and most prestigious school of engineering from Romania. Its traditions date back to the first Higher Technical School founded by Gheorghe Lazar in 1818, followed by the foundation of the "School of Bridges, Roads, Mines and Architecture" in 1864. In 1867 the school turned into "The School of Bridges, Roadways and Mines", offering a 5 year program of academic education. The latter turned into "The Polytechnic School of



Bucharest" (1920) with four sections: Electro-mechanical Engineering, Civil Engineering, Mines and Metallurgy. The POLITEHNICA Institute of Bucharest was founded in 1948 with four sections initially. Starting from 1950, these four sections spawned the present day faculties.

Faculties and Departments

- 12 faculties: Electrical Engineering, Power Engineering, Automatic Control and Computer Science, Electronics, Telecommunications and Information Technology, Mechanical Engineering, the Engineering and Management of Technological Systems, the Engineering of Bio-technical Systems, Transports Engineering, Aerospace

Engineering, the Science and Engineering of Materials, Industrial Chemistry and Science of Materials, (integrated) Engineering - Foreign Language Learning;

- 5 Departments: Physics, Management, Mathematics, Social Sciences and Humanities, Bio-engineering and Biotechnology.

Master and Doctoral Programs

MASTER - During academic year 2004-2005, the Bucharest Poly ran 85 master programs in its 12 faculties and departments, 5 of them being offered by CPRU (Center for the Training of Human Resources) and the UNESCO Chair, in domains of breakthrough scientific, technical and economic development.

Doctoral Programs - Doctor degree programs have been provided along two fundamental directions: Engineering Sciences and Exact Sciences, in close relation to master programs. The academic year 2000 spelt the start of some new and particularly successful departments such as the Continuing Training Department, Open Distance Learning Department and DECIDE - an Internet Training department. These new departments coordinate 31 entities which provide in their turn postgraduate studies.

Patrimony

The Bucharest Poly has an area of over 100 ha, with structures located in New Poly Buildings, Leu, Polizu, Calea Victoriei, 28 campus hostels (accommodating 12.000 students) and 3 Canteens in the Regie Compound/Complex. The academic facilities (lecture and seminar halls, teaching and research laboratories, academic staff offices and auxiliary spaces), amounting to 135.673 sq.m. The students and their teachers have access to playgrounds covering 42.059 sqm including 2 gyms of about 1.879 sq.m.

Fields in which human resources are trained

We provide training in both Romanian and foreign languages of international circulation in the fields of electric, economics engineering, environmental engineering, computer engineering, automatic systems engineering, electronics, mechanical engineering, industrial engineering, transportation engineering, aerospace engineering, IT, science and materials engineering, chemistry engineering, telecommunications, mechantronics, applied sciences and economics engineering.

Human Resources

Professors	532
Senior Lecturers	348
Lecturers	357
Assistant Lecturers	284
Teaching Assistant	220
Research Fellows	34
Administrative Staff	1678
Students	28530
of which:	
Undergraduate	23498
Master	2093
PhD - full attendance	270
PhD attendance not required	2669



Presentation of research activity chart

Research work is carried out at the level of chairs, departments or special units, in compliance with the "Regulations regarding the organization of scientific research in PUB". The specially created units include: laboratories and research centres, or wide consortia enlisting chairs, departments, faculties, universities and other institutions based on protocols concluded between the interested parties. The coordination of the whole research activity is incumbent upon the 15 members of the Scientific Council of the PUB Senate chaired by the vice-rector for Scientific Research. Its operational management is ensured by the Division for the Management of Scientific Research.

Structures	
Research Institutes	0
Research Centers	37
Research Laboratories	124
Multi-user Research Centers	8

Top Priority Research Directions

The key directions of research taken up by the PUB scientific staff in agreement with the EU priorities have been:

- micro and nano systems of information processing, optoelectronics and photonic operational components integrated in intelligent products and applications;
- information models and systems for public services, health, education and the "new economy";
- multifunctional intelligent materials, and special technologies;
- sustainable development, energy, environment, non-depletable resources;
- biotechnologies, bioinformatics and structural biology;
- up to date production processes, flexible and intelligent processing systems, safety and control devices, management of virtual enterprises.

Outstanding Research Infrastructure

In the last 5 years, more than 4 mil. USD have been invested for high quality equipment, mainly in the 8 BCUM range. PUB has been endowed with a top down information and data/voice communication system, with 50 stations located per building cluster (over 2500

The number of papers published in ISI - quoted journals (the most cited 10 papers)

847

- Vrabie, VD, Mars, JI, Lacoume, JL, *Modified singular value decomposition by means of independent component analysis*. Signal Processing, 84 (3), pp. 645-652, 2004;
- Teodorescu, M, Dimonie, M, Draghici, C, Vasilevici, G, *Poly (ethylene oxide)-block-polystyrene copolymers obtained by radical polymerization involving chain-transfer processes*. Polymer International, 53 (12), pp. 1987-1993, 2004;
- Garea, SA, Iovu, H, *Microwave assisted crosslinking process of epoxy resins*. Molecular Crystals and Liquid Crystals, 415, pp. 61-73, 2004;
- Răileanu, M, Giubelan, M, Zaharescu, M, Jitianu, A, Peleanu, I, Meghea, A, *C-60 based hybrid nanocomposites obtained in the presence of ultrasounds*. Journal of SOL-GEL Science and Technology, 31 (1-3), pp. 51-58, 2004;
- Roșca, ID, Watari, F, Uo, M, *Microparticle formation and its mechanism in single and double emulsion solvent evaporation*. Journal of Controlled Release, 99 (2), pp. 271-280, 2004;
- Bujor, F, Trouve, E, Valet, L, Nicolas, JM, Rudant, JP, *Application of log-cumulants to the detection of spatiotemporal discontinuities in multitemporal SAR images*. IEEE Transactions on Geoscience and Remote Sensing, 42 (10), pp. 2073-2084, 2004;
- Sterian, CED, Wang, CX, Johnsen, R, Patzold, M, *Rotationally invariant space-time trellis codes with 4-D rectangular constellations for high data rate wireless communications*. Journal of Communications and Networks, 6 (3), pp. 258-268, 2004;
- Pantelica, A, Oprea, C, Frontasyeva, M, Georgescu, II, Pincovski, E, Catană, L, *Contamination*

- of crop vegetation with trace elements from a fertilizer plant: An INAA study*. Journal of Radioanalytical and Nuclear Chemistry, 262 (1), pp. 111-118, 2004;
- Ghițuța, C, Andronescu, E, Dumitru, G, Stoieriu, S, *Preparation of alumina and cordierite based porous ceramic materials*. Euro Ceramics VIII, PTS 1-3. Key Engineering Materials, 264-268, pp. 2247-2250, 2004;
- Lachi, M, Rebay, M, Mladin, EC, Padet, J, *Alternative models for transient convection heat transfer in external flows over a plate exposed to a variable heat flux*. International Journal of Thermal Sciences, 43 (8), p. 809-816, 2004.

The number of papers published in journals from the main stream of publications

5036

(the most cited 10 papers)

- Bălan, C, Băluț, C, Gheorghe, L, Gheorghe, C, Gheorghiu, E, Ursu, G, *Experimental determination of blood permittivity and conductivity in simple shear flow*. Clinical Hemorheology and Microcirculation, 30 (3-4), pp. 359-364, 2004;
- Cristescu, CP, Stan, C, Alexandroaei, D, *Dynamic control by sinusoidal perturbation and by Gaussian noise of a system of two nonlinear oscillators: Computation and experimental results*. Physical Review E, 70 (1), pp. art. no. 016613, 2004;
- Iordache, M, Dumitriu, L, *Efficient decomposition techniques for symbolic analysis of large-scale analog circuits by state variable method*. Analog Integrated Circuits and Signal Processing, 40 (3), pp. 235-253, 2004;
- Halanay, A, Safta, CA, Ursu, I, Ursu, F, *Stability of equilibria in a four-dimensional nonlinear model of a hydraulic servomechanism*. Journal of Engineering Mathematics, 49 (4), pp. 391-406, 2004;

(Continued on page 131)



computers with optical fiber connections). The National Center for Information Technology has been operating in PUB since 2002. The Center is equipped with a server Sun Enterprise HPC E10000 and 32 processors 16 GB RAM, 527 GB HDD and servers Sun E420.

Excellence Centers

1. MAGNAT - Technical and Applied Magnetism /CNCSIS/2001;
2. CETTI - Centre for Engineering Electronics and Interconnection Techniques/CNCSIS/2001;
3. FOCUM - University Centre for Optical and Photonic Engineering /CNCSIS/2001;
4. CIMR - Research and Training Centre for Robotics, Informatics and Materials Engineering /CNCSIS/2002;
5. EDIL - Computer assisted testing of integrated electronic systems /CNCSIS/2004;
6. TEQREP-advanced technologies for monitoring, control and power quality/project under FP6.

International Cooperation

In the 2000-2004 interval, PUB was involved in 40 bilateral projects, 20 projects under FP 5, 17 projects under FP6, 6 NATO projects, 19 Leonard da Vinci projects, 11 Socrates projects, 1 PHARE project and 16 contracts with third parties. These projects amounted to over 8 million USD. A number of 28 bilateral agreements with European universities has been concluded or re-negotiated (a total number of 122 universities from 14 countries), as well as agreements of inter-university cooperation, respectively, with 5 universities from USA, 6 from Asia (Japan, China, Taiwan), 1 from Australia, 1 from Africa, 3 from East Europe and 14 tripartite conventions with universities from Francophone countries.

International Scientific Activities (the 10 most important ones)

A number of over 25 scientific events of great prestige have been organized in order to publicize the results of the scientific research carried out by our academic staff and in order to boost PUB image. Here is a short list of International Conferences attended by key personalities in the field: International Conference of Machine Tools and Manufacturing Systems, The Balkan Conference of Chemistry, The 14th International Conference of Automatic and

(Continued from page 130)

- Brujan, EA, Ikeda, T, Matsumoto, Y, *Dynamics of ultrasound-induced cavitation bubbles in non-Newtonian liquids and near a rigid boundary*. Physics of Fluids, 16 (7), pp. 2402-2410, 2004;
- Chicco, G, Napoli, R, Piglione, F, Postolache, P, Scutariu, M, Toader, C, *Load pattern-based classification of electricity customers*. IEEE Transactions on Power Systems, 19 (2), pp. 1232-1239, 2004;
- Cristea, PD, *Genomic signals of reoriented ORFs*, EURASIP Journal on Applied Signal Processing, 2004 (1), pp. 132-137, 2004;
- Kucinski, BR, DeWitt, KJ, Pascovi, MD, *Thermoelastohydrodynamic (TEND) analysis of a grooved thrust washer*. Journal of Tribology-Transactions of the ASME, 126 (2), pp. 267-274, 2004;
- Stanciu, L, Groza, JR, Stoica, L, Piapcianu, C, *Influence of powder precursors on reaction sintering of Al₂TiO₅*. Scripta Materialia, 50 (9), pp. 1259-1262, 2004;
- Mitoma, Y, Uda, T, Egashira, N, Simion, C, Tashiro, H, Tashiro, M, Fan, XB, *Approach to highly efficient dechlorination of PCDDs, PCDFs, and coplanar PCBs using metallic calcium in ethanol under atmospheric pressure at room temperature*. Environmental Science & Technology, 38 (4), pp. 1216-1220, 2004.

The number of papers published in volumes of international scientific conferences with reviewers

6838

(10 papers presented at the most prestigious events)

- *Estimation of the Ratio Between Functional Group Graphited in Micro - and Macroporous*, Oancea, A.M., Cox, M., Rădulescu, M., Pincovski, E., International Conference Iex 2004, Cambridge;
- *Synthesis And Characterization a New Metal Chelating Polymers for*

Cations Complexation, Mocioi M., Albu A.M., Mateescu C., Simionescu C. M., Rusen E., Mărculescu B., 40th Int. Symp. On Macromolecules, Paris, 2004;

- *Physical Properties of Water Soluble Carotenoids*, Foss B.J., Yu Q, Hafez A., Ana I., Banica F.G., Gordon Research Conference on Carotenoids Ventura, California, Usa, 2004;
- *Estimation of the Ratio Between Functional Group Graphited in Micro and Macroporous Puralite C 150 Resin Using a Bidispense Pore Mode*, Oancea A., Cox M., Radulescu M., Pincovski E., International Conference Iex 2004, Cambridge;
- *Components Emisivity in Reflow Soldering Process*, Zănescu D. S., Svasta P., Proceedings 54th Electronic Components and Technology Conference, Las Vegas, Nevada, 2004;
- *An Experimental Study of Knock in a Spark Ignition Engine Fueled With Lpg*, Chiriac R., Apostolescu N., Niculescu D., Sae World Congress&Exposition, Detroit, Michigan, 2004;
- *New Image-Restoration System Using Short-Space Power Spectral Substraction*, Udrea R., Preda R.O., Vizireanu D.N., 27th European Conference On Visual Perception Ecvp 2004, Budapest;
- *Planning of a Hybrid System (Solar Thermal & Photo Voltaic) for Stock Raising in Romania's Western Area*, Luminoasu I., Fara L., Eurosun 2004 Congress, Freiburg, 2004;
- *An Effort Reduction Method to Dsp Software Integration*, Margina C., Ungureanu R., Costinescu B., Ilas C., Embedded Signal Processing Conference, Santa Clara, California, 2004;
- *Evaluation of Dosimetric Parameters in Biological Tissues Exposed To Microwaves*, Negoias A., Machedon A., Morega M., Fourth European Symposium On Medical Physics And Biomedical Engineering, 2004, Patras, Greece.

(Continued on page 132)



Computing Systems, the International Conference of Power Engineering, Conference in Communications, IFAC Conference of Large Systems, the International Conference for Environment Engineering, International Conference for Non-destructive Control, International Conference of Fine Mechanics and Mechatronics, International Conference of Materials for Electrical Engineering.

Products created/homologated/ capitalized/Inventions/Patents (maximum 10 significant products) 52

- Intelligent robot station with integrated VA system - prototype;
- Integrated CMOS in sub-micronic technology - EUROCHIP prototype;
- Neutralization par solidification de decantation des steriles miniers, actifs ou en etat de conservation - patent (medal award);
- In-situ cutting system - patent (medal award);
- Burner for grain heating - patent (medal award);
- Plant for light signaling on water ways - patent (medal award).

A Key Player in the Field of Engineering

The UPB Educational Division directly participated in the implementation of a quality management system, partially financed from a CALIST grant. The activity in this domain has led UPB to promote a project under the INFRAS program. The project was meant to support the creation in Romania of two nationwide organizations for the certification of quality management systems in higher education (CERTIS) and of the staff involved in this domain (CERTIP). UPB is also participating in another national program meant to assess the quality of higher education in Romania - the CALISTRO program- coordinated by the University of Bucharest. In this latter program, UPB's role has been to develop syllabus standards for all technical specializations as well

(Continued from page 131)

The number of scientific books published by publishing houses acknowledged abroad 60 (maximum 10 significant books)

- *Encyclopedia of Vibration*, M. Radeş, 1500, Academic Press London;
- *Matrix Riccati Differential Equations*, G. Freiling & V. Ionescu, 230, Birkhauser Verlag;
- *The Generalized Eigenvalue Problem*, C. Oara, P. Van Dooren, A. Varga, 168, Oxford University Press;
- *Personalized Generation of a Complex Structure of Web Pages*, S. Trăuşan-Matu, 262, Informatio n Age Publishing;
- *Non-Sulfonamide Carbonic Anhydrase Inhibitors and Activators*, M.A. Ilieş & M.D. Banciu, 125, Taylor & Francis, London;
- *Energy Conversion*, S. Petrescu, C. Harman, M. Costea, 451, Bucknell University Press;
- *Thermodynamics of Solar Energy Conversion Into Work*, V. Bădescu, 315, Springer Verlag;
- *Neural Networks*, P. Cristea, 300, Patras University Press;
- *Online Experimentation With a Spectrum Analyzer in a Signal Processing Virtual Laboratory*, K. Holbert, M. Albu, F. Miha, 130, Begell House Publishing;
- *The Rheology of Lubricating Grease*, C. Bălan, 160, European Lubricating Grease Institute.

as the guidebook for the assessment of academic quality.

The "CIM-FESTO INTEGRATED PRODUCTION" SYSTEM" laboratory

Equipment: CIMFESTO integrated production system, Vibroport 41/Bruel & Kjaer Vibro-troubleshooting system for machines, "in-situ" equilibration and alignment; Vibrotest 60/ Bruel& Kjaer Vibro- vibration analyzer and data collector; 2526/Bruel & Kjaer Vibro-experimental model for 2 plane rotor equilibration; NL-15/RION-1st class sonometer; NA-27/RION -1st class real time acoustic analyzer, in 1/1 and 1/3 octave bands; VE-10/ RION-accelerometer calibrator.

Services offered: computer assisted design, production simulation, modeling and simulation of SFF transfer and transport sys-



tems operation, experimental measurements in the domain of vibro-acoustics, using Bruel&Kjaer, Schenck, Raytek, Rion systems.

Microanalysis laboratory with electronic microprobe

Equipment: Electronic microscope scanning XL-30 ESEM (TMP), FEI (Philips), equipped with EDS (EDAX) analyzer, Peltier stage etc; installation for preparing thin sheets through electronic polarization, double jet, for TEM, "Materials Science" and device for cooling electrolytes down to -20 °C; Electronic

microprobe JXA-5A (JEOL) with WDS spectrometer; Installation for vacuum metallization in JEE-4D (JEOL).

Services offered: Tri-dimensional microfractography, qualitative and quantitative microanalysis, estimation of the inter-diffusion quotients, coating through PVD procedures, microanalysis (identifications) of nonmetallic inclusions, phase microanalysis (phase identification), estimation of layer thickness.



Success Stories

1. In the general effort to upgrade hydro power plant technology, one needs to modernize the automatic rotation and power adjusters.

The relatively large number of typodimensions of automatic speed adjusters currently operating in hydro power plants directly impacts upon their maintenance and exploitation, because it requires tremendous human effort and material resources.

In these circumstances, THE ENERGY AND ENVIRONMENT RESEARCH CENTER, in collaboration with HIDROELECTRICA Ltd, produced, during 1999-2004, a new type of digital hydraulic rotation and power adjuster for axial turbines with double control.

The working model was produced in UPB's laboratory of Hydraulic and Pneumatic Actions, the Department of Hydraulics and Hydraulic Machines, in collaboration with well-known producers of electro-hydraulic

equipment and industrial automation: BOSH (GERMANY), represented by East ELECTRIC Ltd, KEITHLEY (USA), represented by INTERNET Ltd and ABB, represented by VTC Technologies Ltd. The prototype of the regulator was set on the hydro-unit no.1 of the Rm. Valcea Hydroelectric Plant in collaboration with HIDROSERV RM.VALCEA.

The adjuster was tested in conformity with the international regulations, fully achieving the performances imposed by the A.N.R.E. and meeting normal operating requirements. It represents a model of cooperation between industry and higher education, on viable economic grounds. Consequently, at the INTERNATIONAL TECHNICAL FAIR TIB 2003, it was awarded the HONOR DIPLOMA and the TIB MEDAL 2003, which are usually granted to the most important techno-scientific Romanian and foreign achievements with an outstanding economic impact.

Financial resources obtained for research

	National millions RON	Internat. EURO
2004	95000	860000
2003	96000	790000
2002	70000	3990000
2001	69000	4290000
2000	32000	980000
1999	29000	584000
1998	24000	523000
1997	20000	402000
1996	18000	315000
1995	15000	205000



2. Romania's integration in the European Union entails the involvement of specialists from the fields of electronics, telecommunications and information technology in ample projects aimed at developing the infrastructure and the structures typical for user-oriented telecommunications.

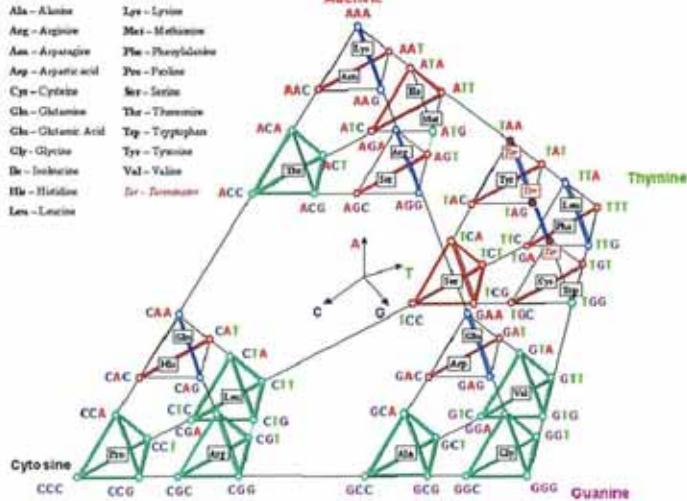
Such a project is the project IST 507637-ENTHRONE-End-to-End QoS through Integrated Management of Content, Networks and Terminals, an integrated project developed in Romania by a European consortium, with 26 partners, including The University POLITEHNICA of Bucharest, represented by the members of the staff of two of its most representative research centers: The Communications and Signal Processing Research Center (3CPS) and The Telecommunication Networks and Software Research Center (CCRST).

The main objective of the ENTHRONE project is to research and develop an integrated solution capable of functionally coordinating various structures of the digital information distribution chain, from the generation of content/service to user terminals, using heterogeneous networks based on an QoS end-to-end approach. The UPB's role in the project is to take part in the process of providing the definition and specification of the general Enthrone system architecture, in the development of modules and techniques of interconnecting hybrid communication networks and in the administration of the quality parameters of the service from the final user - when the communication is achieved through these networks - to the measurement and assessment of receptive quality in the transmission of audio information, as well as in the development of a testing platform set up on UPB premises.

International Affiliations of PUB

The POLITEHNICA University of Bucharest is a member of many academic organizations, out of which we could mention:

- The International Association of Universities (IAU);
- The Conference of the European Schools for Education and Research in Advanced Engineering (IAUP);
- The Francophone Agency for Higher Education and Research (AUFELF-UREF);
- European Rectors Conference (CRE);
- International Council of Great Electrical Systems (CIGRE);
- European Conference of Schools for Education and Research in Advanced Engineering (CESAER).



Tetrahedral representation of the Genetic Code
(Cristea P., *Independent Component Analysis for Genetic Signals*, BIOS 2001 - International Biomedical Optics Symposium, SC316, San Jose, USA, 20-26 January 2001)



Rector

Prof. eng. Nicolae Robu, PhD

Historical Overview of the University

The Politechnical School of Timisoara was founded in 1920, on the basis of the Royal Decree no. 4822 from November 11th. In 1925, the Scientific Society of the Politechnical School is founded, and is publishing the "Bulletin scientifique de l'Ecole Politehnique de Timisoara". This journal will allow from now the exchange of scientific publications with other European countries. The first Rector was doctor engineer Traian Lalescu, and here are some other famous professors of the



institution: *Victor Vilcovici, Caius Jacob, Plautius Andronescu, Iile Murgulescu, Coriolan Dragulescu, Corneliu Miklosi, Remus Radulet, Aurel Barghazan, Alexandru Rogojan*. Over the years, the institution changed its name several times, and since 1995 it is known as the "Politehnica" University of Timisoara.

Faculties and Departments

- The university has:
- 9 faculties: Automation and Computer Science and Engineering, Industrial Chemistry and Environmental Engineering, Civil Engineering and Architecture, Electronics and Telecommunications Engineering, Electrical Engineering, Hydrotechnical Engineering, Management in Production and Transportation, Mechanical Engineering, Engineering in Hunedoara;
 - 6 departments or independent chairs: Department of Mathematics; Department of

Communication and Foreign Languages; Department for Didactic Personnel Training; Department for Continuing Education; Chair of Physics; Chair of Sports;

Master and Doctoral Programs

MASTER programs - The university organizes master programs in all 9 faculties, as well as in the independent departments, as follows:

- Automation and Computer Science: 4 programs (1 in English); Industrial Chemistry and Environmental Engineering: 7 programs (1 in French); Civil Engineering and Architecture: 6 programs; Electrotechnics and Electroenergetics: 2 programs; Electronics and Telecommunications: 4 programmes (1 in French); Hydrotechnical Engineering: 2 programs; Management in Production and Transportation: 4 programs; Mechanical Engineering: 13 programs (1 in English); Engineering Hunedoara: 3 programs; Mathematics: 1 program.

Doctoral programs - These studies are organized in 2 profiles:

Sciences - 1 doctoral domain (Chemistry); *Engineering Sciences* - 10 doctoral domains (Chemical Engineering; Material Science and Engineering; Civil Engineering; Automation; Computer Science; Electrical Engineering; Energetics; Electronics and Telecommunication Engineering; Mechanical Engineering; Industrial Engineering).

Patrimony

The University has in its property 96 buildings, of which 51 educational areas (faculty buildings, laboratories), University Library, University TV Studio - TeleUniversity; 32 student halls and canteens (student residences, halls used as hotels during the summer, restaurants), 3 areas exclusively for research activities, 4 sport areas (football field, basketball, handball, tennis grounds and gym halls).

Fields in which human resources are trained

Automation and Applied Informatics; Systems Science and Computer Science; Chemical Engineering; Environmental Engineering; Electronics and Telecommunications Engineering; Mechanical Engineering; Industrial Engineering; Material Science; Mechatronics and Robots; Transport Engineering; Applied Sciences; Medical Engineering; Constructions; Civil Engineering;

Human Resource

Professors	194
Senior Lecturers	142
Lecturers	178

Assistant Lecturers	288
Teaching assistants	62

Research Fellows	3
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Administrative Staff	656
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Students	14592
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of which:

Undergraduate	13006
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Master	597
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PhD - full attendance	138
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PhD - attendance not required	851
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Installations; Cadastre; Architecture; Economical Engineering; Local Public Administration; Public Relations.

Presentation of research activity chart

The research activity is organized at the level of the excellency research centers, of the accredited research centers or of the departments. A procedure was installed, according to which after covering the expenses, the person carrying out the contract should take advantage of the incomes generated by his research activity: the individual, the laboratory where the person develops the research activity.

The research activity is coordinated by the Scientific Secretary of the University Senate.

Structures	
Research Institutes	0
Research Centers	21
Research Laboratories	61
Multi-user Research Centres	3

Top Priority Research Directions

1. Researches in the area of information systems for e-learning, e-government and e-administration applications.
2. Researches in developing applications related to the Information Society.
3. Digital signal processing.
4. Researches in the field of complex fluids.
5. Researches concerning the composition and behaviour of steel-concrete structures.
6. New methods for building rehabilitation using different materials: composites, complex materials, etc.
7. Development of complexe databases for skeleton defects and establishing the corresponding surgical techniques.
8. Realisation of new surgical techniques for rectifying skeleton defects.
9. Competitivity management.

Outstanding Research Infrastructure

Automated stand for statistical and dynamic experiments for materials, elements and structures for constructions; Stand for

The number of papers published in ISI - quoted journals (the most cited 10 papers) 225

- *MOSI₂ Laser Cladding - Elaboration, Characterization And Addition Of Non-Stabilized ZrO₂ Powder Particles*, S. Ignat, P. Sailaman, A. Nichici, B. Vannes, D. Grevey, E. Cicala, *Intermetallics*, 11 (2003), Pp. 931-938, Elsevier.
- *Synthesis Of Barium Silicates By Glow Discharge Electron Gun*, F. Felician, Z. Schlett, I. Jadaneant, *Ceramics International*, 28 (2002) 463-466, Ed. Elsevier.
- *On A Problem Of G Isaac And Th M Rassias Concerning The Stability Of Mappings*, P. Gavruta, *Journal Of Mathematical Analysis And Applications*, Vol. 261 (2001), Pp. 543-553.
- *Small Sinusoidal Vibrations Amplitude Measurements With The Michelson Interferometer*, V. Ivaschescu, *Ieee Transactions On Instrumentation And Measurement*, Vol. 49, No. 3, Pp. 643-647, 2000
- *Instrumentation And Measurement In Romania*, V. I. Cretu, T. Jurca, M. Micea, I. Sora, *Ieee Instrumentation And Measurement Magazine*, Vol. 6, No. 3, 2003, Pp. 41-47.
- *Optimisation Criteria In Development Of Fuzzy Controllers With Dynamics*, Precup, R.-E., Preitl, St., *Engineering Applications Of Artificial Intelligence*, Elsevier Science, Vol. 17, Nr.6, Pp. 661-674, Issn 0952-1976, 2004.
- *Cyclic Tests Of Double-Sided Beam-To-Column Joints*, D. Dubina, A. Ciutina, A. Stratan, *Asce Journal Of Structural Engineering*, Vol. 127, No. 2, 2001, Pp. 129-136.
- *Pm-Assisted Reluctance Synchronous Motor / Generator (Pm-Rsm) For Mild Hybrid Vehicles: Electromagnetic Design*, I. Boldea, L. Tutelea, C. Pitic, *Ieee Transactions On Industry Applications*, Vol. 40, No. 2, 2004
- *Thermal And Structural Investigation Of The Reaction*

Between 1,2-Propanediol And Co(NO₃)₂ 6h₂O, M. Niculescu, N. Vaszilcsin, M. Birzescu, *Journal Of Thermal Analysis And Calorimetry*, Vol. 65, 2001.

- *Development Of Fuzzy Controllers With Non-Homogenous Dynamics*, R. E. Precup, S. Preitl, *Electrical Engineering (Archiv Für Elektrotechnik)*, Springer-Verlag, 2003.

The number of papers published in journals from the main stream of publications 2185 (the most cited 10 papers)

- *Stochastic speech understanding for human-computer dialogue*, D. Bohus, M. Boldea, In *Romanian Journal of Information Science And Technology*, No. 3-4, 2001, pp. 261-272
- *The evolution of management in SME's of Timișoara*, M. Mocan, *Buletinul Științific al Universității "Politehnica" din Timișoara, Seria Management, Inginerie Economică, Ingineria Transporturilor*, 2004;
- *Avoiding strain on continuous casting correlation of the work rate*, N. Rusu, C. Hărău, I. Ilca, S. Anghel, In *Metalurgia Internationa*, No. 5, 2004, Issn 1582 2214, pp. 35-38;
- *Etude comparative de la polymérisation frontale du diméthacrylate de diéthylène-glycol et de triéthylène-glycol*, G. Bandur, C. Davidescu, L. Rusnac, *4eme Coloque franco-roumaine sur les polymeres*, 1-3 Septembre 1999, Montpellier, France, *Synthetic Polymer Journal*, Vol. VII, 2000;
- *Calcul des courants electriques par les conducteurs elementaires d'une Barre Roebel - Part II: Determination des courants*, T. Dordea, M. Biriescu, Ghe. Mădescu, I. Torac, M. Moț, L. Ocolisan, *Revue Roumaine Des Sciences Techniques. Serie Electrotechnique Et Energetique*, 2004;

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cyclic and monotone experiments, climate-controlled testing room for experiments related to heating systems; Authorized laboratory for power and high-voltage Laboratory for spectrometry and chromatography; Laboratory for advanced control systems; Laboratory for computers' reliability; Laboratory for distributed systems; Laboratory for real-time systems; Laboratory for data communications; Multimedia and digital audio-video processing laboratory.

Excellence Centers

The research center for the mechanics of materials and the safety of structures-CEMISIG - Director: Prof.dr.eng. Dan Dubina.

International Cooperation

- INCO-COPERNICUS Projects (4)
- Socrates Projects - international thematic networks (3)
- Cost Actions (6)
- Leonardo da Vinci Pilot Projects (12)
- FP5 programmes (5)
- FP6 programmes (3)
- Collaborations on the basis of bilateral agreements (23).

International Scientific Activities

(the 10 most important ones)

- International Conference "Conference on Technical Informatics" CONTI 2000, 2002, 2004
- International Symposium of Electronics and Telecommunications ETc 2000, ETc 2002, ETc 2004
- International Conference "Power Systems", 2000, 2002, 2004
- International Symposium on Management SIM-1994, SIM-1997, SIM-1999, SIM-2002, SIM-2003
- German-Romanian Symposium AQUACIVITAS 2004
- International Conference "Stability and Ductility of Steel Structures" SDSS'99
- International Colloquium "Recent Advances and Trends in Structural Design", 2004
- Symposium on Mathematics and Its Applications, 2001, 2003
- International Conference on Integrated Engineering, C2I 2002
- 6th International Conference on Boundary and Finite Element, 2003

(Continued from page 136)

- *Brickwork walls, consolidated with composite materials - the results of experimental attempts*, V. Stoian, T. Nagy-Gyorgy, D. Dan, The Bulletin of Builders Association; Romania's Design Structures Builders, No. 4, 2003 - No. 1, 2004;
- *La sous-mesurable et l'intégrabilité des fonctions probabilistique*, O. Lipovan, Italian Journal of pure and applied mathematics, No. 7, 2000, pp. 139-150;
- *Studies by fem of contact regions from an elastic coupling*, A. Davidescu, C. Sticlaru, Machine Building, No. 12, Year LIII, 2004, ISSN 0025 455 X, pp. 75-78, Bulgaria;
- *Functional optimization of the cam mechanisms through using helical springs with variable geometry*, R. Militaru, E. Lovasz, Facta Universitatis Nis, Series: Mechanical Engineering, Vol. 1, No. 10, 2003, pp. 1289-1298;
- *Fuzzy decision making in preliminary computer aided design*, G. Savii, Transactions on automatic control and computer science, Vol. 49 (63), 2004, No. 4, pp. 91-94.

The number of papers published in volumes of international scientific conferences with reviewers

2391

(10 papers presented at the most prestigious events)

- *Development method for a takagi-sugeno Pi-Fuzzy controller*, R. E. Precup, S. Preitl, 15th World Congress of International Federation of Automatic Control, Barcelona, Spain, Ed. E. F. Camacho, L. Basanez, J. A. De La Puente, Pergamon, Elsevier Science Ltd, 2002, Cd-Rom, Paper Index 390, 6 pp;
- *Investigation related to the wearing of the wire rolling mill guide*, T. Vasii, A. Berghian, Istraživanje I Razvoj Masinskih Elementa I Sistema, Vol. 2, Pp. 331-335, 2002;

- *Synthesis and antimicrobial activity of Poly(Oxyethylene)S functionalized with quaternary Phosphonium and groups*, A. Popa, C. Davidescu, C. Csunderlik, Gh. Iliu, R. Trif, XIV International Conference on Phosphorus Chemistry, Cincinnati, Ohio, USA, 1998;
- *Study of azodyes oxidation with Fenton's Reagent by use of UV-Vis spectroscopy*, C. Bogatu, M. Gheju, L. Duda, P. Negrea, A. Iovi, Vth International Symposium and Exhibition on Environmental Contamination in Central and Eastern Europe, Praha, Cehia, 2000;
- *Bega - A biaxial excitation generator for automobiles: comprehensive characterization and test results*, S. Cridon, I. Boidea, L. Tutelea, F. Blaabjerg, E. Ritchie, IAS 2004, Seattle, USA, 2004;
- *Considerations regarding the comparison between electrical and magnetical contacts*, D. Vătilău, 20th International Conference on Electric Contact Phenomena, Stockholm, 2000;
- *Repair and renewal of existing structures in seismic zones*, C. Bob, S. Dan, Iabse Symposium Metropolitan Habitats and Infrastructure, Shanghai, China, 2004;
- *Monotonic and cyclic performance of joints of cold formed steel portal frames*, D. Dubină, A. Stratan, A. Clutină, L. Fulop, Z. Nagy, In Thin-Walled Structures: Advances in research, design and manufacturing technology, Ed. J. Loughlan, Iop, isbn 0 7503 1006 5, Proceedings of The Fourth International Conference on Thin-Walled Structures, Loughborough, UK, 2004, pp. 381-388;
- *Commuting triples of subnormal operators and related moment problems, operator theory: Advances and applications*, T. Binzar, D. Păunescu, Vol. 153, pp. 39-59, Birkhauser Verlag;
- *Procede et tete d'extrusion actives par ultrasons*, T. Iclanzan, D. Stan, Salon International des Inventions, Geneve, Avril 2003.

(Continued on page 138)



Products created/homologated/ capitalized/Inventions/Patents (maximum 10 significant products) 46

Bi-positional control device for the chopper of a magnetic wheel, patent no. 94967, 30.12.2004, authors: R. Trica, T. L. Dragomir

Asymmetrical and symmetrical citrical esters with complex structure, patent no. RO 116961/2000, authors: L. Mirci, S. Boran;

Composition for removing the odours from the dejections of the domestic animals, patent no. 114438 B1/1999, authors: G. Burtica, R. Pode, P. Negrea, A. D. Mihut;

Neutral point choke with automatic commutating by on-off switch, patent no. 115581/1999, author D. Toader;

Repetitive pulse generator with thyristors, using a device for controlled cutting of the pulse wave, patent no. 115583/2000, author V. Titișan;

Electrolizer for the oxidation of the Natrium etixanat, 2004, author Ghe. Fagadar;

Reactor for electrochemical medial oxidation of the dextran 2000-5000, 2004, author Ghe. Fagadar;

Electromagnetisch gesteuertes Abstutzelement zur multiplen Öffnen von Ein-bzw. Auslassventilen von Verbrennungsmotoren, autori: V. Vacareșcu, E. Golovatai-Schmidt, Erfindungsmeldung nr. 2004 056/INA Schaeffler KG, Industriestrasse 1-3, Herzogenaurach, Deutschland;

Mechanisch - Hydraulische Anordnung zur multiplen Öffnen von Ein-bzw. Auslassventilen von Verbrennungsmotoren, autori: V. Vacareșcu, E. Golovatai-Schmidt, Erfindungsmeldung nr. 2003 241/INA Schaeffler KG, Industriestrasse 1-3, Herzogenaurach, Deutschland;

Cranio-maxilo-facial implants kit, TI 1 and Cranio-maxilo-facial distractor, DE 000, authors D. Dragulescu and CMPICSU team.

International Affiliations of the University

- EUA - European Universities Association;
- AUF - Agence Universitaire de la Francophonie;
- IASTED - International Association of Science and Technology Engineers for Development, SUA;
- EDEN - European Distance and E-learning Network;
- EuroPACE - European Portal for Advanced Collaboration in E-learning;
- EATA - European Association for Telematics Applications;

(Continued from page 137)

The number of scientific books published by publishing houses acknowledged abroad 46 (maximum 10 significant books)

- *Digital Control. Past, Present and Future of Pid Control*, S. Preitl, R. E. Precup, Ed. J. Quevedo, T. Escobet, Chapter: Cross optimization aspects concerning the extended symmetrical optimum method, Pergamon Press, 2001, 8 pp.;
- *Intelligente Systeme in der Optimierung von Entscheidungen*, S. Holban, A. Burciu, R. Exner, Km Verlag, Germany, 2004, ISBN 3-9802437-6-1, 240 pp.;
- *La formule de Lie-Trotter pour les semi-groupes fortement continus*, L. D. Lemle, Prepublications De L'institut Girard Desargues, Lyon, France, 2003, 136 pp.;

- *Grunwasserhydraulik. Stromungs und Transportvorgänge*, I. David, Braunschweig, Wiesbaden, Vieweg, 1998, ISBN 3-528-07713-1;
- *Qspr/Qsar Studies by Molecular Descriptors*, M. Medeleanu (coauthor), Nova Science, Huntington, New York, USA, 2001, 80 pp.;
- *Linear Motion Electromagnetic Devices*, I. Boldea, Taylor & Francis Publisher, UK, 2001, 270 pp.;
- *Cold-formed Steel Design*, D. Dubina, I. Vayas, Ed. Kleidarthmos, Atena, Grecia, 2004, ISBN 960-209-730-2, 640 pp.;
- *Ductility of Seismic Resistant Steel Structures*, V. Gioncu, F. Mazzolani, Spon Press, London, 2002, 600 pp.;
- *Handbook of Number Theory (I, II)*, I. Mitrinovic, J. Sandor, B. Crstici, Kluwer Academic Publishers, 1995, 2004, 637 pp.;
- *Encyclopedia of Information Systems, Chapter: Computer-aided design*, G. Savii, Editor H. Bidgoli, Academic Press, 2002, 100 pp.

- IEEE - Institute of Electrical and Electronic Engineers, SUA;
- BEaA - Balkan Environmental Association;
- IABSE - International Association of Bridge and Structural Engineering, Elvetja;
- FIB - Federation Internationale du Beton, Elvetja;
- ISE - Institute of Structural Engineering, Anglia;
- IAHR - International Association of Hydraulic Engineering and Research;
- ASHRAE - American Society of Heating, Refrigerating and Air Conditioning Engineers, SUA;
- ISIAQC - International Society of Indoor Air Quality and Climate;
- EAAE - European Association for Architectural Education;
- European Federation of Medical Informatics;
- International Association for Hydraulic Research;
- International Society for Boundary Element Methods;
- TECHWARE - Technology for Water Resources;
- EWRA - European Water Resources Association;
- American Society of Agricultural Engineers;
- International Society of Lyophilization.



Multi-user Research Center CMPICSU

CMPICSU was created through a CNCSIS project.

Specific activities:

- Promoting the fundamental and applied research in the biomechanical field;
- Image acquisition and processing, for correcting the accidental or congenital skeleton defects;
- Research for the improvement of implants and prothesis devices;
- Development of complex databases for the imperfections of the skeleton / soft tissues and the establishment of proper surgical techniques;
- Developing new surgical techniques for correcting skeleton defects;
- Production of devices for cranium-maxilla-facial implants and elements of prothesis appliance, made from biologically compatible materials, in the LOPIFO Laboratory certified by the Ministry of Health;
- Implementation of the quality system and accreditation by RENAR of the CIDUCOS testing laboratory, corresponding to the standards SR EN ISO/ CEI 17025/2001;
- Promotion of collaborations with Universities and specialists from abroad: University of Applied Sciences from Bethune-France, University Paris VI "Pierre et Marie Curie", France, University of Applied Sciences from Wilhelmshaven, Germany, University of Applied Sciences from Bremen, Germany, University of Groningen, the Netherlands, Technical University of Perm, Russia;
- Supplying services for the large mass of population, in the field of medical imaging;
- Promoting the specialization of Medical Engineering.

The research base comprises some laboratories, such as:

Laboratory of Structure Modelling -

- it uses professional software for designing the prothesis and implant devices. A cell is



also available, for the analysis of the walking process, used for students' activities, for modelling, for studying the walk and the reactions of articulations in the locomotory system.

The Medical Image Laboratory

- is equipped with one tomograph computer and a special X-ray device for the facial bones



Tomograph Computer SIEMENS Somatom Plus 4 Power; Radiography Equipment; Orthopantomics ORTHOPHOS 3

Orthesis, Prothesis and Facial Implants and Orthopedics LOPIFO - is

a microproduction laboratory, meant for the implants and the prothesis made from biologically compatible materials.



Testing laboratory CIDUCOS
- is achieving corrosion and hardness experiments, mass assignment and densimetry, mechanical experiments,



metallographical analysis and radiological evaluation of the local tissular reactions in contact with the implanted devices.



THE RESEARCH CENTER FOR THE MECHANICS OF MATERIALS AND THE SAFETY OF STRUCTURES - CEMSIG

CEMSIG is, organizationally and financially, an autonomous unity functioning in the "Politehnica" University of Timisoara, along the Department of Metallic Constructions and the Mechanics of Constructions, being certified by CNCSIS as a Center of Excellence.

The Stand of Cyclic and Monotonous experiments

The stand of experiments is composed from a frame where 2 actuators can be put into function; these actuators are controlled by a hydraulic system QUIRI. The control of the actuators is being accomplished as assisted by computer and by the programme HYDROMAX. Here, structural elements and sub-assembly of structures can be tested either in statical or in dynamical conditions.

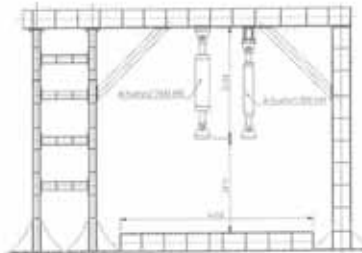
HYDROMAX Programme allows the control towards the actuators, existing the possibility of using the 2 actuators in the same time, or one at the time.

The control of the 2 actuators can be accomplished in the regime of force or in motion;

The maximum capacity of the 2 actuators is as follows:
Actuator 1: 422 kN in dynamic conditions
563 kN in static conditions
Actuator 2: 950 kN in dynamic conditions
1267 kN in static conditions

The maximum depth of the actuators is of 400 mm (+/- 200 mm).

The data recording supplied by the acquisition center is being made automatically through a computer and with the use of the software program SCANWIN.



The Stand of Cyclic and Monotonous experiments

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	40701	104180
2003	24317	208780
2002	18812	301253
2001	13645	412290
2000	6707	529194
1999	4017	104659
1998	2673	0
1997	1797	0
1996	866	0
1995	436	0



Prof. Eng. Nicolae Badesa, PhD

Historical Overview of the University

The first structure of higher technical education in Romania was established in Jassy in the autumn of the year 1813 when the engineer Gheorghe Asachi laid the foundations of a class of surveyors. In 1937 the two technical and applied specializations existing in the University of Jassy became faculties, as part of the new "Gh. Asachi" Polytechnical School of Jassy. The Polytechnical School (called Polytechnical Institute from 1948) extended its field of activity before and after the World War II. The Polytechnical Institute of Jassy changed its name into the "Gh. Asachi" Technical University in 1993.



Faculties and Departments

- 12 faculties with 54 specializations (53 with a teaching program in Romanian, one with a teaching program either in French or English): Architecture, Automatics and Computers, Chemical Engineering, Civil Engineering, Machine Manufacturing, Electronics and Telecommunications, Electrotechnics, Hydrotechnics, Mechanics, Materials Science and Engineering, Textiles and Leather Industry, Trans-frontier

Engineering (co-operation with the Kishinev Technical University).

- 9 departments: Polytech Research and Technological Transfer Center, Department for Teaching Staff Training, Programs Department, Department for Quality Ensuring and European Integration, Center for Professional Orientation, Communications Center, Center for Continuous Education and Training, Training Regional Center for Public Affairs Management, Students Office.

Master and Doctoral Programs

MASTER - 88 programs, budget financed or on tuition fees regime; Tuition fees - specialized postgraduate studies; Tuition fees - postgraduate special lectures; Postgraduate professional conversion lectures; Tuition fees - graduate professional conversion lectures.

Doctoral Programs - 11 domains, with compulsory attendance or without attendance required.

Patrimony

21 hostels with 7950 places, 2 sports halls, 38 buildings with 80581.27 sq.m. area

Fields in which human resources are trained

- Automatics and computers;
- Chemistry and chemical engineering;
- Civil engineering;
- Architecture;
- Electronics and telecommunications;
- Electrotechnics;
- Hydrotechnics;
- Mechanics;
- Metallurgy and science of materials;
- Machine manufacturing technology;
- Textiles and leather industry;
- Ground-water-air environment protection.



University aula

Human Resources

Professors	313
Senior Lecturers	249
Lecturers	228
Assistant Lecturers	151
Teaching Assistant	49
Research Fellows	12
Administrative Staff	336
Students	14179
of which:	
Undergraduate	12033
Master	997
PhD - full attendance	330
PhD attendance not required	1096



Presentation of research activity chart

The Regulations for the organizing and development of the research activity, adopted in June 2003, stipulate that the research activity is organized in chairs (research teams), departments, scientific research units. The effective guidance is ensured both by the scientific research Vice-rector and the Polytech Research and Technological Transfer Center.

Structures	
Research Institutes	0
Research Centers	14
Research Laboratories	355
Multi-user Research Centers	0

Top Priority Research Directions

The main strategical directions in the research field aim at the integration of the Technical University of Galati in an information system concerning the strategies and themes of scientific research with a view to win the national and international competitions for projects; the developing of some competitive scientific research programs by co-operating with well-known internal and external partners; the participation in the programs financed by the North-East Development Agency and co-operations with various companies in the Tehnopolis Technical Park.

Outstanding Research Infrastructure

Three-direction seismic testing stand; Laboratory for in-situ dynamical measurements, equipped with USA competitive apparatus; Wind tunnel with SECO 2 turbulent boundary layer; Laboratory for Accelerated Pavement Testing (LIRA); Equipment for air disinfection with "MidasAir" concentrated non-ionized radiation flux.

Excellence Centers

- Integrated manufacturing systems
- Polymers
- Center for training and research in the fuzzy, intelligent and bio-medical engineering systems (CERFS)

The number of papers published in ISI - quoted journals 494
(the most cited 10 papers)

- Olaru C., Pal C., Petrescu C. "Current to pressure transducer with magnetic fluid", *Sensors and Actuators A*, 91(2001), p.150-152;
- Condurache D, Matcovschi M.H. "Computation of angular velocity and acceleration tensors by direct measurements", *Acta Mechanica* 153, 2002, 147-167;
- I. Bercea, D. Neliş, S. Creţu, "Mechanical and tribological interactions in a double-row tapered roller bearing-part I-model", *STLE Tribology Transactions*, vol. 46, no. 2, 2003, p. 220-239;
- Dan Caşcaval, Corneliu Oniscu, Anca-Irina Galaction - "Selective separation of aminoacids by reactive extraction", *Biochemical Engineering Journal*, 2001, 7, 71;
- V. Roşca, V. Poteraşu, N. Ţăranu, B. Roşca "Finite - element model for laminated beam-plates composite using layer-wise displacement theory", *Polish Academy of Sciences, Institutes of Fundamental Technical Research*, vol. 50, issue 3, Warszawa, 2002;
- Păstrăvanu O, Voicu M, "Necessary and sufficient conditions for component wise stability of interval matrix systems", *IEEE Trans. Autom. Control*, U.S.A., vol. 49, no. 6, 2004, p. 1016-1021;
- Agop M, Ciobanu G, Zaharia L "Cantorian E - (infinity) space - time, frames and unitary theories" *CHAOS SOLITON FRACT* 15 (3), 2003, 445-453;
- Goraş L., Chua L. O., "Turing Patterns in CNN's-Part II: Equations and Behaviors", *IEEE Trans. Circuits & Systems*, vol. 42, 10, 1995, p. 612-626;
- Brudaru O, Buzatu O, "Distributed genetic algorithm for finding approximators, The 4th international conference on parallel computing in electrical engineering, PARELEC 2004, IEEE Computer Society Press, University of Technology, Dresden, Germany, 394-397;

- Butnaru R, Dobrescu L, Bertea A, - "Colour removal of wastewaters from cellulose fibres dyed with direct dyes by electrocoagulation", *Cellulose Chemistry and Technology*, 2003.

The number of papers published in journals from the main stream of publications 2507
(maximum 10 significant books)

- Livint Gh, Lucache D.D, Paicu G "Crone control of an axial magnetic suspension" *Rev.ELECTROMOTION*, vol.10, nr.4, october-december 2003, p.518 - 522;
- Zetu, Dumitru, Horodincă, Mihăiţă, Carata, Eugen, Burlacu, Corneliu, "Maintenance in modern manufacturing flexible systems", *Romanian Academy, Iasi Branch Office, TSTM-10*, 2004, p.9 - 114;
- Roşca I., Vizitiu M., Căilean A., Sutiţan D., Sibiescu D., "Oxidation of sodium cyanide with hydrogen peroxide" *Journal of Balkan Ecology* 2001, 4, 451;
- Matcovschi M. H., Păstrăvanu O., Voicu M., "Component wise absolute stability of Hopfield neural networks without delay", 2003, *Revue Roumaine Sciences et Techniques-Electrotechnique et Energ.* Tome 48, no. 4, p. 495-504;
- Susan M, Bujoreanu L.G, Găluşcă D. G, Munteanu C, Ilescu V, "Influence of relative deformation rate on tube processing by ultrasonic vibration drawing" *Metal Madrid* 40, 2004;
- Alexa D., Sirbu A., Dobrea D., Goraş T. "Topologies of three - phase rectifiers with near sinusoidal input currents", *IEE Proceedings Electrical Power Appl.*, Vol. 151, no. 6, November 2000, p. 673-678;
- Ghişuleasa C, Visileanu E, Ciocoiu M, "Aspects regarding romanian angora mohair fibres, characteristics, application fields" *Journal of Natural Fibres*, vol. 1(2), 2004, pp.13;

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International Cooperation

Cost (Improvements in Pavement Research with Accelerated Load Testing), INCO-COPERNICUS (BECEP-Development of New Building System and Strategies for Energy Conservation and Environment Protection; Grant Integration of Qualitative and Quantitative Methods for Fault Diagnosis in the Framework of Industrial Application IQ2FD, EC FP4), FP5-EUROLIGNIN (thematic network), FP6 (ENCORE-European Network for Composite Reinforcement with MC), SCOPES Projects, PHARE Programs.

International Scientific Activities (the 10 most important ones)

- International Conference on Electrical Engineering and Energetics (EPE);
- International Conference on Electromechanical and Energetical Systems (SIELMEN);
- "Inventica 2004" International Exhibition of Inventions, Technological Research and Transfer;
- "D.I.Mangeron" International Symposium of Theoretical and Applied Mechanics;
- Advanced Concepts in Mechanical Engineering;
- Romanian International Symposium on Cosmetics and Flavour Products;
- International Conference on Environmental Engineering and Management;
- Building Systems and Technologies for Energy Conservation;
- International Symposium on Automatic Control and Computer Sciences (2001 and 2004 editions);
- International Congress in Materials Science and Engineering;
- International Symposium on Signals, Circuits and Systems (ISSCS).

Products created/homologated/ capitalized/inventions/Patents

(maximum 10 significant products) **129**

- PETRI NET TOOLBOX for Matlab-Software homologated and approved by The Math Works, Inc. 3 Apple Hill Drive, Natick, MA 01760-2098; the Math Works Connections Program is registered at the Romanian Office for Copyrights, No.1451 / 20. 07. 2004;
- Equipment for tubing testing;

(Continued from page 142)

- Antoniu Gh, Rimberg R, Savin A, Steigman R - "Expert System for Evaluation of Fibers Distribution in Cross Sections of Yarns" - 31st Aachen Textile Conference, 2004, 24-25 nov, 2004, Germany;
- Săteanu L, s.a. "Nontraditional Machining Processes in the frame of the integrated engineering", Acad. J of Manufacturing, Romania, vol I nr. 1, 2003, pag. 35-38;
- Ciolacu D, "Malls in Romania", Arhitectura Nr. 11/2002.

The number of papers published in volumes of international scientific conferences with reviewers

3845

(10 papers presented at the most prestigious events)

- Cantemir L, Carcea M. I, Aparaschivei A "Activity through invention Quality, reliability, maintenance", Edited by GJ McNulty, 2000, University of Oxford, 273-276;
- Giurma Ion, Bartha Iosif, Giurma Catrinel Raluca "Mathematical Model for Siltin Forecasting of Artificial Storage Lakes", Conference on Modelling Fluid Flow, Budapest, Hungary, 3 - 6 September 2003;
- Alexandrescu A., "Contributions to the working of the Pumping Station Ensemble Hydrosphere in the Non-Permanent Motion", 3rd Fluid Power Net, International, Terrassa, Barcelona, Spain, 30 iunie -2 iulie 2004;
- Olaru D. N., Puiu Gh., Bălan L., Puiu V. "A new model to estimate friction torque a ball screw system", Proceedings of Int. Coll. Product Engineering, Echo Design and Technology;
- Roșca I., Căilean A., Apostolescu G.A., Sutiman D., Vizitiu M., Sibulescu D., Apostolescu N., Nechita M.T., Neagu E. "The study of Poly (vinyl chloride) compounded with inorganic stabiliser", Proceedings of the 6th European Conference on Application on Polar

Dielectrics, Aveiro, Portugal, September 2002;

- Ciupală M. A., Budescu M., Ciongradi I. "Experimental Study on Likely Malfunction of Seismic Isolation Systems", 12 ECEE, London, published on CD, Paper Reference 202, 9 - 13 September;
- Păstrăvanu O., M. Voicu "Robustness analysis of components wise asymptotic stability", Proceedings of the 16th World Congress of IMACS, Lausanne, 21-25.08.2000;
- Ioniță I., Ștefan M., Bădărău Gh., Mantu M., "Modern Casting Technology for Obtaining the Inverse Conical Cast Iron Bottomless Mould with Rectangular Cross Section, with a View to Significantly Increase the Working Durability", International Conference on Advanced Technologies and Materials, Galati, 20-22 November, 2003;
- Dobrea D. M., Teodorescu H. N., Miynek D., "An interface for Virtual Reality Applications", Romanian Journal of Information Science and Technology, Romanian Academy Publishing House, Vol. 5, No. 3, 2002;
- Baran I., Bliuc I, et. al., "The IR Thermography, an important tool for buildings expertise", Eurotherms seminar 71 - Université de Reims, 2002.

The number of scientific books published by publishing houses acknowledged abroad

118

(maximum 10 significant books)

- Hnatiuc E, Voinea E, "Procédés électriques de mesure et de traitement des polluants", Ed. Tec&Doc, Paris, 2002, 372 pp.;
- Oprea C., Dan F., "Macromolecular Mechanochemistry", Cambridge International Science Publishing, England, 2003, 500 pp.;
- Simionescu B., David G., "(Acylimino) Ethylene", Vol. Biomaterials - From molecules to engineered tissues, Kluwer Academic Plenum Publishers, 2004, 18 pp.;

(Continued on page 144)

Key role played in certain fields
Presentation of Laboratories



- Method and apparatus for testing and controlling a flexible manufacturing system, U.S.A. Patent No. 6,185,469 B1;
- Hydro-drainage support-based band-type machine for cultivating the barren sandy fields;
- Testing equipment for variable loads at high and low temperatures;
- Equipment for air disinfection with "MidasAnAir" concentrated non-ionized radiation flux;
- Quick hydraulic coupling;
- Non-conventional multifunctional energetic equipment;
- Method for obtaining polyurethaneic membrane;
- Device for liquid metals treatment.

(Continued from page 143)

- Radu Andrei, "Land transportation Engineering", Tehnica-Info Publishing House, Kishinev, 2002, 204 pp.;
- Voicu M., "Advances in Automatic Control", Kluwer Academic Publishers, International Series in Engineering and Computer Science, Boston, 2004, 456 pp.;
- Agop M., Ioannou P.D., "Particles and Fields", Athenus University Press, 2004;
- Teodorescu H.N., Lakhmi C. Jain, "Intelligent Systems and Technologies in Rehabilitation Engineering", CRC Press, 2000, 520 pp.;
- Vasile C., Grigoriu A., Biascu V., "Particulate fibers and fibre reinforcements" (capitol distinct in Handbook of Polymer Blends and Composites), Rapra Technology Ltd, Showbury, England, 58 pp.;
- Dan F., Grolier J. P. E., "Spectrocalorimetric screening for complex process optimization in chemical thermodynamics for industry", Royal Society of Chemistry (Thomas Graham House);
- Hapurne T., "Introduction in the Information Technology", Tehnica-Info Publishing House, Kishinev, 2001, 175 pp.

Key role played in certain fields

The Chemical Engineering Faculty, as part of the "Gh. Asachi" Technical University of Jassy, has developed in the last 15 years a remarkable scientific activity in the inter-disciplinary domain of the bio-chemical engineering and bio-technologies. In this domain, the faculty is the initiator and promoter, on the national level, of the studies dealing with the modern bio-separation techniques (reactive extraction, pertraction-extraction and conveying through liquid membranes, direct extraction), the obtained results being known and acknowledged by the scientific community from our country and from abroad.

Laboratory for Accelerated Pavement Testing (LIRA)

It works as part of the Road Testing Unit, established in 1958. Updated from a technical view point in 1997, this Unit is the only one in the South-East of Europe and one of the few



of its type in the world, being included in the volume Synthesis of Highway Practice 235-A-Application of Full-Scale Accelerated Pavement Testing, published by the National Academy Press, Washington D.C., 1996, and in the materials to be circulated in the COST 347-Improvements in Pavement Research with Accelerated Load Testing Program (2001-2004). At the present-day parameters of the laboratory equipment, there can be tested, at a natural scale, pavement structures subjected to accelerated loadings given by the axle of the OS 115 kN standard vehicle, under controlled hydro-climatic conditions.



Computer-Assisted Manufacturing Laboratory

This laboratory allows the teaching program and the high level scientific research in the following domains: Computer-assisted manufacturing, robotics, artificial intelligence, distributed systems. Owing to the financial support from a CNFIS grant as well as by the

Success Stories

International Affiliations of the University

International Cooperation



teaching and research activities, there has been developed a flexible manufacturing system integrated with the CAD / CAM system in a Computer Integrated Manufacturing unitary-type concept which includes elements of artificial intelligence. The laboratory has 2 ABB industrial robots of the IRB 1400 and IRB 2400 types (6 degrees of mobility, 5 kg / 7 kg load capacity, 0.01 resolution, 0.05 mm repeatability, maximum speed of the working arm of 2.1 m / s, portable programming unit, RAPID language programming (word-by-word and by learning), PC Mill 55 (EMCO) digitally-controlled machine tool, OPTIMASTER artificial sight system, FlexLink-type closed loop blade conveyer, warehouse for pieces and semi-manufactured products, computer network for computer-assisted designing, simulation, planning, artificial intelligence (software: Autocad, CATIA, Robot Studio, Program Maker, WinCAM, WinNC, GPSS/H, CLIPS, Eclipse, LPA Prolog).

■ CAROLUS MAGNUS Inter-University Association, with the members of the University from Romania, France, Poland, Belgium, Germany, Hungary; co-ordinating headquarters: L'Institut Universitaire de Technologie de Bethune.

INTERNATIONAL COOPERATION

■ with 45 institutions from our country and from abroad (Brazil, Canada, China, Finland, Egypt, France, Germany, Greece, Jordan, Italy, Japan, Peru, Poland, Portugal, Republic of Moldavia, Singapore, U.S.A) etc.



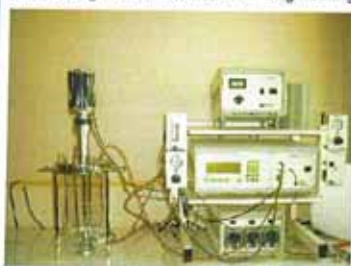
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INTERNATIONAL AFFILIATIONS OF THE UNIVERSITY

- European University Association (EUA), headquarters in Brussels
- Association Universitaire de Francophonie (AUF), headquarters in Paris

Success Stories

As an acknowledgment of the activities in the domain of bio-chemical and biotechnology engineering, the teaching staff from the Department of Organic Substances Engineering and Bio-chemical Engineering



has become part of the team which suggested and won, in an international competition supported by the World Bank, the Grant 41891 / 1999 for "Modern Procedures and Techniques in Cyber-bio-technology". As a result of this grant, the team has acquired in the period 1999 - 2001 a state-of-the-art equipment for laboratory work: the B. Braun Biotech International Bio-reactor,

This bio-reactor is equipped with computerized system for measuring, checking and adjusting the parameters which occur in a bio-synthesis process (pH, oxygen concentration, nitrogen and carbon sources concentration, temperature, speed, foam level, flow rate), with sterilized feeding systems as well as an interface for recording and processing the obtained data. The value of this equipment, unique in the academic environment of Jassy, was of 45,000 DM in 2000.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	24046,851	312948
2003	13577,872	528857
2002	12097,977	1029078
2001	11222,269	1659845
2000	5982,765	559793
1999	5424,215	214527
1998	4769,310	360402
1997	3105,295	148434
1996	1908,121	21188
1995	1210,435	-



Rector

Prof. eng. Radu Munteanu, PhD

Historical Overview of the University

The first industry-related higher education institution in Cluj was set up on February 1st 1920. The domain of study was electromechanics and was called the Higher Industrial School. This school was then transformed into The School of Technical Conductors that was restructured as the School of Electromechanical Sub-Engineers in 1937. Another school set up in 1920 was that for Public Works Conductors, mainly oriented towards the training of specialists in roads and bridges. In 1948, the Cluj Institute of Mechanics was established. This institute became the



Polytechnic Institute of Cluj in 1953. In 1989, the Polytechnic Institute of Cluj had three faculties: Mechanics, Electrotechnics and Civil Engineering. In 1992, it changed its name into the Technical University of Cluj-Napoca; at present, the university has eight faculties, 11800 students and 650 teaching staff.

Faculties and Departments

- 8 Faculties: The Faculty of Machine Building, The Faculty of Mechanics, The Faculty of Materials Science and Engineering, The Faculty of Automation and Computer Science, The Faculty of Electronics and Telecommunications, The Faculty of Electrical Engineering, The Faculty of Civil Engineering and Building Services, The Faculty of Architecture and Urban Planning;
- The five departments are directly linked to the university senate: The Department for the Teaching Staff Training; The department for Continuous Education and Distance Learning, The Centre of Scientific Research, Technological Transfer and Implementation of Inventions; The Department for Quality Assurance; The International Relations Office.

Master and Doctoral Programs

MASTER - 35 Master of Science programs within the eight faculties;
Doctoral programs - in eight main fields: Industrial Engineering, Mechanical Engineering, Materials Science and Engineering, Automation, Computer Science, Electronics and Telecommunications, Electrical Engineering, Civil Engineering.

Patrimony

13 premises on a total area of 174,000 sq.m.; 30 buildings for educational activities on 53,000 sq.m., out of which:
 - 32,000 sq.m. for educational activities (47 lecture halls, 73 seminar rooms, 290 laboratories, 7 sports halls, 8 training workshops);
 - 15,000 sq.m. additional rooms (106 research laboratories, 260 teaching staff rooms, 30 library rooms);
 - 6,000 sq.m. administrative rooms;
 - 7 students' hostel buildings with a total of 3,900 beds and 2 canteens with 900 seats; a sports area including 2 indoor swimming pools and 1 outdoor swimming pool.

Fields in which human resources are trained

16 educational fields: Architecture and Urban Planning, Computer Science and Information Technology, Civil Engineering, Building Services, Electrical Engineering, Electronics and Telecommunications Engineering, Power Engineering, Industrial Engineering, Materials Science, Mechanical Engineering, Environmental Engineering, Systems Engineering, Engineering and Management, Transportation Engineering, Mechatronics and Robotics, Applied Engineering Sciences.

Presentation of research activity chart

The research activity of the teaching staff, researchers, Ph.D. students and graduates of The Technical University of Cluj-Napoca is carried out in the laboratories and research centers belonging to the 38 departments as part of the research projects and contracts or agreements. The activity is managed by The Research Council of the University Senate and led by The Deputy Rector, in charge of research. The Centre of Scientific Research, Technological Transfer and Implementation of Inventions (CSRTTII) has taken over the research activity management since 1994. The Technological Transfer Office and the Research Marketing Office are part of the CSRTTII.

Human Resources

Professors	211
Senior Lecturers	215
Lecturers	146
Assistant Lecturers	114
Teaching Assistant	53
Research Fellows	35
Administrative staff	699
Students	11808
of which:	
Undergraduate	10131
Master	463
PhD - full attendance	213
PhD - attendance not required	1001

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Success Stories

International Affiliations of the University

International Cooperation



SCABOR: "Stereo-Camera Based Object Recognition System For Vehicle Application"

This is an applied research project carried out for a world-famous automobile company. The main objective of the project consists in developing a stereo vision system able to fully describe the external environment of a car during running. The application is optimized for use on motorways, and can also be used in cities or for countryside roads. Among the



system performance one can list: detection range of 100 m, maximum speed 180 km/h, processing speed 10 fps. The system possesses stereo approach, 3D path detection, moving object detection and survey (speed, position, size), detection of the running path and of margins.

International Affiliations of the University

EUA - The European Universities Association (since 2000), AUDEM (since 2001), BSUN - The Black Sea Universities Network (since 2004).

International Cooperation

Among the research-based international cooperation projects, one can mention those with Volkswagen AG Germany, Seoho Wintech Co. Ltd. South Korea, ENEA Italy, Pirelli Italy and the European partnership

with EURATOM, TELENOR Communication II AS Norway, FIST S.A. France Innovation Scientifique et Transfert, Fraunhofer Institut für Produktionstechnik und Automatisierung IPA, Stuttgart, Germany, ARMINES-CEMEF, Paris, France, EGA SINTER Nottingham, U.K. and Technische Universität Braunschweig, Germany, within the FP6 programmes.

The Technical University of Cluj-Napoca has signed and put into operation bi-lateral and teaching staff and student exchange agreements with universities from Germany, Great Britain, France, USA, Italy, Spain, Portugal, Ireland, The Netherlands, Denmark, Finland, Austria, Switzerland, Belgium, Greece, Hungary, Singapore and South Korea.

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Prof. Eng. Dan Stenatiu, PhD

Historical Overview of the University

The Technical University of Civil Engineering Bucharest (TUCEB) carries on the traditions of both "the border engineering" education system, founded in 1818 by Gheorghe Lazar at St. Sara monastery in Bucharest, and "The School of Bridges and Railways", founded in 1847. Later, by means of the decrees 1129/1864, given by Alexandru I. Cuza, 1562/1867 and 3124/1890, given by King Carol I, "The National School of Bridges and Driveways" (NSBD) is successively reorganized. By the decree 2521/1920, King Fer-



inand founds "The First Polytechnic School" by developing and transforming NSBD. In 1948, by the adjudication of the M.I. no. 263327/10. 25. 1948 "The Institute of Civil Engineering" is founded and is now called "The Technical University of Civil Engineering", made up of 6 faculties.

Faculties and Departments

- Civil, Industrial and Agricultural Engineering
- Hydrotechnics
- Roads, Railways and Bridges
- Building Services
- Technological Equipment
- Geodesy
- Department of Engineering in Foreign Languages and Communication
- College of Civil Engineering

Master and Doctoral Programs

MASTER - 4 fields and 21 programs within the 6 faculties

Doctoral programs - main field: "Engineering Sciences", with 24 specialties

Patrimony

Locations: 122-124, Lacul Tei Bvd.; 66, Pache Protopopescu Bvd.; 59, Calea Plevnei; 5, Rascoala 1907 Str.; Murighiol-Tulcea (The Laboratory of Space Research)

Overall area: 9.07 ha; useful area: 93,690 sqm.

Teaching areas: 51,851 sqm; administrative and additional areas: 41,839 sqm (6 hostels that provide accommodation for 2000 students; a canteen; 2 gyms; 7 laboratories accredited by CNCSIS; 5 nationally licensed laboratories (RENAR, MLPTL, MCTC, ISCIR etc.); 2 centers of excellence RELANSIN.

Fields in which human resources are trained

1. Civil engineering (civil and industrial buildings; hydro-technical buildings; railways; roads; bridges);P.
2. Building services engineering and the protection of the atmosphere;Q.
3. Mechanical engineering for building equipmentR.
4. Cadastre engineering and geodesy
5. Licensed technical translators

Presentation of research activity chart

The research activity takes place within "The Department of Research and Designing in Civil Engineering" (DRDCE) - certificate ISO-9000-2001.

Structures

Research Institutes	0
Research Centers	9
Research Laboratories	20
Multi-user Research Centers	1

Top Priority Research Directions

- The calculation and behavior of reinforced concrete, masonry, metal and wood structures at various seismic activities and stresses;
- The elaboration of norms and standards in accordance with the present European legislation;
- The seismic zoning of the Romanian territory;
- The rebuilding, expansion and modernization of the water supply systems, sewage and waste water treatment;
- Technologies of investigating and exploiting the industrial waste;

Human Resources

Professors	148
Senior Lecturers	138
Lecturers	329
Assistant Lectures	214
Teaching assistant	80
Research Fellows	17
Administrative Staff	491
Students	8835
of which:	
Undergraduate	7867
Master	269
PhD - full attendance	43
PhD - attendance not required	656

- The energetic efficiency of buildings, by means of safe, steady and reliable services and equipment;
- Research concerning the hydro mechanical driving systems, the automation and robotization of the technological processes within the field of civil engineering;
- Design and provision of the geodesic support networks.

Outstanding Research Infrastructure

"The laboratory of structural loads", provided with equipment for structural tests, donated by the Japanese International Cooperation Agency (JICA) and worked out in a partnership with The National Center of Seismic Risk Reduction. Regarding its loading capacity, the laboratory is the second in Europe and it is similar to the one in Tsukuba, Japan, with which it is in a direct relationship of cooperation.

Excellence Centers

There are 7 centers of excellence having a CNCSIS license:

1. The safety of structures at actions of natural hazard;
2. The center of research in Civil Engineering
3. The center of Geotechnical Engineering;
4. The center of scientific research for roads and airports;
5. Hydrotechnical works and water resources management;
6. The Engineering of Equipment and technological flows;
7. The center of research in environment engineering;
8. Two centers of excellence RELANSIN;
9. Centers with international acknowledgement:
 - EUROHOT (European Highways Open Technology);
 - CEEC (ambience quality and energetic efficiency of buildings);
 - IEST (The European Institute for Thermal Sciences).

International Cooperation

The coordinator of the thematic network EUCET (CIVIL ENGINEERING EDUCATION IN EUROPE), which involves 131 partners from 29 European countries

- two programs RISK-UE, NATO, NEMISREF;
- one program COST, CEEPUS and ECOLEX.



The number of papers published in ISI-quoted journals

108
(the most cited 10 papers)

- *Seismic Hazard and Counter measures in Bucharest - Romania*, Bulletin of the International Institute of Seismology and Earthquake Engineering IISEE, Lungu D., 1999, Tsukuba, Japan, Vol. 33, p. 341-373;
- *Assessment of Site Response in Eastern Bucharest, Romania*, Bulletin of the International Institute of Seismology and Earthquake Engineering IISEE, Aldea A., 2001, vol. 36, Tsukuba;
- *The characteristics of the Halo Neutron Pre-Emission in the Fusion of ⁷Li with Light Targets*, Phys. of Atomic Nuclei; M. Petraşcu, I. Tanihata, T. Kobayashi, M. Giurgiu, sa;
- *Experimental study of Marangoni effect in a liquid-liquid system*, Chem. Eng. Scie., 55(18), 3813-3816, 2000. A. Stoica, M. Levai, O. Floarea;
- *Holographic Interferometry using photorefractive crystals for mass transfer processes investigation*, JOAM (Journal of Optoelectronics and Advanced Materials), vol. 6, no. 2, 385-392, 2004, A. Petriş, M. Levai, V. I. Vlad;
- *Dualities in Fractional Statistics*, Mod. Phys. Letters B, vol 17, pp. 921 (2003) M. Beciu;
- *Can Be Conserved the Concept of Homogeneous Gravitational Field from Classical Mechanics in the Relativistic Theory of Gravitation*, Theoretical and Mathematical Physics, 130 (2), pp. 287-297, 2002, author: lect. dr. D. Ionescu;
- *Metric invariants over Henselian valued fields*, Journal of Algebra, Vol. 266(1), 2003, 14-26, authors: prof. Popescu Sever-Angel, Phd, N. Popescu, A. Zaharescu;
- *Analytical Determination and Classification of Pollutant Concentration Fields using Air-pollution Monitoring Network Data. Methodology and Application in the Paris Area during Episodes*

with Peak Nitrogen Dioxide Levels, Environmental modelling and software 15/2000, pp. 565-573, A. Ionescu, Y. Candau, E. Mayer, I. Colda;

- *Assessment of contaminant diffusivities in building materials from porosimetry tests*, Indoor Air, 13/2003, pag. 302-310, P. Blondeanu, A. L. Tiffonnet, A. Damian, O. Amiri, J.L. Molina

The number of papers published in journals from the main stream of publications

1453
(the most cited 10 papers)

- Lungu D., Aldea A., Demetriu S., Vacareanu R., Cornea C., (2001) *Agreements and Disagreements of the Romanian Prescriptions for Earthquake, Wind and Snow with the Stipulations of the European (EC1 and EC8) and American Codes (ASCE 7-98, 2000)*, AICPS Bulletin, No. 4, pp 20-48, ISSN 1454-928X;
- Chesaru E., Preda D., *Comments of the Provision of the Eurocode 3-on Bolted Connections Used in Steel Structures - Part two*, Bulletin of the Technical University of Civil Engineering Bucharest 1/2001;
- Iancovici M., *The assessment of the reinforced concrete building structures seismic performance based on the elements performance*, Bulletin of International Institute of Seismology and Earthquake Engineering, Building Research Institute, Tsukuba, Japan, 2001, pag. 239-251;
- Răcănel I.R., *The Influence of the Various Types of Braces upon the Stability of the Upper Slab of the Metal Beam Bridges with Lattices*, Roads and Bridges Review, no. 54, May-June 2000;
- Bucur C., Bucur M., *The Influence of Road Dislevelment upon the Dynamic Response of the Bridge-Structures of Railroad with Composed Section*, Roads and Bridges Review, no. 3-4/2001, pp 44-49.

(Continued on page 155)



International Scientific Activities (the 10 most important ones)

- JICA International Seminar: Earthquake Hazard and Countermeasures for Existing Fragile Buildings, Bucharest, November 23-24, 2000, organizers TUCEB, JICA;
- Bucharest Seminar on Facilitation of Transfer of Know-How of the Construction Industry, 2001, organizers TUCEB, JICA, Ministry of Constructions, Japan;
- International CONFERENCE Earthquake Loss Estimation and Risk Reduction, 24-26 October 2002, Bucharest, Romania; organizers: Dan Lungu, Radu Vacareanu, Alexandru Aldea, Cristian Arion, Mihai Iancovici;
- 7th ICOLD Benchmark-Workshop on Numerical Analysis of Dams. Bucharest, September, 2003. The organization for the first time of a scientific event under ICOLD (International Commission on Large Dams) auspices in Romania;
- The International Conference "Settling the Water Supply and Sewage Systems to the Requirements of the EU Directives, EXPO WATER 2004, Bucharest, The Palace of Parliament, 19 - 21 May, 2004;
- EXPO WATER 2000, The International Conference "The Quality of Water in the Distribution Networks", Bucharest, 2000;
- 1st International Conference on Geotechnical Engineering Education, Sinaia, 2000;
- EUCET-ECCE International Conference, "Challenges to the civil engineering profession in Europe at the beginning of third millennium", Sinaia, 2001;
- 2nd International Young Geotechnical Engineers Conference, Constanta, Mamaia, 2003;
- International Conference "ECA Education Conference-Linking Policies and Actions to Outcomes", Bucharest, May 2004.

Products created/homologated/ capitalized/Inventions/Patents (maximum 10 significant products) 32

- Design, homologation and valuation of the flexible switch points R 30 and R 50;
- Building, in cooperation with The Federal Agency of Cartography and Geodesy in Frankfurt am Main (Germany), in February 1999, the first permanent GPS station, which is still functioning at the designed parameters; (web pages and server ftp-http://193.231.4.70), 2000;

(Continued on page 156)

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The number of papers published in volumes of international scientific conferences with reviewers

1230

(10 papers presented at the most prestigious events)

- Postelnicu T., Popa V., *Probabilistic Procedure for the seismic evaluation of some industrial RC Structures. Proceedings of 5th Symposium "CONCRTE STRUCTURES IN SEISMIC REGIONS", 6-8 may 2003, Athens, 326-327;*
- Lungu, D., Arion, C., Baur, M., Aldea, A., 2000, *Vulnerability of existing building stock in Bucharest, 6th International Conference on Seismic Zonation, Palm Springs, California, USA, Nov. 12-15, p. 837-846;*
- Crețu D., Stoica M., Sireteanu T., Ghiță Gh., Șerban V., *Mechanical adjustable controlled elasticity & damping (ACED) devices for the structural control of buildings subjected to seismic loads, 7th International Seminar on Seismic Isolation, Passive Energy Dissipation and active Control of Vibrations of Structures - Assisi, Italy, October 2-5, 8 pag., 2001;*
- Romanescu C., Răcănel C., *Complex modulus and phase angle-main parameters to characterize an asphalt mixture from rheological point of view, 2nd Eurasphalt and Eurobitume Congress, Barcelona, Spain, 20-22 september 2000, ISBN 90-802884-3-8 (pag. 750-753);*
- A. Popovici, A. Abdulamit, I. Toma, T. Moldoveanu, *Assessment of the seismic safety of dams based on "in site" measurement and back analysis, Proceedings XXI-st International Congress on Large Dams, Montreal, 2003;*
- Sandu M., *The Correlation between the water supplied and the distribution network, EXPO WATER 2000, The International Conference "The Quality of Water in the Distribution Networks", ISBN 973-8165-10-5 Bucharest, 2000;*
- Manea S., Ciortan R., Batail L.,

Olinic E., *Choice of the foundation solutions for the Constanta South Harbour (Romania) constructions based on the overall geotechnical characterization, The 12th Danubian-European Conference of Ground Mechanics, Passau, 27 - 28 May 2001;*

- Damian A., *Distribution of room air contaminant concentrations as a function of ventilation and air cooling-a numerical investigation, Healthy Buildings Conference, 2003, Singapore 7-11 December, 6 pages;*
- Bruja A., Dima M., *La cinématique et la géométrie de l'engrenage à mouvement de précession. Le profil des dents et la ligne d'action. IXth International Conference on the Theory of Machines and Mechanisms, 31.08-02.09.2004 Liberec, Czech Republic, ISBN 80-7083-847-7, pp. 143-146;*
- Petrașcu M., Tanihata I., Constantinescu A., Giurgiu M., Isbănescu A., Petrașcu H., Bordeanu C., *Experimental Evidence for Residual Correlation of Single Detected Valence-Neutrons Emitted from 11Li Halo Nuclei, Intern. Conf. "Cluster 03", Nara, Japan, PD2, 2003;*

The number of scientific books published by publishing houses acknowledged abroad 4 (maximum 10 significant books)

- Vrancea Earthquakes. *Tectonics, Hazard and Risk Mitigation*, Wenzel F., Lungu D., 374pp., Kluwer Academic Publishers;
- *Geotechnical Engineering Education and Training*, Manoliu I., Rădulescu N., Antonescu A., 523 pp., A. A. Balkema, Rotterdam;
- *Transfers thermiques*, Bianchi A.M., Fautrelle Y., Etay J., 580pp., Presse Polytechnique et Universitaire Romandes, Lausanne;
- *Mécanique rationnelle assistée par l'ordinateur. Exercices de Statique avec solutions*, Bausic F., Conti C., Dehombreux P.; 150 pg., Faculté Polytechnique de Mons, Belgique.



(Continued from page 155)

- Drobot, R., A Statistical Approach of the Scale Effect in the Hydrological Simulation, *Hydrotechnics Review*, vol. 47, no. 5-6, 2002;
- Voicu M., Locally bounded semigroups, *Romanian Journal of Pure and Applied Math.*, XLIX, Nr.4, 2004 (385-396);
- Teodorescu D., Colda I., The Numerical Simulation of the Air Stirring Motion in Isothermal Rooms, *The Scientific Bulletin of TUCEB*, 1-2/2001, pp. 52-59;
- Zăvoianu Fl., Turdeanu L., Dinulescu L., The Evaluation of Natural Catastrophes in the Urban Area by Means of Remote Sensing, *Digital Photogrammetry and GIS Technologies, The Bulletin of Photogrammetry and Remote Sensing*, no. 19-20, Bucharest, 2000, pp. 18-23);
- Rusu St., Gafar S., Fuzzy Control at the Technological Flow on Multicomponent Systems, *The Scientific Bulletin of TUCEB*, no. 4/01, year XLIV, pp. 1-8.
- High humidity household waste burning procedure and unit - OSIM 93.00314, Antonescu N.N.;
- Waste burning unit with pyrogenic distillation tube - OSIM 00.4295077; Antonescu N., Stănescu P.D., Antonescu N.N.
- Burner - vortex chamber with Karlowitz effect - OSIM 03.A/00941; Antonescu N., Antonescu N.N.;
- Multi-cyclone burner for gas combustible - OSIM A/01463/15.11.2002; Stănescu P.D.;
- Vibration generator with continuous variation of the interference force - OSIM - 0027/2005; Diaconu C., Pavel C., Rece L.;
- Device for plug drawn in from electric sockets, Patent OMP/PCT - ROP00002 -4; OSIM-0126/2004; Diaconu C., Ristea S.;
- Elastic mechanical coupling with steel cable linking elements. Brevet 117811 B-2002

Key role played in certain fields

Fields of activity in which the teaching and research staff from TUCE is playing a key role at a national level:

- seismic engineering
- dam engineering
- waste water treatment
- non-permanent movements hydraulics
- slope stability
- tele-detection
- electrical lighting technique
- automation of technological processes in civil engineering

Presentation of Laboratories

The Structural Testing Laboratory

Structural testing equipment donated by the Japanese Agency for International Cooperation JICA to the National Centre for Seismic Risk Reduction, and exploited in partnership with the Technical University of Civil Engineering (TUCE) Bucharest, mounted in TUCE and consisting in a metallic reactive frame, tested sample loading equipment and experimental data acquisition and processing equipment. The installed reactive frame is the second in Europe from the point of view of its testing capacity and is similar to that of Tsukuba Building Engineering Institute in Japan, Figure 1.



Fig. 1 - Reactive frame mounted in the Structural Testing Laboratory



The loading cylinders have the following capacities, Figure 2:

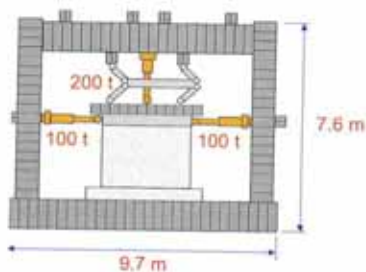


Fig. 2 - Reactive frame diagram

- 1) Vertical cylinder - ± 2000 kN force ; ± 100 mm displacement
- 2) Horizontal cylinders - ± 1000 kN force ; ± 200 mm displacement

The above shown equipment can ensure the following effort combinations:

- 1) Beam bending with cutting force;
- 2) Beam bending with cutting force and axial force for pillars, structural walls, nodes or portal frames

The maximum weight of tested specimens is 7 t, while the maximum dimensions of specimens are 2.5m height x 3.0m width.



Figure 3. Loading - unloading cycles monitoring



Figure 4. Reinforced concrete pillar tested in the laboratory

The loading parameter followed during tests can be either the force or the displacement. Control is ensured with the help of monitoring and control systems of the hydraulic cylinders, Figure 3. Loading takes place in pre-determined loading-unloading cycles, while the behavior of the loaded elements is followed-up in time, Figure 4.

The force is measured by means of loading cells placed at the piston end, and the displacement is determined with the help of digital transmitters. Strains are registered with tensiometer marks. All data are gathered in digital format by means of a data logger and they are transmitted to the computer controlling the experiment. All data can be followed in real time on the monitoring computer display.

Financial resources obtained for research

	National millions RON	Internat. EURO
2004	41413	46261,28
2003	46394	12618,4
2002	35777	525592
2001	30056	1084215
2000	16658	459220
1999	10940	110554
1998	6829	53432
1997	4777	-
1996	2852	-
1995	2184	-



Success Stories

The advanced seismic instrumentation of Bucharest

Bucharest is one of the world capital cities with a high seismic risk, partly because of the strong specific seismic movements generated by the Vrancea sub-crust seismic source, and partly because of the vulnerability to earthquakes of the existing buildings.

In view of this specificity, the advanced seismic instrumentation of Bucharest was considered a high priority at a national level, because it can contribute to reducing the seismic risk due to the importance of data provided for new buildings and for the consolidation of existing buildings that are vulnerable to earthquakes.

The advanced seismic instrumentation of Bucharest consists in the placement of a digital earth parameters data acquisition system in several important points of the city, operational during seismic activities.

This system is made of a digital accelerometer which measures the parameters of seismic movements at the ground level, to which in-depth sensors are placed in seismic drillings 30-450 m deep. Thus, during an earthquake, the parameters of ground move-

ments at the surface and in depth can be measured. The subsequent data are used in making an analysis of the ground response to seismic activities.

This seismic instrumentation was installed in Bucharest in 2003, in seven locations:

- TUCEB, Lacul Tei Bvd.
- TUCE, Pache Protopopescu Bvd.
- INCERC
- The Civil Protection Headquarters
- "Filantropia" Hospital
- The Municipal Hospital
- Bucharest City Hall

This pioneering system, as far as Europe is concerned, was installed by specialists from TUCE working in partnership with specialists from the National Centre for Seismic Risk Reduction and INCERC, along with Japanese experts and technicians. The seismic instrumentation equipment was bought by the Japanese Agency for International Cooperation and donated to Romania according to the provisions of the JICA Project for reducing seismic risks in Romania.

Efforts aimed at the advanced seismic instrumentation of Bucharest were a constant concern in TUCE through the contribution of the group made of Prof. Eng. Dan Lungu, Ph.D., Associate Prof. Radu Vacareanu, Ph.D., Senior Lecturer Alexandru Aldea, Ph.D. and Cristian Arion, Ph.D.

Membership in international associations

IABSE (International Association for Bridge and Structural Engineering) - Zurich - Switzerland - D. Cretu, T. Postelnicu, St. Betea, M. Ieremia;

ISPRS (International Society for Photogrammetry and Remote Sensing) - L. Turdeanu, Fl. Zavoianu, I. Ionescu, I. Noaje;

ISSMGE (International Society for Soil Mechanics and Geotechnical Engineering) - I. Manoliu, A. Chirică, E. Marghidaru, A. Marcu, L. Batali, N. Rădulescu, S. Manea, A. Munteanu, R. Stănescu, A. Olteanu, M.S. Serbulea, I. Antonescu;

IUFA (International Urban Fellows Association) - A. Anton;

EASA (European Academy of Science and Arts) - A. Anton;

IAHR (International Association of Hydraulic Engineering and Research) - R. Damian;

SEFI (Société Européenne pour la Formation des Ingénieurs) - I. Manoliu;

ECCE (Europeane Council of Civil Engineers) - I. Manoliu;

AECEF (The Association of European Civil Engineering Faculties) - I. Manoliu;

International Association of hydrogeologists - I. Bica;

Network on Natural Attenuation in Soil and Groundwater - I. Bica;

European Geophysical Society - I. Bica

International Cooperation Activities

Cooperation based on agreements: The World Bank; UNESCO - CEPES; CITO - Holland; ETC - U.S.A.; ADEME - France

Teaching cooperation: with over 140 universities from more than 35 countries: Austria, Belgium, Bulgaria, The Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece, Hungary, Italy, Ireland, Latvia, Lithuania, Holland, Norway, Poland, Portugal, Russia, Slovenia, Slovakia, Turkey, Great Britain, Serbia, Bosnia-Herzegovina, Japan, U.S.A. and others



Prof. Eng. Cornel Panait, PhD

Historical Overview of the University

In 1990 the Navigation and Marine Engineering Faculties separated from "Mircea cel Batran" Maritime Institute and became the Merchant Marine Institute, subject to the Ministry of National Education. Starting from 31st January 2000, it changed its name into Constantza Maritime University. Since December 2000 CMU has been registered in "The White List" of the maritime institutions recognized by IMO.



Faculties and Departments

- Navigation and Naval Transport Faculty
- Naval Electromechanics Faculty
- The University College of Maritime and River Navigation
- Department of Part time education
- Department of Open Distance Learning.

Master and Doctoral Programs

Postgraduation courses (master) are targeted at technical higher education graduates in the maritime field or in a related one.

- Maritime Law
- Maritime and Port Management
- Hydrography and the Use of Coast Potential
- Naval and Multimodal Transport Management (in English)
- Maritime Safety (English)
- Advanced Concepts of Marine Engineering
- Technical Management of Communication

Patrimony

The Constantza Maritime University Patrimony is:

- headquarters (P+7), 104, Mircea cel Batran Str., Constantza;
- 2 hostels: 512 beds
- nautical center placed on the Siutghiol banks.

Fields in which human resources are trained

Mechanical Engineering

Presentation of research activity chart

The basic ideas of the European Union construction are meant to create a large framework, with a view to allowing the coagulation of individual competence into a strong nucleus and to 'export' the accumulation of positive experience.

Starting from these principles, the Maritime University of Constanta has endeavoured to go beyond any territorial and insular boundaries by means of the specializations it has promoted within the Romanian higher education system, as well as through various types of cooperation.

Structures

Research Institutes	0
Research Centers	2
Research Laboratories	16
Multi-user Research Centers	0

Top Priority Research Directions

- Maritime transport impact on the economy and on the environment;
- Vibration and noises study made by naval engines;
- Erosion of coastal areas.

Outstanding Research Infrastructure

The Complex of Navigational Simulators. Specialized equipment:

- ARPA radars; Bridge Master, Furono, Nucleus;
- GPS;
- LORAN-C;
- Radio direction finder;
- ECDIS
- AIS.

Human Resources

Professors	17
Senior Lecturers	10
Lecturers	15
Assistant Lectures	23
Teaching assistant	3
Research Fellows	0
Administrative Staff	88
Students	1822
of which:	
Undergraduate	1455
Master	329
PhD - full attendance	2
PhD - attendance not required	40



International Cooperation

Maritime University has been part of *Tempus Retaining Program By Open And Distance Teaching For Underwater Technologies* project, in 1999

Maritime University was the promotor for the project with the World Bank *Curricular Development Of The College Of Maritime And English Navigation 45241* in 2001

Maritime University has initiated and coordinated ERASMUS Master Degree Course For Maritime Safety project, SOCRATES 210281-1C-1-2000-1-RO-ERASMUS-EP5-1 2002-2003.

International Scientific Activities

(the 10 most important ones)

"New standards for seafarers education" Romanian-Turkish seminar 1999.

The bursting mechanics, Romanian-Japanese seminar, 1999.

"Maritime Safety" international seminar 2002.



Notical
Device,
Central
Lobby

The number of papers published in ISI-quoted journals

3

(the most cited 10 papers)

- *Jets of nuclear matter in He-AT inelastic collisions at 4.5 A GeV/c.*, C. Besliu, Al. Jipa, D. Argintaru, C. Argintaru, R. Zaharia, J.G. Rican, M. Iosif, European Physical Journal A1(1)(1998) 65-75 ISSN 1434-6001;
- *On the competition between equilibrium and non-equilibrium particle production mechanisms in nucleus-nucleus collisions at 4.5 A GeV/c.*, C. Besliu, Al. Jipa, R. Zaharia, D. Argintaru, C. Argintaru, D. Felea, N. Ioneci-Sarbu, M. Iosif, C. Grigorie, S. Zgura, Nuclear Physics A 672 (2000) 446-474, ISSN 0375-9474;
- *Economic Impact Study of Constantza Port Versus Constantza County*, D. Carp, E. Barsan, Journal of Coastal Research, vol.19, no. 4, FALL 2003, ISSN 0749-0208, SUA.

The number of papers published in journals from the main stream of publications

24

(the most cited 10 papers)

- *Means to improve the cooling systems of the overflow air for diesel engines*, Tudor Daria, Motoauto Ruse 29-31, Oct.2002;
- *Digital message coding of the 406 Mhz distress beacon using location protocols*, Pricop Codruta, Tehnav 2002 - International symposium on marine technologies and management, Ovidius University, Constantza;
- *The noise of mos structure magnetic microsensors*, Jurian Mariana, Sicpro, 03, Moscow, 2003, Russia;
- *The Optimization of microsensor structures*, Panait Cornel, Istet 03, July 6-9, Warsaw, Poland;
- *New directions in solving multi-index transportation problem*, Constantinescu Eliodor, IAMU News 11;
- *Some Predictions with URQMD code for AU+AG collision*, Argintaru Danuț, Romanian reports in physics, 2001.

The number of papers published in volumes of international scientific conferences with reviewers

518

(10 papers presented at the most prestigious events)

- *Numerically computed structure of the thermocapillary flow in cylindrical liquid bridges*, Dinescu Cristian, European Congress on Computational Methods in Applied Sciences and Engineering, Ecomas Computational Fluid Dynamics Conference 2001, Swansea, Wales, UK;
- *Condensers for marine refrigeration and air conditioning*, Memet Feiza, Ecos 2001, Istanbul;
- *The current effect on wave forces acting on thin elements*, Novac Iordan, International Conference Micro Cad 2001, Miskolc, Hungary;
- *Computer simulation of the marine diesel engine*, Buzbuchi Nicolae, International Conference "Bulgarian Naval Academy" 120th anniversary, Varna, Bulgaria;
- *The noise of integrated magnetic sensor*, Căruntu George, ISTET03, Warsaw;
- *The importance of minimum standards in training of shore-based personnel on environmental protection*, Stanca Costel, The Second Conference of IAMU, Kobe, Japonia ;
- *Costs of environmental degradation in the port area*, CIEM Conf. Int. Energie-mediu, 2003, Panaitescu Mariana, Panaitescu Fanel;
- *COSPAS - SARSAT 406, Mhz Channel Processing-bip verification based by error correcting codes*, Pricop Codruța, Tehnav, 2002, Constantza;
- *Effects of the deforming consumers over the other*, Bordea Nicolae, Tehnav, 2004,
- *Int. Maritime Assoc. of Mediterranean*, Ischia-Napoli, Bocanete P., Imam 2000, IX Congress.

Presentation of Simulators

The Constantza Maritime University Navigational Simulators

In 2004 The Maritime University inaugurated a complex of modern simulators designed to provide practical training:

- Navigational Simulator;
- Engine room Simulator;
- GMDSS simulators.



Navigational Simulator

The complex of navigational simulators includes:

- the main training bridge with a 270 - degree view;
- the secondary training bridge with a 60 - degree view;
- 4 virtual bridge units.

The engine room simulator includes:

- the main panel MP;
- the main panel for the distribution of electric power TPD;
- four panels MP and virtual TPD.

GMDSS simulator module includes:

- 4+1 virtual GMDSS consoles (4 students + 1 instructor);
- 2 radio-communication menus;
- 1 realistic GMDSS console.

The Complex of Navigational Simulators

Specialized equipment:

- ARPA radars: Bridge Master, Furono, Nucleus
- GPS
- LORAN-C
- radio direction finder
- ECDIS
- AIS

Database:

- includes all main categories of ships;
- simulates the most difficult sailing areas and the river pilotage;
- includes maneuvers for towing, anchoring, moving.

Six ships, each of them operated by a watch keeper team of 10-15 trainees can take part during a complex scenario of simulation.

Engine room simulator

Characteristics:

- the main engine type MAN B&W 5L90MC of 17,4MW;
- the equipment simulates a tanker of 150 tdw;
- a two - circuit boiler - capacity of 50t/h;
- the main panel for the distribution TPD;
- types of simulated installations: loading, cooling, greasing, steering diesel generators, steam generators.

18 trainees can be simultaneously instructed.



Engine room Simulator



Navigational Simulator

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	40	4050
2003	10	1500
2002	500	5000
2001	176	-
2000	61	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



GMDSS Simulator

Equipment for GMDSS communication:

- VHF (DSC) radiotelephone;
- SSB MF/HF radio station;
- INMARSAT terminal;
- NBDP radio telex;
- EPIRB;
- SART;
- NAVTEX

The simulated exercises are very complex and realistic. Any procedure of radio-communication GMDSS: distress, urgency, safety and routine can be simulated.

8-10 trainees can be simultaneously instructed.



GMDSS simulators

National competition awarded research Grants (CNCIS and Romanian Academy of Sciences)

- Flow, minijets and shockwaves - abnormal states detectors of nuclear material in heavy relative ions collision, ARGINTARU Danut, 2001;
- Numerical modeling of thermogasdynamics phenomena and the functioning of the internal combustion naval engines and auxiliary systems, BUZBUCHI Nicolae, 2001;
- Flow study in marine engineering, PANAITESCU Mariana, 2000;
- Container terminal assisted decision, CONSTANTINESCU Eliodor, 2000;
- Curricular extension by adding "maritime harbor area navigation" to the "river navigation" fields, ZAHARIA Ion, 2001.

Contracts obtained within Research Development and Innovation National Plan (PNCDI) and contracts with miscellaneous domestic companies

- Efficient use of thermal energy study in the Dobrogea Area, Tudor Darie, 2002, Orizont 2000;
- Economic impact study of Constantza county maritime ports for 2001 and 2002, trend analysis, Carp Doina, 2003, internal funding;
- Management and marketing study for Constantza District Youth Foundation, Iordanoaia Florin, 2003, local funding.



Public Universities

Socio-Human/Economic Specialization



Rector

Prof. Ion Gh. Roșca, PhD

Historical Overview of the University

On 6 April 1913, by virtue of the Law promulgated by Royal Decree no.2972, the Academy of High Commercial and Industrial Studies of Bucharest was set up. The institution changed its name along the years, and in 1967 it became the Academy of Economic Studies of Bucharest.



World wide famous professors have taught in the Academy of Economic Studies, among whom we mention Nicolae Iorga, Virgil Madgearu, Ion Tutuc, Gromoslav Mladenatz, Ion N. Angelescu, Victor Slavescu.

Faculties and Departments

- 10 Faculties: Economic Cybernetics, Statistics and Informatics, Commerce, Accounting and Management Information Technology, Agrifood and Environmental Economics, General Economics, Finance, Insurance, Banking and Stock Exchange, Management, Marketing, International Business and Economics, Economic Studies in Foreign Languages.
- 4 colleges: Bucharest, Buzau, Calarasi, Giurgiu.
- 14 departments: The AES Library, the Virtual Campus and Television, Economic Research, Economic Department, Life-long Learning, IT, Distance Learning, Quality Management, Teacher Training, CALIST National Programme, International Relations and European Integration, Computer Networks, Social, Technical and Administrative Department.

Master and Doctoral Programs

MASTER - 52 Master programs within the 10 faculties, 5 Postgraduate Schools: Romanian - Canadian MBA, INDE (a Franco-Romanian

Programme), European Master's Programme in Finance and Management Control, EMBA (Romanian-German Entrepreneurial Management), BRIE (The European Romanian-Bulgarian Inter-university Centre)

Doctoral programs - 2 main fields: Economics with 7 domains and Law with one domain.

Patrimony

12 buildings providing a total educational area of 42.000 sq.m., 21 hostels with 5,564 standard places, 8 library halls, 4 gymnasiums (two large and two small ones)

Fields in which human resources are trained

- 2 fundamental domains:
 - economic sciences, with 8 domains for undergraduate studies: economics, business administration, finance, accounting, statistics and economic IT, international business and economics, management, marketing;
 - social and political sciences, with one domain: administration sciences.2 domenii fundamentale:

Presentation of research activity chart

The first Regulation for the organisation, operation, and financing of scientific research was adopted in 1996, and revised in July 2004. The regulation stipulates that the activities of scientific research in the AES are carried out in chairs, departments, and research centres and are managed by a Scientific Council subordinated to the AES Senate. The operative management is ensured by the Vice Rector in charge with the scientific activities and by the Board of the Economic Research Department.

Structures

Research Institutes	0
Research Centers	14
Research Laboratories	30
Multi-user Research Centers	0

Top Priority Research Directions

The strategic objective is to promote excellence in the process of scientific research, in areas of a great potential in knowledge processing, conveyance and use, in research on

Human Resources

Professors	250
Senior Lecturers	119
Lecturers	213
Assistant Lectures	190
Teaching assistant	154
Research Fellows	0
Administrative Staff	703
Students	39876
of which:	
Undergraduate	6404
Master	118
PhD - full attendance	42
PhD-attendance not required	2601



the basic issues of the Romanian economy, starting work on the Great Encyclopaedia of Romanian Economy under the aegis of the Academy of Economic Studies and of the Economic, Legal and Sociologic Section of the Romanian Academy, as well as of other interested institutions. Priority research directions are: the knowledge society, economic-social modelling, Romania's integration in a European context and in the overall international context, sustainable development and the environment, institutional modernisation and efficiency, Small and Medium-Sized Enterprises, upgrading the financial-banking systems, marketing, accounting, services.

Outstanding Research Infrastructure

A metropolitan network consisting of 2425 PCs, out of which 65 servers located in 6 buildings in Bucharest, with optical fibre connections ensuring a 1GB/s speed, 15 computer networks in the territorial centres including 375 PCs and 15 servers. The international connections (Internet) feature a 40MB/s speed, 2 Picture Tel videoconference systems in the metropolitan network and 2 videoconference systems in the territorial centres of Buzau and Calarasi, a TV studio and multimedia.

The Reuters Centre for information and economic and financial communication.

Excellence Centers

The Doctoral School of Finance and Banking, organised in 1994 by the Secretariate of the European Commission, operating as a European Centre of Excellence within the ACE-PHARE Programme.

International Cooperation

- Research projects: the Inco - Copernicus Project, FP5, the project with the World Bank;
- Academic Schools: the Romanian - Canadian MBA programme, the Higher School of Management, INDE - the Romanian - French Executive MBA, ESFL (Economic Studies in Foreign Languages Faculty) - the Entrepreneurial Management Programme with Germany;
- International Master programmes: Master in Accounting Management in co-operation with the University of Orleans, BRIE - in co-operation with the University of Ruse and the Rector's Conference from Germany.

The number of papers published in ISI-quoted journals

5

(the most cited 10 papers)

- V. Dragotă, E. Mitrică, *Emergent capital markets'efficiency: The case of Romania*, in *European Journal of Operational Research*, no. 155 (2), PP. 353-360, 2004;
- A. Toma, *Bounded influence estimators for multivariate lognormal distribution*, *Comptes rendus mathématique*, 338 (9), pp. 723-728, 2004;
- V. Trandafir, S. Visan, V. Ciobotaru, M. Albu, *The characterization of collagenic hydrolysed compounds doped with calcium/magnesium ions*, *Chemistry Journal*, 55 (4), pp. 230-234, 2004;
- V. Ciobotaru, S. Visan, G. Coara, M. Florescu, *The IR Spectroscopy analyses of shark liver oil*, *Chemistry Journal*, 55 (3), pp. 149-152, 2004;
- A. Iorgulescu, *Lse'xi algebras. Connection with BL algebras*, *SOFT Computing*, 8(7), pp. 449-463, 2004.

The number of papers published in journals from the main stream of publications

2086

(the most cited 10 papers)

- O. Nicolescu, *Knowledge based management*, *The Economic Tribune*, 2004;
- S. Neguț, *Différences géographiques et culturelles dans un monde globale*, *Revue Etudes Internationales*, Tunis, 2001, no.1;
- I. Cătoi, C. Vegheș, *Living to survive: the Small and Medium - sized Enterprise sector In Romania After Ten Years of Transition to The Market Economy*, in *Small Firms and Economic Development in Developed and Transition Economies*, A Reader Ashgate, London, 2003;
- D. Marin, D. Marinescu, *Pareto-Optimal Allocations in an Outsourcing Economy*, *Studies and research of economic estimation and cybernetics*, no. 1, 2005
- T. Moșteanu, A. Stoian, E. Câmpăneanu, D. Vasilescu, *Influence of*

Institutional Factors on the Romanian Economic Environment, *Finance, Banks, Insurance Journal*, - *The Economic Tribune*, 2004;

- B. Ghilic-Micu, *The Meta-management of Network Virtual Organizations*, *Revista de Informatică Economică*, nr. 3(31)/2004;
- C. Negrei, A. Vădineanu, *Tendencies of the Economic Development in Romania*, *Ecological - Economics Review*, 2004;
- I. Ivan, M. Popa, *The Orthogonality of Object-Oriented Software Applications*, *Economic Informatics Journal*, no. 4(32)/2004;
- D. L. Constantin, *SME's Territorial Development and Networking: the Case of Romania*, *Research Papers in Economics*, Dortmund, 2002.

The number of papers published in volumes of international scientific conferences with reviewers

1310

(10 papers presented at the most prestigious events)

- C. Rațiu-Suciu, *Advances in Modeling the Phenomena Occurring on the Market of Knowledge as Concerns the Investment*, XI SIGEF CONGRESS "Techniques and Methodologies for the Information and Knowledge Economy", Reggio Calabria and Messina, November 2004, Italy Falzea Editore;
- M. Altăr, J. Samuel, *Fiscal Policy, Public Capital and Economic Growth*, 58th International Atlantic Economic Conference Chicago, Illinois, USA, October 7-10, 2004;
- C. Mitruț, D. Constantin, *Issue Regarding the Improvement of Environmental Information*, Economic Cooperation in South Eastern Europe Symposium, Belgrad, Serbia, november 2003;
- G. Stănculescu, E. Țițan, *Employing the model of analyze of variance in study of tourism development in the Black Sea Countries*, Book of abstracts, European Regional Statistics Association, Dortmund, Germany, 2002;

(Continued on page 167)



International Scientific Activities (the 10 most important ones)

- The International Conference on Economic Computer Sciences organised every other year; the 7th edition to be held in 2005; organised by the Faculty of Computer Economic Cybernetics, Statistics and Economic IT, Department of Economic IT;
- International Symposium on "Investments and Economic Re-launch" organised annually by the Faculty of Management, Department of Economic Efficiency of Investments;
- International Scientific Symposium on "Romania's Accession to the European Union", AES, Bucharest, 2004, organised annually by the Faculty of General Economics;
- International Conference on Economic Cybernetics organised annually by the Faculty of Computer Economic Cybernetics, Statistics and Economic IT, Department of Economic Cybernetics;
- International Session of Scientific Communications: "Finance and the Accession to the European Union", November, AES, Bucharest, 2004, organised by the Faculty of Finance, Insurance, Banking and Stock Exchange;
- The second International Symposium on Statistics: STATISTICS-EVERYBODY'S MATTER: Quality - knowledge - management - European Harmonization, Bucharest, November 2004, organised by the Faculty of Economic Cybernetics, Statistics and Economic IT, Department of Economic Statistics;
- International Conference: "Commerce and competitiveness", AES, Bucharest, 2004, organised by the Faculty of Commerce;
- Symposium on "Accounting and Computer-Assisted Management", AES, Bucharest, 2004, organised annually by the Faculty of Accounting and Management Information Technology;
- National Symposium on "Quality - Management - European Integration", organised by the Faculty of Economic Studies in Foreign Languages together with the Romanian National Auditors' Office, the Ministry of Economy and Commerce, the National Authority for the Protection of Consumers, the Romanian Standardization Association, 2004;
- International Symposium on "Management and Competitiveness", AES, Bucharest, 2004, organised annually by the Faculty of Management

(Continued from page 166)

- M. Korka, *European Union and the Balkan Area (with special focus on the relation with Romania)*, International Conference "Eastern Europe and Mediterranean Civilisation", 2001, University of Bologna/Italy, published in the volume "Le prospettive europee di apertura all'Europa orientale e ai Paesi del Mediterraneo", Longo Editore Ravenna, 2003;
- M. Ristea, *Synchrony and Diachrony in the Harmonization of Accounting with The International Accounting Standards*, Congress of the Accounting Profession in Romania: "Harmonization or Convergence in the International Accounting Standards?", Bucharest, 3-4 September, CECCAR Publishing House, 2004;
- F. Bran, V. Manole, *Globalization, for and against*, Symposium on "Conspiring Globalization", Thessaloniki, Greece, 2002;
- M. Roman, M. Roman, *Time Use for Leisure in Romania*, The XXVIIth IATUR Conference, Rome, Italy, octombrie, 2004;
- C. Bodea, *Setting Up a Project Management Certification Programme in Romania according to the 4-L-C System*, in the volume Digital Economy, The Proceedings of the Sixth International Conference on Economic Informatics, Infocrec Printing House, May, 2003;
- M. Olaru, Gh. Stoleriu, *Evaluation of the quality system management efficiency of SME in Romania*, in the volume of the 3rd international conference on "Management of Technological Changes", Chania, Greece, August 2004.

The number of scientific books published by publishing houses acknowledged abroad 6 (maximum 10 significant books)

- *A comparative analysis of efficiency and functioning of capital markets*, Gogoneață Basarab, 122 pg, Shaker Verlag, Aachen, 2004;
- *Analiza financiară. Capitalul, costul capitalului, alocarea capitalului, structura financiară, valoarea întreprinderii*, Petcu Monica, Norcross, Georgia, USA, 2004;
- *Regional development reconsidered*, Constantin Luminița, 250 pg., Springer Verlag, 2002;
- *Quality management in language education*, Mureșan Laura; 100 pag., Consiliul European - ECML;
- *The organization of innovation in language education. A set of case studies*, Mureșan Laura, 25 pg, Consiliul European ECML, 2003;
- *Banking reforms in South-East Europe*, Doltu Claudiu, 335 pag., Edward Elgar, Londra, 2003.

Products created/homologated/capitalized / Inventions/Patents 24 (maximum 10 significant products)

- Integrated IT system for academic management, implemented for 40,000 AES students;
- Manager-1: Assisted Manager training system in the field of information technology;
- MS OFFICE interactive multimedia training system
- DESIGN - expert system for assisting strategic decisions;
- System for macroeconomic growth strategy simulation;
- Multimedia deductive database management system prototype;
- 12 certified products, applied at TAMIV SA Brasov, TAMICO SA Corabia, PIELOREX SA Bucharest, ROBUC SA Bucovat, Med-Impact

Key role played in certain fields

Presentation of Projects

Presentation of Research Centers



SA Medias, Pionierul SA Bucharest, Flaros SA Bucharest, Textila Bucegi Pucioasa, Crinul SA Bucharest etc.;

- 6 patents: "Rubber and leather fibre compound", "Pigment paste for finishing natural leather, make up and production procedure", "Dye make up for natural leather", "Greasing agent for leather formula and production procedure", "Shark liver oil production procedure".

Key role played in certain fields

In 2004 research activities focused on 118 funded topics as follows:

- the Ministry of Education and Research - CNC-SIS - 49 topics in value of ROL 4,816,084,000;
- the Ministry of Education and Research - national programmes - 33 topics in value of ROL5,837,595,000;
- Economic organisations - 36 topics in value of ROL513,795,691.

AES Bucharest is carrying out research within the following national programmes: CERES, INFOSOC, MENER, MATNANTECH, INFRAS, AMTRANS, AGRAL, RELANSIN.

The project IST 29419 EPHARM_UP - a virtual market for pharmaceuticals, financed by the European Union within the IST 2000 programme. The e-PHARM-up project contributes to the implementation of the electronic commerce in the pharmaceutical sector in the East European countries, especially in the Romanian market. The project is implemented in Romania by a European consortium that also includes AES Bucharest, its role being to measure and evaluate the ePHARM-up application.

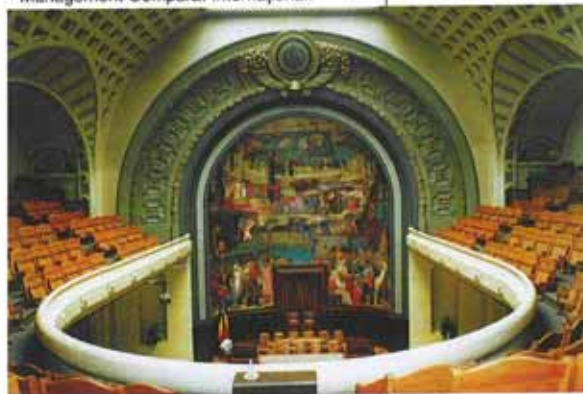
The project Sustainable Development, Global Change and Ecosystems in the Perspective of the European Integration, financed by the Academic Agency of Francophony is an extensive study on sustainable development and enterprise management in the Lower Danube Region within inter-university co-operation programmes. The project will be carried out in co-operation with prestigious universities of Belgium, Moldova and Bulgaria.

CNCISIS recognised research centres

- The ECO-INFOSOC Research Centre - modelling and informatisation of socio-economic processes,
- The Food Products Research, Analysis and Audit Centre,
- The National Think Tank for Compared Management Studies
- The Opinion Poll and Survey Centre
- The Think Tank for Regional Policies and Analyses
- International Economic Relations Research Centre
- The Centre for International Financial and Accounting Studies - SIFC-
- The Think Tank for Economic Analyses And Policies

AES published reviews recognised by CNCISIS

- Informatică Economică;
- Economic Informatics;
- Dialogos;
- Amfiteatru Economic;
- Economia, Management series;
- Studii și Cercetări de Calcul Economic și Cibernetică Economică;
- Economic Computation and Economic Cybernetics Studies and Research;
- Jurnal economic. The Romanian Economic Journal;
- Management Comparat Internațional.

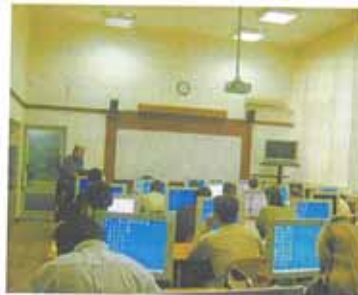


AES Aula



The Internet Access Center – IAC, AES

It is an area meant for public, teaching and research activities including the following facilities: conference room, research room and free Internet access room.



AES Participation in the management of national programs

CALIST -the National Program for Quality and Standardisation Since 2000, the Academy of Economic Studies has been co-ordinating the national program CALIST - Quality and Standardisation. The program aims at creating and developing a favourable technical and economic environment in the field of quality and standardisation, with a view to obtaining more competitive Romanian products and a wider access for them in the European Union market.

Thus it proposes to contribute to meeting the requirements related to the free movement of goods as specified in the Governing Programme, the Romanian National Programme for Accession to the European Union as well as to addressing the priorities specified in the Partnership for Accession to the European Union.

INFOSOC - the National Program for Research and Development During 2001-2003, the Academy of Economic Studies managed the national program of research and development INFOSOC, in a partnership with ICI Bucharest. Within this program, AES Bucharest participated in organising and carrying out project contests and in promoting and disseminating the results obtained within the program.



Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	11167	101760
2003	9867	193200
2002	21887	48360
2001	18660	0
2000	4974	0
1999	1296	0
1998	1265	0
1997	754	0
1996	281	0
1995	0	0



Diplomas awarded for outstanding scientific research

- **OPERA OMNIA DIPLOMA** is awarded to scientific personalities in the AES who have created research fields and schools, have had a special contribution in the development of economic science and have obtained, at least once, the GEORGESCU RÖEGEN award. It is only awarded once in the professional lifetime of an individual.
- **The GEORGESCU RÖEGEN DIPLOMA** is awarded yearly to teaching or research staff in the Academy of Economic Studies who carried out research work within projects funded by national or international bodies in the preceding calendar year.
- **THE CUM LAUDAE DIPLOMA** is awarded yearly to junior staff in the Academy of Economic Studies who carried out research work within projects funded by national or international bodies in the preceding calendar year.

Research partners

- Asociația pentru Sprijinirea Inițiativei Tinerilor - ANSIT (*The Youth Initiative Support Association*);
- Asociația Studenților Economisti din România - ASER (*The Association of the Economics Students in Romania*);
- Centrul pentru Sociologie Urbană și Regională - CURS (*The Urban and Regional Sociology Centre*);
- Centrul Român de Politici Economice - CERPE (*The Romanian Centre of Economic Policies*);
- Consiliul Național al Întreprinderilor private Mici și Mijlocii din România (*The National Council of Small and Medium-Sized Enterprises in Romania*);
- Institutul de Bioreșurse Alimentare (*The Institute of Food Bioreources*);
- Institutul de Cercetare a Calității Vieții - ICCV (*The Life Quality Research Institute*);
- Institutul de Cercetare și Proiectare Tehnologică pentru Construcția de Mașini, București - ICTCM SA (*The Institute for Technological Research and Design for the Machine Building Industry, Bucharest*);
- Institutul de Cercetări Electrotehnice - ICPE SA (*The Institute for Electrotechnical Research*);
- Institutul de Cercetări pentru Economie Agrară (*The Research Institute for Agricultural Economics*);
- Institutul de Chimie Alimentară București - ICA (*The Institute for Food Chemistry Bucharest*);
- Institutul de Diabet, Nutriție și Boli Metabolice București - IDNMB (*The Institute for Diabetes, Nutrition and Metabolic Disease Studies Bucharest*);
- Institutul de Economie Națională - IEN (*The Institute of National Economy*);
- Institutul de Filosofie și Psihologie "Constantin Rădulescu-Motru" (*The Constantin Radulescu-Motru Institute for Philosophy and Psychology*);
- Institutul de Geografie al Academiei Române (*The Romanian Academy Geographical Institute*);
- Institutul de Prognoză Economică (*The Institute for Economic Forecasts*);
- Institutul Manager (*The Manager Institute*);
- Institutul Național de Cercetare - Dezvoltare pentru Protecția Muncii, București - INCDFM (*The National Institute for Work Safety Research and Development*);
- Institutul Național de Cercetare - Dezvoltare în Construcții și Economia Construcțiilor București - INCERC (*The National Institute for Research and Development in Civil Engineering and Civil engineering Economics Bucharest*);
- Institutul Național de Cercetare - Dezvoltare Textile Pielărie, Filiala ICPI (*The National Institute for Research and Development in the Textile and Leather Processing Industries, the ICPI Branch*);
- Universitatea Alexandru Ioan Cuza Iași (*The Alexandru Ioan Cuza University of Jassy*);
- Universitatea de Petrol și Gaze Ploiești (*The Petroleum and Gas University of Ploiești*);
- Universitatea din Pitești (*The University of Pitești*);
- Universitatea Dunărea de Jos Galați (*The Dunarea de jos University of Galati*);
- Universitatea Politehnică București - UPB (*The Polytechnical University of Bucharest*);
- Universitatea Politehnică Timișoara (*The Polytechnical University of Timisoara*);
- Urban Proiect București.



Rector

Prof. Mihaela Vlăsceanu, PhD

Historical Overview of the University

SNSPA was established through Government Decision no. 220/1/PR on January 19, 1990, within the University of Bucharest. Through Governmental Decision no. 542/1995 SNSPA was defined as a higher education public institution with legal status, under the supervision of the Ministry of Education and Research, having as main objective the education, at graduate and postgra-

- Gender and Public Policies
- Educational Management
- International Relations and European Integration
- International Relations, Analysis and Conflict Solving
- European Public Space
- Communication and PR
- Political Communication
- HR Management
- Management and Business Communication

Doctoral programs - Political Science and Administrative Science

Patrimony

The educational space owned by SNSPA consists of 32 educational rooms (amphitheatres, class and seminar rooms, laboratories) with an estimated capacity of 1050 seats.

Fields in which human resources are trained

- Political science
- Public Administration
- Communication and Public Relations
- Management
- International Relations and European Integration

Research activity's structure

The research activities in SNSPA are organized at faculty and department levels. The supervising and centralising of all these activities is done through the Scientific Research Council which comprises all the scientific secretaries from the faculties and departments as well as other persons who coordinate relevant departments for the research activity (Socrates, publishing house, Ph.D. programs, international relations).

Structures

Research Institutes	2
Research Centers	6
Research Laboratories	0
Multi-user Research Centers	0



duate level, of specialists in the fields of political and administrative science, international relations, communication and PR, management.

Faculties and Departments

1. Faculty of Political Science;
2. Faculty of Public Administration;
3. Faculty of Communication and PR "David Ogilvy";
4. Department of International Relations and European Integration;
5. Department of Management;
6. NATO Studies Center;
7. Department of Academic Personnel Training.

Master and Doctoral Programs

MASTER:

- Modern Government and European Integration
- Administrative capacity and aquis communautaire
- Executive Power and Public Administration

Human Resources

Professors	23
Senior Lecturers	20
Lecturers	42
Assistant Lectures	13
Teaching assistant	6
Research Fellows	0
Administrative Staff	65
Students	15164
of which:	
Undergraduate	9128
Master	5877
PhD - full attendance	40
PhD - attendance not required	119



Top Priority Research Directions

The research in SNSPA holds as main goal the development and improving of the educational programs at postgraduate, master and doctoral level as well as the development of specific research units. The priority research objectives are: scientific analysis and study of social, administrative and political phenomena; studying the influence of global processes on the social space; security and defense policies; the evolution of public administration reform; new information and communication technologies.

Outstanding Research Infrastructure

The "Filia" Center for Curricula Development and Gender Studies.

International Cooperation

INFOSOC (2), AMTRANS, ACCES, SOCRATES-ERASMUS (5), LEONARDO DA VINCI (7), The Network of Institutes and Schools of Public Administration in Central and Eastern Europe, Public Administration Thematic Network, Erasmus - Thematic Network, International Public Management Network - SUA, Jean Monnet, FP6.

International Scientific Activities (the 10 most important ones)

- Bilateral Romanian-Japanese Seminar "Multimedia Technologies in Higher Education" NIME-SNSPA
- International Seminar "Training for the European Integration of Civil Servants"
- International Conference NISPA-SNSPA "Enhancing the Capacities to Govern: Challenges Facing the CEE Countries"
- International conference "Japanese Coordinates of the Public Sector Management"

The number of papers published in journals from the main stream of publications

118

(the most cited 10 papers)

- *The economic reform in Romania, between external conditioning and internal constraints*, L.G. Popescu, 19th Congress of the Romanian-American Academy of Sciences and Arts, Bochum University, Germany.
- *The components and the role of the marketing audit*, Adriana Grigorescu, The Annals of the University in Oradea, Economic Sciences.
- *The symbolic interaction*, Paul Dobrescu, Alina Bargaeanu, The Romanian Sociology Review.
- *Romania, a NATO full rights member*, Mihai E. Ionescu, the Military History Review.

The number of papers published in volumes of international scientific conferences with reviewers

56

(10 papers presented at the most prestigious events)

- *Comparative Studies between Japanese and Romanian Management in Public Administration. Designing and developing a prototype of course material package for e-learning*, Lucica Matel, Journal of Multimedia Aided Education Research;

- *Information society and its challenges to emerging economies*, Vasile Baltac, Conf. Intl. "Technology foresight summit";
- *Les effets de l'integration europeene sur les activites de marketing deroules par le societes roumaines*, Adriana Grigorescu, Le VI-eme Seminaire International "Le management de la transition";
- *Identity conflicts*, Iulian Chifu, Conf. Intl. Minority Rights.

The number of scientific books published by publishing houses acknowledged abroad

10

(maximum 10 significant books)

- *Plato: Selected Myths*, Cătălin Partenie, Oxford University Press;
- *L'adequation de la legislation et de la Practique des Peco en vue de leur adhesion a L'Union Europeene*, vol. III, Mariena Uliescu, Edit. L'Hartman, Paris;
- *The State of Economics in Romania*, Dragoş Aligică, Trisocial Sciences in Central and Eastern Europe;
- *EU Preaccession Strategy* (in vol. The EU's Enlargement and Mediterranean Strategies), Andrei Popescu, Palgrave, Londra.

Products created/homologated/capitalized / Inventions/Patents

1

(maximum 10 significant products)

Virtual Business University.



INTERNATIONAL COOPERATION

The international cooperation in the field of scientific and academic activities represents a major goal for the National School of Political Studies and Public Administration. The cooperation materialised in organizing and attending international conferences on Central and Eastern Europe issues, public management and administration and the development of the strategic partnership. Also, the academic cooperation through SOCRATES programs, led to signing institutional agreements between The Faculty of Political Sciences from SNSPA and similar departments



Conferring the DMC title to Mr. Peter Schieder President of the Parliamentary Assembly Council of Europe

in Universities from Perugia, Bologna, Trieste, Ancona (Italy), Brussels (Belgium) or Nanterre (France) (exchange of students and professors), between The Faculty of Social Communications and Public Relations and universities from Perugia (Italy), Kortrijk and Limenau (Germany) or Liège (Belgium), as well as between The Faculty of Public Administration and Montpellier I University (France) and Mirandela (Portugal).

The main objectives of the National School in 2005, in the field of international cooperation, are as follows:

- Taking part in international programs, which will allow students (particularly those in the terminal years) to study abroad in a similar

university or to attend training courses in a European or world famous institution. (we have in view contacts with: Centre de Sociologie des Pratiques et des Représentations Politique - CSPRP, Université Paris VII - Denis Diderot, USD Department of Speech Communication), European Public Law Center, Athens;

- Developing and strengthening institutional cooperation with the following universities and institutions: College of Europe - Bruges, Belgium; EADTU - European Association of Distance Teaching University, Holland; University of Barcelona, Spain; Instituto Mediterraneo para el Desarrollo Sostenible, Spain; University of Bologna, Italy; University Católica Milano, Italy; University of Perugia, Italy; University of Saragosa, Italy; FORMAPER, Italy; EUC NORD - Netherlands; Runemedia ApS, Netherlands; Grenaa Business College, Netherlands; CESI, Paris, France; Faculty of Law, University of Montpellier I, France; Centre National de la Fonction Publique Territoriale, Montpellier, France; European Public Law Center, Greece; National and Kapodistrian University, Greece; University of Limerick, Ireland; University of Surrey, Great Britain; Universitas London, Great Britain; Central College of Commerce, Great Britain; Human Dynamics, Austria; University of Applied Sciences, Germany; School of Foreign Service - Georgetown University, USA; University of Warwick, USA; Research Triangle Institute, USA; University of Waseda, Japan.
- Academic exchange based on specialized modules sustained by cooperation with foreign partner Universities.



Students



Amphitheatre

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	6065	1256675
2003	4321	578564
2002	3250	225441
2001	2005	220834
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Starting with 2002, **The National School of Political Studies and Public Administration** became member of two prestigious academic institutions: EUA (European University Association) and IUC (Inter-University Centre).

As a representative association for the European Universities and the National Conferences of Rectors, **EUA** is an important voice of the academic community in Europe.

The mission of the Association is to promote coherent European education and research through efficient support and coordination from its members, as independent institutions in developing the quality of education and research.

Founded in March 2001, EUA is the result of the merger between CRE - The Association of European Universities and The Confederation of Rectors in UE.

Inter-University Centre Dubrovnik, Croatia is an international independent institution for advanced studies. It is a powerful center, which focuses on training and granting scholarships co-sponsored by almost 200 member universities and institutions of high academic quality around the world.

Founded in 1971, in a time of anxiety, during the Cold War, IUC became one of the most important ways of exchanging ideas between the Eastern and Western students. During a decade more than 4000 scholarships and stu-



ECDL laboratory

dents have attended the lectures and conferences of the Center.

Nowadays, IUC is the promoter of specialized postgraduate education and takes into consideration the regional component and the challenge of globalism.

Also, The National School is a member in the following thematic networks: Public Administration Thematic Network - Limerick University, Ireland; Socrates Erasmus Program; Academy of European Public Law, Socrates Erasmus - Thematic Network: Harmonization of the legislation in the field of justice and home affairs; International Public Management Network - USA; NISPAcee (The Network of Institutes and Schools of Public Administration in Central and Eastern Europe).

Since 2004, The National School and The National Institute of Multimedia Education in Japan have signed a cooperation agreement having in view the development of information, students and professors exchange and designing multimedia strategies.



Foreign languages laboratory



Rector

Prof. Achim I. Moise, PhD

Historical Overview of the University

1991- Founded through the Government Decision No. 474/1991, with the specializations History-Archaeology, Orthodox Theology -Social Work and 3 specializations from Economics and Technical profiles;
1991 - 1993 - Two specializations in Philology and Museum Sciences;
1993 - 1994 - The Law specialization;
1995 - 1997 - The first research centers in the field of History;
1998 - 1999 - The Primary School Teachers University College "Gheorghe Sincai" of Blaj was founded;



1995 - 1999 - New lines of study in the profiles Philology, Economics, Orthodox Theology, Social Work, Museum Sciences;
1998 - 1999 - Master's and Doctoral Studies were initiated;
1998 - 1999 - The study credit transfer system was introduced;
2000 - PH.D. organizing institution;
2000 - Other new 7 specializations received authorization to function.

Faculties and Departments

- **Faculties:**
 - Faculty of History and Philology;
 - Faculty of Science;
 - Faculty of Law and Social Sciences;
 - Faculty of Orthodox Theology.
- **Departments:**
 - University College of Alba Iulia;
 - The Primary School Teachers University College of Blaj;
 - Department of Informatics;
 - Department of Scientific Research;

- Department for Quality Management;
- Department for Distance Learning;
- Department for International Relations and European Integration;
- Department for Teacher Training.

Master and Doctoral Programs

MASTER:

- **Domain - HISTORY:** Pre-historical Archeology, Computerized Archeology, Culture, Politics and Society in Transylvania (17th-19th centuries), Topography and Archeological Cadastre;
- **Domain - PHILOLOGY:** Romanian Culture and Literature in the European Context, French Culture and Civilization as perceived in Romania during the 18th-20th centuries
- **Domain - EDUCATIONAL MANAGEMENT:** Educational Management;
- **Domain - ECONOMICS:** Financial-Accounting and Administrative Management, Public Services Management
- Business Administration, Trade, Tourism and Services Management;
- **Domain - LAW:** Private Law Institutions, Criminal Sciences and Criminology, Institutions of Banking, Fiscal and Customs Law;
- **Domain - ORTHODOX THEOLOGY:** Systematic - Biblical Theology - The Search for the Sacred in a Desacralized World, Man as "zitonemos", Systematic Theology - Theology in the Context of the Consumer World of the 21st Century, Biblical Theology - Divine Revelation as an Answer for the "homo economicus" of the 3rd millennium.

Doctoral programs:

- **Domain - HISTORY:** History, Prehistoric Archeology;
- **Domain - PHILOLOGY:** Romanian Literature History, Theory of Literature.

Patrimony

A. Spaces owned by the university - 3 buildings used in the educational process - 2 buildings destined for the educational process undergoing capital repairwork - The APOR Palace - ongoing repairwork - 3 students residences, with 520 places - one canteen, with a capacity of 239 places - one building for a Research Centre.

B. Spaces under university administration - Faculty of Theology Building- College of Blaj Building - Research Centre Building.

Human Resources

Professors	24
Senior Lecturers	26
Lecturers	41
Assistant Lectures	13
Teaching assistant	10
Research Fellows	12
Administrative Staff	129
Students	5919
of which:	
Undergraduate	1500
Master	684
PhD - full attendance	3
PhD-attendance not required	80

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"IULIU HAȚIEGANU" UNIVERSITY OF MEDICINE AND PHARMACY CLUJ-NAPOCA



Rector

Prof. Marius Bojiță, MD, PhD

Historical Overview of the University

In Cluj, medical university education in the Romanian language started in 1919, at the Faculty of Medicine of Dacia Superior University. Following the education reform in 1948, the Faculty was separated from the University, and the Institute of Medicine and Pharmacy was created (IMPh), with the faculties of General Medicine, Hygiene, Pediatrics, Dentistry and Pharmacy. After 1990, IMPh became the University of Medicine and



Pharmacy which, in 1993, was given the name of its illustrious founder, Iuliu Hațieganu. Over the past 10 years, the university has harmoniously developed, and in addition to the faculties of Medicine, Oral Medicine and Pharmacy, the faculties of midwives and licensed medical nurses, as well as several university colleges, were founded.

Faculties and Departments

- Sectorial Regulated Health Professions: Medicine, Oral Medicine, Pharmacy, Midwives, Licensed Medical Nurses;
- General Regulated Health Professions: Medical Radiology and Imaging; Clinical Laboratory; Balneophysiokinesitherapy and Rehabilitation; Dental Care; Pharmaceutical Care;
- Departments of the Faculty of Medicine: Pathology; Infectious Pathology; Community Medicine; Internal Medicine; Oncology-Hematology; Surgery; Emergency Medicine and Anesthesia and Intensive Care; Pediatric Medicine; Obstetrics-Gynecology; Imaging-Radiology-Informatics; Human Sciences and Psychiatry;

- Departments of the Faculty of Oral Medicine: Special Surgery, Anesthesiology, Emergencies and Oral Rehabilitation; Preventive Medicine, Pediatric Dentistry and Orthodontics; Clinical Odontostomatology.

Master and Doctoral Programs

MASTER

- Faculty of Medicine: Medical Informatics and Biostatistics, Bioinformatics, Clinical Pharmacology, Molecular Medicine and Neurosciences, Ultrasonography;
- Faculty of Pharmacy: Drug Study and Analysis, Industrial Pharmaceutical Technology, Drug and Environmental Toxicology.

Doctoral programs - in the fundamental field of medical sciences, namely in medicine, oral medicine and pharmacy.

Patrimony

Buildings: 50 buildings, with a useful surface area of 31,699 sq m for education spaces, of which 26 amphitheatres; 9 hostels with 2500 places; a sports room and an artificial turf sports field; two experimental stations with a bio-base; a restaurant accommodating up to 150 persons; a hotel accommodating 40; a chalet with 30 places in the mountain resort Baisoara.

Fields in which human resources are trained

Medicine; Oral Medicine, Pharmacy, Midwives; Licensed Medical Nurses; Medical Radiology and Imaging; Clinical Laboratory; Balneophysiokinesitherapy and Rehabilitation; Dental Technique; Dental Care; Pharmaceutical Care.

Presentation of research activity chart

The research activity is coordinated by the Prorectorate for Scientific Research-Evaluation, supported by the Scientific Board and the Ethic Commission, bodies of the university Senate. The research activity is assisted by the Grant Office, "Valeriu Bologa" University Library, "Iuliu Hațieganu" Medical University Publishing House, and "Clujul Medical" journal.

Within the University, there are centers of excellence, research centers, departments with didactic and research attributions, as well as several teams of interdisciplinary research.

Human Resources

Professors	90
Senior Lecturers	118
Lecturers	147
Assistant Lectures	249
Teaching assistant	65
Research Fellows	1
Administrative Staff	384
Students	2890
of which:	
Undergraduate	1912
Master	118
PhD - full attendance	141
PhD-attendance not required	719



Structures	
Research Institutes	0
Research Centers	11
Research Laboratories	52
Multi-user Research Centers	1

Top Priority Research Directions

- **Medicine:** studies in fundamental medical sciences (normal and pathological morphology, biochemistry - cell and molecular biology, genetics, physiology-pathophysiology, pharmacology), in clinical disciplines (internal medicine and derived specialties, pediatrics, general surgery and related specialties, neurosciences), epidemiology and public health;
- **Pharmacy:** fundamental and applied research in chemistry, pharmacognosy and pharmacology, botany, toxicology, pharmaceutical technology, drug analysis and control;
- **Oral medicine:** dental prosthetics, odontology-pedodontics, periodontology, craniomaxillofacial surgery, and implantology.

Outstanding Research Infrastructure

- Laboratories - completely equipped centers: Cell and Molecular Biology, Biochemistry and Medical Genetics, Medical Informatics; Drug Analysis and Control, Toxicology, Pharmaceutical Technology;
- Communication Center: the UMPH Cluj network uses RoEduNet (Gigabit Ethernet link) as a provider, an internal network based on ATM FO (622 Mb/s), ATM FO 155 Mb/s, FastEthernet FO - 100 Mb/s, Xdsl, Wireless 802.11b technology;
- Approximate number of users: 500;
- Windows 2000 Server, Windows 2003 Server platforms.

Excellence Centers

- **Center of Excellence:** Anesthesia and intensive care
- **Research centers:**
 - Training in laparoscopic surgery;
 - Genetic and genetically conditioned diseases in children;
 - Cancer surgery;
 - Training in ultrasonography;
 - Biopharmaceutics and drug pharmacokinetics;

The number of papers published in ISI-quoted journals

(the most cited 10 papers) **80**

- Viăduțiu DS, Cosa A, Neamțu A, State D, Brăila M, Gherman M, Patu IM, Dulău-Florea I., *Infections with hepatitis B and C viruses in patients on maintenance dialysis in Romania and in former communist countries: yellow spots on a blank map?* Journal of Viral Hepatitis 2000; 7 (4): 313-319;
- Benga G, Kuchel PW, Chapman BE, Cox GC, Ghiran I, Gallagher CH., *Comparative cell shape and diffusional water permeability of red blood cells from Indian elephant (Elephas maximus) and man (Homo sapiens).* Comparative Haematology International 2000; 10 (1): 1-8;
- Acalovschi I, Cristea T, Mărgărit S, Gavru R., *Tramadol added to lidocaine for intravenous regional anesthesia.* Anesthesia And Analgesia 2001; 92 (1): 209-214;
- Androne L, Găvan NA, Veresiu IA, Orasan R., *In vivo effect of lipoic acid on lipid peroxidation in patients with diabetic neuropathy.* In Vivo 2000; 14 (2): 327-330;
- Săndulescu R, Mirel S, Oprean R., *The development of spectrophotometric and electroanalytical methods for ascorbic acid and acetaminophen and their applications in the analysis of effervescent dosage.* Journal Of Pharmaceutical And Biomedical Analysis 2000; 23 (1): 77-87;
- Muntean V., *The surgical anatomy of the fasciae and the fascial spaces related to the rectum.* Surgical and Radiologic Anatomy 1999; 21 (5): 319-324;
- Drugan C, Jebaleanu G, Grigorescu-Sido P, Callaud C, Crăciun AM., *Biochemical markers of bone turnover as tools in the evaluation of skeletal involvement in patients with type 1 Gaucher disease.* Blood Cells Molecules and Diseases 2002; 28 (1): 13-20;
- Dindelegan G, Liden H, Kurlberg G, Oltean M, Nilsson O, Aneman A, Lycke N, Olsson M., *Laser-*

doppler flowmetry is reliable for early diagnosis of small-bowel acute rejection in the mouse. Microsurgery 2003; 23 (3): 233-238;

- Cazacu M, Oniu T, Lungoci C, Mihalov, Cipak A, Klinger R, Weiss T, Zarkovic N., *The influence of Isorel on the advanced colorectal cancer.* Cancer Biotherapy and Radiopharmaceuticals 2003; 18 (1): 27-34;
- Acalovschi M., *Cholesterol gallstones: from epidemiology to prevention.* Postgraduate Medical Journal 2001; 77 (906): 221-229.

The number of papers published in volumes of international scientific conferences with reviewers

430

(10 papers presented at the most prestigious events)

- Pașca D, Pascu O, Grigorescu M, Dumitra D, Chira O, Andreica V, Szanto P., *The Effect of Interferon on the Histological Changes in Chronic Viral Hepatitis.* 9th United European Gastroenterology Week, Amsterdam, 2001;
- Zaharia V, Imre S, Verite Ph., *The reaction of aldolic condensation - means to obtain alpha-dicarbonyls.* 18th International Congress of Heterocyclic Chemistry, Yokohama, 2001;
- Andercou A, Galea FI, Strâmbu C, Andercou O, Ionica S, Budiu O., *Composite Grafts and Simultaneous Revascularization, Indications and Results.* 44th Annual World Congress International College of Angiology, New-York 2002;
- Leucuța SE., *Pharmacokinetics of oral omeprazole in children.* 4th World Meeting on Pharmaceutics, Biopharmaceutics, Pharmaceutical Technology, Florence, 2002;
- Benga Gh., *Effects of Cationic Multilamellar Liposomes Entrapping the Human Interferon-β Gene on Human Malignant Melanoma Cell Lines.* 8th World Congress Advances in Oncology and 6th International Symposium on Molecular Medicine, 2003;

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- Cardiovascular diseases;
- Pediatrics;
- Hepato-gastroenterology and digestive endoscopy "Octavian Fodor";
- Immunology; Rheumatic diseases.

International Cooperation

- Proposal Title: Genomics and advanced new drug delivery system used in combating cancer, acronym: combacer, FP 6, Sorin Leucuța;
- Proposal Title: Echography telescreening network for malignancies, acronym: etmn, FP 6, Radu Badea;
- Proposal title: Complications of cardiovascular calcification, acronym: triple c, FP6, Crăciun Alexandra.

International scientific activities (the 10 most important ones)

- Falk Symposium - Cholestasis and gallstones, Cluj-Napoca, 2000;
- International Symposium on "Early diagnosis of neuropsychic disorders in children", 1999, 2000;
- International Course in "The Medicine of the Adolescent" Cluj-Napoca, Socrates-Erasmus Program, 2000, 2001;
- The 33rd International Congress on the Pathophysiology of Pregnancy, Cluj-Napoca, 2001;
- The South-East European Conference of Perinatal Medicine, 2003;
- The Romanian-British Meeting in collaboration with Royal Society of Medicine U.K. Section of Anesthesia, 2001, 2002, 2004;
- International Symposium: "500 Transplants in Cluj University Center", 2003;
- International Symposium on "Molecular Medicine, Society and Public Health", 2001, 2002, 2003.
- International Symposium "Chronic viral hepatitis. Epidemiological and therapeutic aspects", Cluj-Napoca, 2004.

Products created/homologated/ capitalized / Inventions/Patents

(maximum 10 significant products) **7**

- Cistogal - disinfecting and anti-inflammatory urogenital fluid extract;
- Novastim - antihyperpetic, cicatrizing, immunomodulating solution, gel and tablets;
- Verucolizin - tincture for the treatment of benign skin tumors;
- Chelidonium fluid extract - gallbladder antispastic and choleric agent;

(Continued from page 184)

- Lucan M, Rotariu P, Iacob G, Lucan C, Burghilea C, Elec F., *Retroperitoneoscopic assisted nephroureterectomy in cases with upper tract transitional cell carcinoma*. 21st World Congress on Endourology, Montreal, 2003;
- Viăduțiu D, Gherman M, Spănu C, Pațiu IM, Răcăsan S, Părvu L., *Acute renale failure in Romania: new patterns pointing to a changing society*. World Congress of Nephrology, Berlin, 2003;
- Băciuț M, Băciuț Gr, Iancu A, Hurubeanu L, Cămpian RS, Dinu C, Rotaru H, Bran S, Rotaru AI, Balog C, Sava A., *Hemorrhagic high-flow vascular malformations of the mandibula*. XVIIth Congress of the European Association for Cranio-Maxillofacial Surgery, Tours, 2004;
- Serban DS, Florescu P, Miu N., *Experience with colonic polyps in 49 Romanian children*. 2nd Intercontinental Congress of Pathology, Iguassu Falls (Brazil), 2004;
- Olinic D, Homorodean C, Ober M, Stoiaș M, Olinic M, Farvas A, Marin H, Olinic N., *Comparative evaluation of the diagnosis benefit of angiography and Doppler ultrasonography in chronic critical leg ischemia*. 21st World Congress of the International Union of Angiology, Rome, 2004.

The number of scientific books published by publishing houses acknowledged abroad **6**

(maximum 10 significant books)

- *Potential effects of vitamin K supplementation on bone metabolism*. Crăciun A, Unigraphic, Publishing House, Maastricht, 2001, 184 pp;
- *Hepatobiliary disease. Cholestasis and Gallstones*. Acalovschi M, G. Paumgartner (eds). Kluwer Acad Publ Dordrecht/Boston/London, 2001, 179 pp;

- *Cardiovascular Risk in Type 2 Diabetes Mellitus. Assessment and Control*. Hâncu Nicolae, Springer Publishing House, 2002, 286 pg;
- *Guidelines in Renal Transplantation*. Kälbe T., Benoit G., Lucan M., Nicita G., Sells R., Burgos Revilla F.J., Wiesel M, Drukker, Gelderland, Netherlands, 2003, 70 pp;
- *Basic principles of skin grafting*. In: *Surgical Techniques in Orthopaedics and Traumatology*. Georgescu A.V, Ivan O, Avram A, Vasilescu D, Elsevier Edition, Paris, 2004, 20 pp;
- *Acute appendicitis. Diagnosis, treatment and results in the 2002s*. A literature study aiming at evidence based surgery. Părăian I., Ake Andren-Sandberg, Suedia, 2002, 226 pp.

The number of papers published in journals from the main stream of publications **886**

(the most cited 10 papers)

- Benga G, Frontescu L, Matei H, Tigan S. *Comparative nuclear magnetic resonance studies of water permeability of red blood cells from maternal venous blood and newborn umbilical cord blood*. Clin Chem Lab Med 2001; 39(7): 606-611.
- Oprean R, Oprean L, Tamas M, Sandulescu R, Roman L. *Essential oils analysis. II. Mass spectra identification of terpene and phenylpropane derivatives*. J Pharm Biomedical Analysis 2001; 24(5-6): 1163-1168.
- Gngorescu-Sido A, Schulze E, Gngorescu-Sido P, Heinrich U, Nistor T, Duncea I. *Mutational analysis and genotype-phenotype correlation in patients with classic 21-hydroxylase deficiency from Transylvania (North-West Romania)*. J Pediatric Endocrinol Metab 2002; 15(9): 1505-1514.

(Continued on page 186)

- Salviaclim - syrup for the treatment of climacteric disorders;
- Venarol - venotonic and anti-inflammatory ointment;
- the radiolotopic method for the measurement of intestinal permeability



(Continued from page 185)

- Procopciuc L, Jebeleanu G, Surcel I, Puscas M. Angiotensinogen gene M235T variant and pre-eclampsia in Romanian pregnant women. *J Cell Molecular Med* 2002; 6(3): 383-388.
- Acalovschi M, Blendea D, Feier C, Letia AI, Ratiu N, Dumitrascu DL, Veres A. Risk factors for symptomatic gallstones in patients with liver cirrhosis: A case-control study. *Amer J Gastroenterol* 2003; 98(8): 1856-1860.
- Preda M, Leucuta SE. Oxprenolol-loaded bioadhesive microspheres: preparation and in vitro/in vivo characterization. *J Microencapsulation* 2003; 20(6): 777-789.
- Popa D, Loghin F, Imre S, Curea E. The study of codeine-gluthetamide pharmacokinetic interaction in rats. *J Pharm Biomedical Analysis* 2003; 32(4-5): 867-877.
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REPRESENTATIVE DATA ON RESEARCH ACTIVITY

In the period 2000-2004, the research activity was reflected by obtaining 107 national grants amounting to 87.5 billion lei and by concluding contracts with economic agents amounting to 18.7 billion lei, which situates "Iuliu Hatieganu" UMPH among the first universities of medicine and pharmacy in Romania in terms of contracted value. This financial support has allowed the revival and development of the university research potential and the ensuring of fundamental conditions for high-performance studies.

In what follows, we present some research nuclei representative for our university.

CENTER OF MOLECULAR MEDICINE

Director: Prof. Gheorghe Benga, PhD.

It represents one of the most advanced research structures of the university. The priority research fields include the study of water transport through the membrane of red blood cells, a research program in which the group directed by Professor Gheorghe Benga has an exceptional original contribution: the discovery in 1985 of the first water channel protein in the membrane of the human red blood cell, several years before Agre, winner of the Nobel Prize for Chemistry in 2003. The same group has conducted for the first time in Romania research on metabolic genetic diseases (aminoacidopathies, chronic glycosylation defects) and molecular genetic research (the first exhaustive study on the type of mutations in the cystic fibrosis gene in the Romanian population). Regarding the exceptional performance of the



Cluj research team, even if the Nobel Prize was awarded to another work group, the priority of the discovery of aquaporins by the Cluj Center has been recognized by outstanding personalities of the international medical world. In fact, under different circumstances, the Nobel Prize should have gone to Cluj, justifiably honoring a scientist of our university.



CENTER OF RESEARCH IN BIOPHARMACEUTICS AND DRUG PHARMACOKINETICS

Director: Prof. Sorin Leucuta, PhD.

Fields of interest: evaluation of the pharmaceutical availability of drugs; determination



Center of molecular medicine



Center for research in biopharmaceutics and pharmacokinetics

of the bioavailability/bioequivalence of drug substances; study of the pharmacokinetics of drug substances in human subjects. The activity is financially supported by the constant obtainment of research grants, but also by self-financing, the bioequivalence studies carried out by contract bringing to UMPH an annual income of approximately US\$150,000.

"OCTAVIAN FODOR" CENTER OF HEPATOGASTROENTEROLOGY AND DIGESTIVE ENDOSCOPY

Director: Prof. Oliviu Pascu, PhD.
It carries out its activity at the Medical Clinic III, a high performance unit of Romanian gastroenterology. The center benefits from advanced equipment for therapeutic digestive endoscopy, echoendoscopy and interventional ultrasonography. The quality of the members of the research team and the modern infrastructure have allowed the performance of priority studies in hepato-bilio-pancreatic and digestive tract pathology in Romania.



CENTER FOR DRUG CONTROL AND ANALYSIS

Director: Prof. Marius Traian Bojita, PhD.
The laboratory of the Drug Control Department is part of the circuit for the testing



of some immunosuppressors (Sirolimus) using the HPLC method, in collaboration with Medical School London, UK.

CENTER OF RESEARCH FOR GENETIC AND GENETICALLY CONDITIONED DISEASES IN CHILDREN

Director: Prof. Paula Grigorescu-Sido, PhD
It functions at the Pediatric Clinic I, in collaboration with the Department of Medical Biochemistry, having two compartments: Genetic Diseases (stationary and ambulatory care) and the Laboratory of Genetics. The Center has two national priorities: making of specific enzymatic diagnosis of lysosomal diseases and molecular diagnosis in Gaucher disease, and molecular diagnosis in patients with 21-hydroxylase and 11-β-hydroxylase deficiency. As a result, the Center has been included in the European Cerezyme Access Program (ECAP) and has obtained enzyme replacement therapy support amounting to over 3,000,000 Euro/year for 17 Romanian patients with a severe form of type 1 Gaucher disease.

DEPARTMENT OF CRANIO-MAXILLO-FACIAL SURGERY

Director: Prof. Grigore Baciut, PhD.



The Center benefits from a competitive research infrastructure allowing laser surgical applications, for reconstructive microsurgery, orthognathic and cranio-maxillo-facial surgery of dento-maxillary and cranio-facial malformations/anomalies, bone fixation in cranio-maxillo-facial traumas, which is supported by a modern computer network.



"Octavian Fodor" center of hepatogastroenterology and digestive endoscopy



Department of cranio-maxillo-facial surgery

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	13757	16718
2003	6790	164460
2002	8124	1240000
2001	3922	1280000
2000	1207	565000
1999	2537	171000
1998	876	-
1997	407	-
1996	183	-
1995	42	-



in Pop



strong teams into national and international research associations, the revamping of the research material basis, the approach of research topics oriented towards solving current and future issues, the increase in the number and quality of the research programs and projects carried on by the research teams in order to obtain financial support, stimulating the interest of the students and the young teaching staff in scientific research by including them in research teams.

Outstanding Research Infrastructure

MEDALS - A Multimedia Educational System Applied to the Medical Teaching Process, created as a result of a CNFIS grant, which constituted the beginning of the setting up of the modern and competitive IT infrastructure of the University. The aim of the project is the implementation of a series of teaching services, self-study and assessment, based on multimedia technologies applied to the current teaching process of the following subjects: Cellular and Molecular Medicine, Pharmacology, Cardiology, Pediatric.

Excellence Centers

- The C. C. Iliescu Cardiology Research Centre;
- The Fundeni Radiology, Medical Imaging and Nuclear Medicine Centre;
- The Fundeni Gastroenterology and Hepatology Centre.

International Cooperation

- The Tempus programme was organized during 1992-1999, at a Trans-European level and aimed to transfer the "know-how" from West to East, being completed in Romania in 2000-2001;
- The Socrates (Erasmus) programme is intended for the European cooperation in the higher education field with a view to attaining the same level of intellectual training. There are bilateral cooperation protocols between the University of Medicine and Pharmacy "Carol Davila".
- There are bilateral cooperation protocols between the University of Medicine and Pharmacy "Carol Davila" Bucharest and the University of Medicine "N. Testemitzanu" Kishinev, Moldova; The Universities "Rene Descartes" and "Pierre et Marie Curie", Paris; The University "Claude Bernard", Lyon; The University "Paul Sabatier", Toulouse; The University "Louis Pasteur", Strasbourg, France; The University of Oxford, UK

The number of papers published in ISI journals 66

(the most cited 10 papers)

- Seroprevalence of HSV2 infection in women from Bucharest, Romania, Herpes, V. Arama, M. Chiotan, A. Streinu Cercel, E. Benea, The Journal of IHMF;
- Sugar Binding Induced Charge Translocation in the Melibiose Permease, C. Ganea, Biochemistry;
- Quantitative evaluation of Retinal Photoreceptor Cells Viability Based on Their Electric Polarity and Dielectric Properties, E. Kovacs, N. Irimescu, M. Ionescu, M. Radu, Journal Biophys;
- Staphylococcus aureus and E. Hermani in diabetes patients, A.G. Popescu, C. Popescu, Emerging Infect.

The number of papers published in journals from the main stream of publications 256

(the most cited 10 papers)

- Clinical, evolutive and therapeutic aspects in the diastatic perforation of the caecum, Surgery, Fl. Popa, V. Strambu, V. Constantin, C. Balalau, Cr. Ciocolu, A. Cuibac;
- Quality of Life Assessed by SI-36 Health Survey in Renal Transplant Patients, Transplantation Proceedings, I. Sinescu, M.A. Manu, S. Rădulescu, M. Hârza, R. Manu, D. Capşa;
- Basic Principles in Finite Elements Modeling method Applied for Metal-Ceramics Bond Analysis, Romanian Biotechnological Letters, I. Pătraşcu, L.T. Ciocan, M. Barbu;
- C-reactive protein, prothrombotic imbalance and endothelial dysfunction in acute coronary syndromes without st elevation, Romanian Journal of Internal Medicine, E. Apetrei, R. Jurcuş, M. Rugină, A. Gavriţă, V. Uscăţescu.

The number of scientific books published by publishing houses acknowledged abroad 4

(maximum 10 significant books)

- Esc core syllabus - a learning framework for the continuing

medical education of the general cardiologist (3)genetics, (10)myocardial disease, (16)infective endocarditis, (18)primary pulmonary hypertension (pph), Peter Müller, Robert Ferrari, Rafael Ferreira, Joseph Kautzner, Cezar Macarie, Blackwell Publishing Ltd;

- Melanoma and vitiligo-in vitiligo, Problems and solutions, D. Forsea, Marcel Dekker inc. New York;
- Implications for production facilities of international cooperation and assistance provisions in the implementation of legally binding measures to strengthen the biological and toxin weapon convention, Marie Isabel Cherveir, Krystof Chomiczewski, Henri Garriague, Gyorg Granasztol M. Dando, G. Pearson, M. Neguţ, Kluwer Academic Publishers-theNetherlands;
- Preparedness against bioterrorism and reemerging infections diseases, J. Kocik, K. Janiak, M. Neguţ.

The number of proceedings published in international conferences' papers with reviewers 441

(10 papers presented at the most prestigious events)

- New Gravity Prognostic Score in Acute Pancreatitis, Proc. of the EuroSurgery Lisabona, Fl. Popa, H. Gilorteanu, C. Băilău, A. Cuibac;
- Orientation Behavior of Retinal Photoreceptors in Alternative Electric Fields, Proc. of 3rd Internat. Workshop on Biological Effects of EMFs, E. Kovacs, M. Radu, M. Ionescu, N. Irimescu, R. Pologea;
- Effects of Combined Selenium and Vitamin E Administration on DNA in Walker Tumor Bearing Wistar Rat Exposed to Cytostatic Acute Treatment, Proc. of 2nd Internat. Congress of Pathology, E. Katona, G. Katona, A. Căplănuşi, M. Tufeanu, C. Negreanu, D. Ionescu;
- Cancer du cardia-Resultats en fonction des techniques chirurgicales, 27 Congres Internat, Societe Chirurgie Mediterannee Latine, S. Oprescu, C. Savlovski.



training graphy



clinical



clinical



International scientific activities

(the 10 most important ones)

- The International Congress of Pancreatology in Pisa;
- The Congress of Cardiology in Orlando;
- The Meeting of the French Speaking countries for type AIDS therapy;
- The International Scientific Congress for students and young doctors.

Products created/homologated/ capitalized / Inventions/Patents (maximum 10 significant products)

7

- The methods of obtaining 2-imidasoldine, I. Chirita;
- A drug composition with antianemic effect, D. Lupuleasa;
- A procedure to obtain magnesium lactate and magnesium caseinate, D. Lupuleasa;
- Shampoo with minoxidil, D. Lupuleasa;
- The method and equipment to obtain the cryopreservation of cardiovascular homografts, L. Iliuta;
- A procedure to obtain dental alloys from the Ni-Cr-Mo system, I. Patrascu;
- A dental alloy based on nickel for prosthetics and the procedure to obtain it, I. Patrascu.

Presentation of Centers

CENTRE OF EXCELLENCE - The C. C. ILIESCU CARDIOLOGY RESEARCH CENTRE



Was accredited in 2001, headed by Prof. Eduard Apetrei, M.D., PhD, belongs to the University of Medicine and Pharmacy "Carol Davila" Bucharest.

The competency research domains regarding cardiovascular diseases are: modern methods of noninvasive diagnosis (effort tests, monitoring), of diagnosis and noninvasive treatment and drug treatment.

Due to the quantity and quality of its activities, the Centre is the best in the country in the research concerning the cardiovascular diseases.

The Centre's priorities are coronarography, the use of the echocardiography as a means of diagnosis, coronary revascularization, intracoronary implant of stenablation in the obstructive hypertrophic cardiomyopathy, dilatations of peripheral arteries, dilatations of renal arteries.

Among the research programs undergone within the Centre there could be mentioned: the Urziceni study: Monitoring the progressive tendency of the cardiovascular diseases and of the risk factors in a period of 10 years, began in 2000; the Prevalence of the cardiac insufficiency at the institutionalized old people from the old people's homes in Bucharest; Screening for finding out the prevalence of the arterial hypertension at the population in district 2 Bucharest; The swelling and evolution of the atheroma plate; Screening for finding out and determining the prevalence of the cardiac insufficiency at the population in district 3 Bucharest.



Images - Cardiology
Research Center

THE FUNDENI GASTROENTEROLOGY AND HEPATOLOGY CENTRE

- CENTRE OF EXCELLENCE ACCREDITED BY CNCIS IN 2002, headed by Prof. Mircea Diclescu, M.D., PhD, is a tertiary medical centre for diagnosis and treatment of digestive diseases, a famous centre in the gastroenterology university and post graduate education, being the only institution of this kind





in the gastroenterology field. It is the oldest centre in Romania exclusively destined to the study and cure of the diseases of the alimentary canal, liver, biliary ducts and pancreas; many generations of doctors have been formed and specialized in gastroenterology at this centre.

The Digestive Endoscopy Laboratory has been recognized as one of the leading laboratories in respect with the practiced procedures of diagnostic and therapeutic digestive endoscopy.

The Centre is equipped with a monitoring system of patients' data recording. The system uses a personal application for the medical data storing, developed in accordance with the legal current provisions, which states the confidentiality of the patients' data.

The medical equipment in the Gastroenterology and Hepatology Centre includes, among others, videocapsule, echoendoscope, fibrogastrosopes, flexible sigmoidoscopes, 2 ultrasounds, one equipped with examination colour and power Doppler ways, clotting system with ERBE argon plasma, microscopes. In the Digestive Oncology department digestive malign diseases are treated with an adjuvant and palliative cure, according to personal protocols of treatment or within some international selection stages, having special equipment for that purpose.

The Centre is financed by research contracts, sponsorships, The Foundation for the Liver Surgery.

**THE "FUNDENI" RADIOLOGY,
MEDICAL IMAGING AND
NUCLEAR MEDICINE CENTRE OF
EXCELLENCE**

Is headed by Prof. Serban Alexandru
Georgescu, M.D., Ph.D.



Enjoys undeniable national and international recognition, operating within the framework of The Fundeni Radiology, Medical Imaging and Nuclear Medicine Chair of the Faculty of Medicine, within the University of Medicine and Pharmacy "Carol Davila" Bucharest.

The centre was chosen as a partner of prestigious international professional organizations (The Radiological Society of North America, The French Radiological Society, etc.) with a view to organizing exceptional scientific meetings in Romania.

The centre focusses on maintaining a high rate of participation at any national or international scientific or professional meeting. In 2006, the Centre shall be the main organizer





of a Central and East European Regional Congress of Radiology - Medical Imaging.

The centre has a maximum potential for expanding the scope of specialty investigations and mini invasive treatment techniques, being endowed at the highest possible level in the field with the necessary equipment: magnetic resonance imaging, CT scan, ultrasound, angiography, gama camera, mammographs. All this equipment has digital processing technology, being linked to an intranet and internet network, thus completely eliminating the use of the photo images.

The "Fundeni" Radiology, Medical Imaging and Nuclear Medicine Centre of Excellence is the only fully computerized centre in Romania.

MEDALS - A Multimedia Educational System Applied to the Medical Teaching Process,

created as a result of a CNFIS grant, which constituted the beginning of the setting up of the modern and competitive IT infrastructure of the University.

The aim of the project is the implementation of a series of teaching services, self-study and assessment, based on multimedia technologies applied to the current teaching process of the following subjects: Cellular and Molecular Medicine, Pharmacology, Cardiology, Pediatrics. It also aims at developing the capacity of the teaching staff and of the auxiliary staff to create, use and evaluate multimedia educational materials, as well as providing a basis both for the university education (lectures and evaluation for the student activity, and for master degree), and for postgraduate education (PhD, specialization, competence achieving, improvement).

The e-learning system allows the following services:

1. The teaching service: is formed by the multimedia course and the associated examples. It offers the course to a broad community, achieving full interactivity of the participants. Each lecture is in HTML format, with links to other pages, images, sound or video clips. It is hierarchically structured, on multiple levels, permitting the reading of the whole material on different difficulty levels. The purpose of this course is to offer extended facilities of personal study and personal evaluation, also allowing for presentation and evaluation.

2. The evaluation service: has two access levels: *student and professor.*

The student level permits temporary access to questions, only in the examination period. The professor level provides unlimited access to the collection of questions, as well as to the associated marking methods. The obtained results can also be seen at this level.

3. The personal study and personal evaluation: each user has access through a personal, unique count. In the personal study process, the student has access to all the materials and he can chose for himself the difficulty level. The students can also define their own method of reading the text. Questions with multiple choice, from the studied material are presented at the bottom of each page, for the personal evaluation part. If the answer is not correct for these questions, necessary explanations and information about supplementary reading are provided to the student. This service is provided with an "on-line teaching assistant" program for a better professor-student communication; in this system, students ask questions and get answers by e-mail or online by the communication modulus.

4. The related services: comprise the full range of activities auxiliary to the services mentioned before, which do not have a direct connection with them, but which offer support for the system's good functioning. This type of services is made up of:

- Users' administration: all the operations concerning the forming of new users and the deleting of the old ones, administering the discussion groups and the videoconferences, if necessary;
- Network administration: all the operations concerning the network monitoring, the local branch network administration and maintaining the level of performance.
- Technical support for the described services: creating unitary presentation styles, initial editing for pages and chapters, designing presentation materials.

THE CENTRAL LIBRARY of the University of Medicine and Pharmacy "Carol Davila" in Bucharest was founded in 1857, at the same time with the National School of Medicine and Pharmacy. Following the transformation of the National School of Medicine and Pharmacy into

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	1565,40	37280
2003	12237,00	35961
2002	11237,00	751760
2001	5797,70	570000
2000	1507,50	450000
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



the Faculty of Medicine (1869), the Library was moved into the premises of the University of Bucharest in 1870 and, from there to the seat of the Faculty of Medicine in 1901, where it still

operates today. Through its specific functions, the Central Library supports the study and research activity of the University, providing access to the scientific information in the medical, pharmaceutical and dental fields, contributing to the assimilation of the techniques of intellectual work and to the stimulation of creativity, both being indispensable qualities for the future specialists. The library comprises over 700,000 copies of:

- textbooks, practical activities, treatises and monographs edited by the teaching staff of the University of Medicine and Pharmacy;
- treatises and specialty textbooks published in Romanian or in international languages;
- Romanian and foreign magazines;
- PhD dissertations, reports and diploma papers;
- CD-ROMs;
- atlases, dictionaries, encyclopedias in Romanian and foreign languages, reference material, which are offered to the students, the teaching staff and other types of readers.

ARMS - the increase of the competitiveness of the Romanian medical research centres for a better participation in the development of the European Research Area.

At the end of the year 2004, "The Research Centre for the Pathology and Treatment of Rheumatic Systemic Diseases" - a university research centre - obtained financing for the ARMS project through the Specific Support Actions scheme of the European Commission. Having a three-year duration and a total financing of Eur 950,000, ARMS mainly puts forward the means of improving the quality of the research infrastructure of this centre, the optimization of the portfolio of the research techniques that are available - by training the members in similar centres from the European Union and by developing cooperation activities with other partner units. A special package of this project comprises support actions for the other university research groups so as to achieve the increase of the participation of the groups from the University of Medicine and Pharmacy "Carol Davila" in the European Research Area. Thus, in cooperation with European partners, actions are designed, aimed both at the managers of the research centres (centre management, international projects management, financing and self-financing)

and at the individual researchers (identifying research partners, designing and carrying out research projects, means of financing from the European funds their own research projects). The specific dissemination actions comprised in this project (which should lead to the improvement of the degree of information of Romanian researchers about the opportunities offered by the Community programs) are granted priority and benefit from the support of the leading European and Romanian bodies.

In accordance with the departments' needs, the respective teaching staff carry on specific research programs inside their own laboratories. Here are some examples of such laboratories:

- at the Physiology Department, there functions a Laboratory of Neuronal Culture and a Electroneurophysiology Laboratory;
- at the Endocrinology Department, the own research activity is carried on in the Immunocytochemistry of the endocrine tumors Laboratory and in the Sleep Endocrinology Laboratory.

The same types of laboratories exist at the Clinical Institute Fundeni, the Clinical Emergency Hospital Bucharest, the Emergency University Hospital Bucharest.



Rector

Prof. Șt. Ioșif Drîgulescu, PhD

Historical Overview of the University

The Faculty of Medicine from Timișoara was founded in 1945 by the Decree-Law no. 660, signed by King Mihai I; the faculty started its activity on July 15, 1945, comprising the first and the second year of study. In 1948, due to the education reform, the faculty became the Institute of Medicine, with 3 faculties: General Medicine, Pediatrics and



Hygiene. The Faculty of Stomatology was founded in 1964, and the Faculty of Pharmacy in 1991. Internationally recognised professors and doctors taught in Timișoara.

Faculties and Departments

■ 3 faculties: Faculty of Medicine, specialties: General Medicine (6 years of study), Midwifery (4 years), Nursery (general-3 years), Nursery (Radiology and Imagistics-3 years), Clinical Laboratory (3 years), Balneo-Physio-kinotherapy and Recovery (3 years); Faculty of Dental Medicine, specialties: Dental Medicine (6 years), Dental Nursery (3 years), Dental Techniques (3 years), and Faculty of Pharmacy, specialties: Pharmacy (5 years) and Pharmacy Assistant (3 years).

Master and Doctoral Programs

Doctoral programs - 1 fundamental PhD area of study - medical sciences, comprising 2 fields: medicine and dental medicine.

Patrimony

"Victor Babeș" University of Medicine and Pharmacy owns the following facilities: 7 buildings dedicated to the teaching process; 1 experimental facility (microsurgery, animal breeding facility); 7 dormitories; 1 sport facility; 1 recovery facility

Fields in which human resources are trained

Medicine
Dental medicine
Pharmacy

Presentation of research activity chart

Scientific research is based upon the regulation adopted by the university Senate, under the coordination of the scientific secretary. There are being promoted interdisciplinary projects in order to involve several teams in major research themes. This approach is in accordance with the current national trend to create technological platforms and research facilities with competitive equipment, with multiple users. Our priorities in research are top areas in the fields of cardiology, molecular biology, in vitro fertilization and embryo-transfer technics, microsurgery and haematology.

Structures

Research Institutes	-
Research Centers	8
Research Laboratories	49
Multi-user Research Centers	1

Top Priority Research Directions

The research is based on two priority themes, of present interest internationally, with a view to achieve the excellence, both in cell and gene therapies in degenerative diseases, and in the evaluation of the predisposition and also in the therapy guiding in cardio-vascular diseases by specific gene markers. UMFVBT is among the pioneers of these fields, and is the main regional centre specialised in cell therapies, comprising a cluster involved in the stem cell research consisting of 9 departments

Human Resources

Professors	95
Senior Lecturers	76
Lecturers	109
Assistant Lectures	296
Teaching assistant	134
Research Fellows	-
Administrative Staff	234
Students	4142
of which:	
Undergraduate	3092
Master	0
PhD - full attendance	68
PhD-attendance not required	982

(immunology and physiology, histology, biochemistry, biophysics, hematology, cardiology, pediatrics, orthopaedics, experimental microsurgery), organized around the Immunophysiology and Biotechnologies Centre.

Outstanding Research Infrastructure

Within the university, 8 research centres are accredited by CNCIS (NURC); these centres have laboratories equipped with modern laboratory apparatus, competitive at European level.

The university has a network of 600 computers, out of which 13 servers located in 10 university buildings, having a transmission speed of 1GB/s.

Excellence Centers

UMFVBT is under evaluation as a centre of excellence in cell therapies. The university's research capacity was evaluated in Bruxelles, by means of a project proposal within the FP6-2004-ACC-SSA-2 call; the European Commission recommended the funding of the project by the Ministry of Education and Research, which now evaluates the proposal. The Cardiology Institute is under evaluation as NURC Excellence Centre.

International Cooperation

- European study of clinical, health economic and quality of life outcomes in haemophilia treatment, **FP5**, ESCHQoL;
- Integrated project **FP6**, contract no **LSHB_CT-2003-503161**-Adult mesenchymal stem cells engineering for connective tissue disorders. From the bench to the bed side;
- Directorate C - Public Health and Risk Assessment from Luxembourg of European Commission- European Quality in Tissue Banking;
- Leonardo project, contract no **RO/2002/PL-89066/Ex**- Post graduated training in bone marrow transplant;
- Leonardo project, contract no **RO/2002/PL-89066/EX**-Leonardo project on implementation of institutional physiotherapeutic in Romania according to EU standards of rehabilitation;
- Leonardo project, contract no **RO/2003/PL-91026TD** Genomic approaches in diagnosis



The number of papers published in ISI-quoted journals (the most cited 10 papers) 119

- Drăgulescu Ștefan Iosif et al, *Indirect markers of atrial stretching in patients with paroxysmal atrial fibrillation*, European Heart Journal, 2003;
- Păunescu Virgil et al, *Endothelial cells obtained from hematopoietic stem cells are functionally different from those obtained from human umbilical vein*, Journal of Cellular and Molecular Medicine, 7 (4), 455-460;
- Raica Marius et al, *Screening for prostate cancer in Romania*, International Urology and Nephrology, 2004;
- Anghel Andrei et al, *Population genetic study of eight short tandem repeat LOCI CSF1PO, TPOX, TH01, F13A01, FESFPS, VWA, F13B and LPL in western Romanian population*, Dyes and Pigments, 2003;
- Kurunczi Ludovic et al, *MTD-PLS: a pls-based variant of the mid method. ii. mapping ligand-receptor interactions. enzymatic acetic acid esters hydrolysis.*, Journal of Chemical Information and Communication Science, 2002;
- Pescariu Sorin et al, *Can echocardiographic timing measurements change biventricular pacing indication?*, European Journal of Echocardiography, 2002;
- Neagu Adrian et al, *Fluctuations and the holmeister effect*, Biophysical Journal, 2001;
- Ionac Mihai et al, *Thromboxane a2 release in ischemia and reperfusion of free flaps in rats, studied by microdialysis*, Journal of Reconstructive Microsurgery Thieme New York - Stuttgart, 2001;
- Muntean Danina et al, *Formation of palmitic acid-ca complexes in the mitochondrial membrane: a possible role of cyclosporin insensitive permeability transition*, Journal of Bioenergetics and Biomembranes, 2004;
- Mut-Vitcu Bogdan et al, *Secondary prevention after myocardial infarction: current clinical practice in Romania*, Monduzzi Editore, 2000.

The number of papers published in journals from the main stream of publications 988 (the most cited 10 papers)

- Dragulescu Stefan Iosif et al, *Protocol for intra-coronary transplantation of autologous AC133 bone marrow stem cells*, Timisoara Medicala (Timisoara Medical Journal), 2004;
- Raica Marius et al, *Tumoral angiogenesis, from experiment to clinical application*, Revista Romăna de Patologie (Romanian Pathology Journal), 2004;
- Poenaru Dan et al, *The need of models in medicine*, Timisoara Medicala (Timisoara Medical Journal), 2004;
- Gaita Dan et al, *The role of physical practice in the reversibility of "sick euthyroid syndrome" associated to chronic heart block*, Revista Romăna de Cardiologie (Romanian Cardiology Journal), 2002;
- Anghel Andrei et al, *Hyper-expression of HER-2/NEU and immunohistochemical and gene expression of hormonal receptors in mammary malignant tumors*, Revista Romăna de Patologie (Romanian Pathology Journal), 2004;
- Paunescu Virgil et al, *Isolation and culture of human chondrocytes for autologous transplantation*, Timisoara Medicala (Timisoara Medical Journal), 2004;
- Tomescu Mirela et al, *Benefits and risks of IECA and spironolactone association in moderate and severe heart block*, Revista Romăna de Cardiologie (Romanian Cardiology Journal), 2003, XVIII, 82;
- Ionac Mihai et al, *Harvest of omentum by laparoscopic techniques. Swine experimental model*, Chirurgia (Surgery), 2004;
- Cristescu Carmen et al, *Particularities of pharmacotherapy during pregnancy*, Farmacia (Pharmacy), 2004;
- Sporea Ioan et al, *Ultrasound assisted liver biopsy for the staging of diffuse chronic hepatopathies*, Romanian Journal of Gastroenterology, 2004.

(Continued on page 197)



- of cardiovascular diseases and cancer in Romania;
- Leonardo project, contract no RO/2003/PL-91029TD Leonardo project on implementation of institutional physiokinotherapy in Romania according to EU standards of rehabilitation;
 - Leonardo project, contract no RO/2003/PL-91030TD Postgradual training in cellular therapies;
 - Leonardo project, contract no RO/2003/PL-91032TD Harmonization of diagnosis in haematology to EU criteria;
 - 3 grants NATO CLG (Collaborative Linkage Grants).
 - Grants Socrates/Erasmus - Phare - scholarship programme - contract 6235/25.07.200212.
 - Grants Socrates/Erasmus - Phare - scholarship programme - contract 5947/29.07.2003

International scientific activities
(the 10 most important ones)

- Clinical and Experimental Physiology Trends"-4-5 June 2004, Timisoara The 9th National Congress of the Romanian Society of Physiology Sciences - with international attendance;
- The 3rd International Congress of Angiology, The 2nd Ambulatory Surgery Symposium, Lymphology Symposium - 19-20 October 2001, Timisoara- organisers: Romanian Angiology and Peripheral Vascular Surgery Society - Timisoara Branch, "V. Babes" University of Medicine and Pharmacy Timisoara, Cardiovascular Diseases Institute Timisoara, Romanian Ambulatory Surgery Society, Romanian Lymphology Society;
- The 7th Francophone Course of Neurological Sciences, 24-25 May 2004, Timisoara, thematic: "Carotid Stenoses"
- The 11th International Practical Course in Microsurgery of Vessels and Nerves, October 15-18, 2003, Timisoara;
- National Biophysics Conference and Summer School, organized by Timisoara Branch of the Romanian Pure and Applied Biophysics Society, with the support of IUPAB (International Union for Pure and Applied Biophysics): Baile Herculane, 6-8 and 8-12 October 2003;
- The 11th Physical Chemistry Conference ROMPHYSICHEM - with international

(Continued from page 196)

The number of papers published in volumes of international scientific conferences with reviewers

1390

(10 papers presented at the most prestigious events)

- Poenaru Dan et al, *Confrontation of clinical and imaging assessment in chronic hemophilic athro-paty*, Congresul Mondial de Hematologie, Bangkok, 2004;
- Cotulbea Stan et al, *Endoscopic CO₂ Laser microsurgery - modern method of treatment for supraglottic carcinoma*, 5th European Congress of Oto-Rhino-Laryngology Head and Neck Surgery, Rodos-Kos Hellas, september 11-16, 2004;
- Gaiță Dan et al, *How to start cardiovascular rehabilitation*, Educational Program of European Society of Cardiology, 24-26 June 2004 Berna, Elveția;
- Păunescu Virgil et al, *Comparative analysis of chondrocytes isolated from human cartilage and derived from human mesenchymal stem cell*, Congress of European Haematology Society, Geneva, iunie, 2004, abstract nr. 211;
- Șerban Margit et al, *Successful major surgery with minimal dosage of rfvia in a hemophilic with high level of alloantibodies to factor VIII*, the of j of the wft, vol.10, suppl 3, oct 2004, abstr, p.61, 12po54, ISSN 1351-8216;
- Bunu Carmen et al, *The benefit of new anti-leukotriene derivatives on airway responsiveness in ova-sensitized rats*, 14th ERS Congress Glasgow, European Respiratory Journal, 1386, P. 219S - lucrare premiată cu argint;
- Șerban Viorel et al, *Type 2 diabetes mellitus in children, a case report*, The 18th IDF Congress, Paris, France, 24-29 august 2003;
- Munteanu Ioan et al, *Aspects*

concerning the prognosis of delivery in preeclampsia, Al 17-lea Congres EAGO/EBCOG, Praga (VOL REZ. P. 78);

- Podariu Angela et al, *Dental maxillary abnormalities in wind instrumentalists*, Al 77 lea Congres EOES, 19-23 iunie 2001 Gent, Belgia;
- Drăgan Simona et al, *Distance learning in nursing: a Leonardo da Vinci project for developing joint masters programs in Eastern Europe*, Conference, Global Integration of Graduation Programs, Amman, Jordan, 26-30 noi, 2004.

The number of scientific books published by publishing houses acknowledged abroad

5

(maximum 10 significant books)

- Van der Waals *Molecular Descriptors. Minimal Steric Difference cap. 10 din QSPR/QSAR Studies by Molecular Descriptors*, Ciubotariu Dan, 81, NOVA Science Publishers, Inc. Huntington, New York, USA, 2000;
- *Active Transport Modulated by Barrier Fluctuations*, in: *Bioelectronic Applications of Photochromic Pigments*, NATO Science Series, vol. 335, Nagy Iosif, 19, IOS Press, Amsterdam, 2001;
- *Reconstructive Microsurgery*, Ionac Mihal, 605, Monduzzi Editore, Bologna, 2001;
- *Fusion of cell aggregates: A mathematical model*, in: *Biomedical Engineering: Recent Developments*, Jafar Vossoughi, (Editor), Neagu Adrian, 12, Medical and Engineering Publishers, Washington DC, 2002;
- *Organ printing: Computer-aided jet Printer-based three-dimensional soft tissue engineering*, in: *Biomedical Engineering: Recent Developments*, Jafar Vossoughi, (Editor), Mironov Vladimir, 20, Medical and Engineering Publishers, Washington DC, 2002.



- attendance - Faculty of Pharmacy - 2-5 September, 2003, Timisoara;
- Regional medical research in the context of European integration - current trends - UMFT, Medical Sciences Academy, Timisoara Branch, University of Szeged, University Paris-South, France, 1-5 October 2003;
 - 2nd International Conference of Cardiovascular, 2-4 April 2002, UMFT, Cardiovascular Diseases Institute Timisoara;
 - Romanian - German Days of Obstetrics-Gynecology - UMFT, University of Frankfurt, Germany, September, 2002, Timisoara, Frankfurt;
 - Stomatological Days of Banat, 20-22 May 2002, Faculty of Dentistry.

Products created/homologated/capitalized / Inventions/Patents
(maximum 10 significant products) **3**

- Antiinflammatory and analgetic compounds, unguent, -Peter Terness, Dan Navolan, Brigitte Kopp;
- Electrodesonde for the study of intraatrial and atrioventricular conductioni - Stefan I. Dragulescu;
- Therapeutic ointment on tioglicoid extracted from Bassic Olearcea against rheuma and inflamations - Mircea Goian, Horia Vermesan;
- Automatic device used in the albumine preparation method Meyer-A/11988/16.07.2002 - Marius Raica, Cristian Suci.



Eccardiography – Cardiology Center

Within the Cardiovascular Diseases Research Centre the research results are theoretically valorised by the acknowledgement of current scientific theories, by initiation of new research directions and by shaping a complex and integrated vision over the studied topic; at the practical level, the results are valorised by assigning some strategies of diagnosis, evaluation, treatment and follow-up of the patients. Each department has as priority research interests, top themes of modern cardiology: complex medical and surgical diagnosis and treatment, prophylaxis and recovery of cardiovascular diseases - identification and fight against cardiovascular risk factors, the study of the efficiency of various modern diagnosis and treatment methods, risk stratification and evaluation of results on short and long term. Postgraduate training programmes intend to implement new ways of teaching that effectively involve practical

activity, by the transition from an informative to a formative teaching system, and also by contributing to a regional development with positive impact on the labour market , so as to determine a decrease of emigration of Romanian specialists. We chose these research themes in order to ensure our participation in grant competitions and to obtain international co-operations with external funding.

National and international recognition of the assistance and research quality is materialised not only by the number of attendances in congresses and conferences, but also by the appraisal from first rank worldwide personalities from the field of cardiology: Prof. Marius Bamard, MD, PhD, (South Africa), Prof. Mervyn Gotsman, MD, PhD, (Israel), Prof. Gunter Laufer, MD, PhD, (Austria), Prof. Joep Perk, MD, PhD, (Sweden).



Laboratory – Cardiology Center



Library
Cardiology Center



Cateterism – Cardiology Center

Cardiovascular Diseases Institute of Timisoara aims to develop guides for medical assistance for each category of patients.

Within the Cardiovascular Diseases Institute of Timisoara premieres of Romanian cardiology took place:

- the first rotablation (coronary permeabilisation by use of a special technique);
- the first use of intracoronary ecography;
- the first implantable defibrillator;
- the first ablation by radiofrequency;
- the first ergospirometric testing (direct measuring of the maxim de oxygen consumption and of anaerobic limit).

International Cooperation

GENOSTEM - FP6 INTEGRATED PROJECT, no. 503161/2003-2006, "Adult mesenchymal stem cells engineering for connective tissue disorders. From the bench to the bed side"

Project funded by European Union in the 6th Framework Programme - Integrated Projects instrument

Cell therapies represent a new area of fundamental medical research that will have a significant impact in the development of medical sciences. It will create new techniques and will offer, thanks to the biotechnology, new products designed for the treatment of diseases considered until recently incurable, as, for example: cardiovascular diseases, metabolic diseases, degenerative osteoarticular disorders, but also pulmonary and neuro-degenerative diseases.

Genostem represents a consortium of European leading scientists on "Adult Mesenchymal Stem Cells (MSCs) engineering for connective tissues", working together in an integrated project of the European Commission FP6 research funding programme.

The objective of Genostem is to establish a European international scientific leadership for stem cell regenerative medicine in the field of connective tissue disorders.

The objective of this project is to demonstrate that adult MSC are the ideal candidates to serve as the building blocks for bone cartilage and ligament engineering.

Over 50 million European citizens suffer from some form of connective tissue disorder. Genostem has been created for them. The specific issues that will be addressed include:

- To purify and optimize the culture of MSCs
- To identify novel factors essential for MSC proliferation and differentiation
- To engineer MSCs to obtain repair of the target tissue and to define optimal conditions for transplantation of MSCs in normal and pathological tissue.
- To develop clinical trials using autologous MSCs in bone, cartilage, and tendon disorders.

The project is coordinated by Professor Christian Jorgensen (MD, PhD) from the French National Institute of Medical Research (INSERM).

Genostem will study the complete MSC gene product repertoire using genomic and proteomic analysis that should provide us with the molecules and pathways potentially operative for the maintenance and differentiation of stem cells. Genostem will develop innovative technologies to generate biodegradable matrices, scaffolds and microcarriers that bind pharmacologically active proteins and allow their delivery in a controlled way; these biomaterials will allow us to engineer MSCs such as to obtain optimal repair of the target injured tissue. In a field in which ongoing treatment of chronically ill patients is expensive and unsatisfactory, it is critical to develop clinical solutions.

Genostem will use a variety of experimental model systems and develop several innovative technical advances. Isolation and cul-

Financial resources obtained for research

	National millionsROL	Internat. EURO
2004	7084,873	375439
2003	1829,16	57000
2002	1075,00	13300
2001	622,00	12300
2000	510,598	-
1999	238,4	-
1998	289,476	-
1997	245,0	-
1996	197,25	-
1995	215,32	-



ture of MSCs under proliferation and differentiation conditions will be standardized. Standardisation of the genomic and proteomic studies will be introduced in order to ensure that data produced by the different partners can be accurately compared. Also, standard protocols for the transplantation of MSCs or differentiated progeny within different connective tissue sites will be developed. Presently there are no such protocols.

The final result will be a translation to the clinic for the treatment of connective tissue diseases.

Within the consortium, the research is divided between 7 interdependent work-blocks:

- WB 1: MSCs and their isolation;
- WB2: proteomics and genomics;
- WB3: cell engineering and differentiation factors;
- WB4: use of MSCs for cartilage repair;
- WB5: use of MSCs for tendon repair;
- WB6: use of MSCs for bone repair;
- WB7: transition to the clinic.

The team of "Victor Babes" University of Medicine and Pharmacy Timișoara, led by

Professor Virgil Paunescu, MD, PhD, the head of Physiology-Immunology Department is part of WB1, along with institutes from France (FMT, INSERM, CNRS - Centre National de la Recherche Scientifique, AbCys SA, Biopredic), Italy (University La Sapienza), Greece (University of Crete) and Germany (TU Munich).

GENOSTEM in numbers:

- 18 academic institutes
- 5 private enterprises
- 30 laboratories
- 160 scientists
- 10 different countries
- 4 years
- 18 million euro in costs
- 8 752 000 euro provided by the European Commission

Remarkable successes

Within national premieres, we mention:

- the first bone marrow transplant in a child, achieved in 2002
- the first use of the cell therapy in the clinic treatment of myocardial infarction, in 2003.



Microsurgery Center - 1



Microsurgery Center - 2



Lecture Room UMFVBT



Senatory Room UMFVBT



Rector

Prof. Tudorel Ciurea, PhD

Historical Overview of the University

On 2/10 1970 was published the Decree that founded the Faculty of Medicine Craiova. In 1976, was founded the Stomatology Department and in 1996 the Pharmacy Department. In 1998, the Roumanian Parliament founded-law no.119/1998-the University of Medicine and Pharmacy Craiova, apart from the University of Craiova. In 1998- was founded a Medicine College - departments: Medical nurse & Dental technique;



2000 - Physiokinetotherapy; 2004 - Medical aid & Midwives; 2005 - masters: Medical Informatics, Biostatistics & Management of Health Centres.

Faculties and Departments

- Faculty of Medicine, departments: General medicine, Midwives, Physiokinetotherapy, Medical aid, the Faculty of Dental medicine, with the department of Dental medicine, the Faculty of Pharmacy - the department of Pharmacy and College of Medicine with the departments of Medical general aid and Dental technique. In accordance with the Government Decision no. 88/2005 it was suggested to MeDC and CNEEA the founding of a Faculty of Medical aid and midwives that included: Medical aid, Midwives, Balneophysiokinetotherapy and medical recovery.

Master and Doctoral Programs

MASTER - In 2004 the necessary approvals were obtained from National Board of Academic Evaluation and Credit and from the Ministry of Education and Research in order to start off, beginning with the session 2005-2006, 2 postgraduate programs in Medical informatics and Biostatistics and the Management of health centres.

Doctoral programs - Since 1999, U.M.F. Craiova became a PhD Organising Institution (P.O.I), the workplace of 43 PhD supervisors, over 570 doctoral students doing research in 28 specialties.

Patrimony

Currently, the institution includes two buildings, located near the District's Clinic Hospital of Emergency No. 1 Craiova, that assures the necessary space to carry on preclinic learning process, having lecture rooms, practice halls and laboratories, libraries, reading rooms. The clinic activity is carried on especially in college clinics belonging to the 13 hospitals, institutes, laboratories and polyclinics, rescue services.

Fields in which human resources are trained

UMF Craiova, through its faculties and existing departments, both long-standing and short, offers the students, during the studies, a complex sum of notions in all medical fields, dental medicine and pharmacy, providing the future graduate with a solid base of professional qualification so that in a first stage, they would be prepared to ensure primary medical aid, and in a further stage the achievement of a specialty.

Presentation of research activity chart

The Department for Promotion, Organisation & Scientific Research Coordination of the University of Medicine and Pharmacy Craiova - founded on 12.12.2001 through a Senate's decision, linked to CNC-SIS and UMF Rector's office.

- DPOSRC1. informs about the functioning principles and evaluation criteria imposed

Human Resources

Professors	51
Senior Lecturers	57
Lecturers	88
Assistant Lectures	129
Teaching assistant	33
Research Fellows	5
Administrative Staff	175
Students	3603
of which:	
Undergraduate	2680
Master	350
PhD - full attendance	27
PhD-attendance not required	546



- by EU, for the universities competition and adhesion to the scientific area of central Europe;
- reflects the academy and students' involvement in scientific research development process;
 - disseminates the research data.

Structures

Research Institutes	-
Research Centers	1
Research Laboratories	6
Multi-user Research Centers	1

Top Priority Research Directions

- Updating and improving policies and institutional strategies in order to increase the research quality
- professors' institutional support in processing research grants projects and getting research contracts
- documents deposition to found new research centres-sustaining the organisational process of data base and multiple usage labs (didactic, research, medical aid);
- handing in research projects in competitions for grants, at least 2/department;
- the institution's financial support for research;
- attracting youth toward research.

Outstanding Research Infrastructure)

- DNA study program-the laboratory for molecular diagnosis and DNA typification;
- UMF Craiova's Department of Gastroenterology has accomplished, as a premiere in Romania, a modern and attractive on-line atlas of linear echoendoscopy. The interesting cases presented here, are illustrated with images and high-quality movies, made with the latest digital technology(DVD) accessible at <http://www.eusatlas.ro>.

International Cooperation

Collectives within the University of Medicine and Pharmacy Craiova are part of the European thematic networks, as: Med-Net, SIDA NET, IIME, CIDMEF.

The number of papers published in ISI-quoted journals

42

(the most cited 10 papers)

- Spontaneous Pancreatico - Renal Fistula*, A. Săftoiu, I. Rogoveanu, T. Ciurea, *Gastrointestinal Endoscopy*;
- Hepatic arterial blood flow in large hepatocellular carcinoma with or without portal vein thrombosis: Assessment by transcutaneous duplex Doppler Sonography*, Săftoiu Adrian, Ciurea Tudorel, Gorunescu Florin;
- Queueing theory and cost of hospital care*, F. Gorunescu, S. McClean, *British Medical Journal*;
- Apoptosis and angiogenesis - paradoxical phenomena involved in vascular alteration in the diabetic kidney*, C. Pisoschi, M. Baniță, C. Stănculescu, M. Grigorescu, *European Journal of Biochemistry*;
- Synthesis and characterisation of new 4-(Phenylazo) phenoxy acetic acids*, V. Tudor, C. Lepădatu, V. Pop, A. Gheorghe, N. Stănică, M. Pplaveti, M. Brezeanu, *Revue Roumaine de Chimie*;
- Stochastic modeling of tumor volume assessment and growth patterns in hepatocellular carcinoma*, A. Săftoiu, T. Ciurea, F. Gorunescu, I. Rogoveanu, M. Gorunescu, C. Georgescu, *Buletin du Cancer/ Electronic Journal of Oncology*;

The number of papers published in journals from the main stream of publications

1265

(the most cited 10 papers)

- Child Omphalocele Treatment Evaluation in Time*, F. Ignat, *Oftalmologia*;
- The Importance of Self-Antibodies Determination in Chronic Autoimmune Hepatitis Diagnosis*, F. Petrescu, *Craiova Medical Journal*;

- Cytokine Involvement in Ischemic Cardiac Disease Pathogenesis*, S. Rogoz, C. Avramescu, M. Comanescu, I. Silosi, R. Musetescu, A. Teodorescu, V. Biciusca, *Craiova Medical Journal*
- Endoscopic Diagnosis of Gastric Cancer*, P. Mitruț, F. Petrescu, A. Susanu, A. Vaduva, S. Zaharie, A. Genunche, M. Georgescu, *Romanian J. of Gastroenterology*;
- Laboratory Diagnosis Aspects of Candida Albicans Respiratory Infections*, M. Marx, C. Ciobanu, L. Godeanu Stătie, I. Pop, *Journal of Romanian Parasitology*;
- Microscopic Research concerning Senecio Jacobaea L. (Asteraceae) species*, D.G. Mogosanu, L.E. Bejenaru, C. Bejenaru, H. Popescu, L. Mogoanta, *Craiova Medical Journal*;
- Etiological Exceptions in Upper Digestive Haemorrhage*, V. Vasile, R. Nemes, I. Georgescu, A. Rotaru, V. Surlin, *Surgery*;
- The Induction of Experimental Allergic Encephalomyelitis as Human Demyelination Diseases Model (Multiple Sclerosis)*, F. Mixich, I. L. Groza, V. Mixich, *Craiova Medical Journal*;
- Cytokine Involvement in Pathogenesis of Oropharynx Candidosis*, S. Rogoz, C. Avramescu, I. Danaricu, I. Silosi, M. Craioiu, M. Comanescu, C. Silosi, C. Poulakis, *Journal of Romanian Parasitology*;
- Extramedullary Spinal Masses*, A. Georgescu, E. Andrei, D. Dumitrescu, A. Bondari, Z. Stoica, *Medical Imaging*.

The number of papers published in volumes of international scientific conferences with reviewers

814

(10 papers presented at the most prestigious events)

(Continued on page 203)



Presentation of Laboratories

As part of the Discipline of Cellular and Molecular Biology, runs the "Laboratory of molecular diagnosis and DNA typification", the first one of this kind in Romania., that works in collaboration and based on a contract with the Institute of Legal Medicine Craiova. This laboratory was created following the Ministry of Justice decision no. AMA/1454/31.08.2000, which specified that the two institutions, the former Exterior Laboratory of Legal Medicine Craiova, the actual Institute of Legal Medicine Craiova and the University of Medicine and Pharmacy Craiova, could perform, when requested by a court of law, by legislative bodies and interested individuals, on cost, according to legal requirements in force, the entire series of investigations on human DNA, used to establish the filiation, to identify -



Investigations on human DNA

based on fragments of tissues and organs or other biological products that contain DNA.

Through the address no. XI/C/GH/ 9118/ 15.12.2000 of the Ministry of Health, Direction of Strategy, Development and Management, the functioning of this laboratory was approved.

The laboratory of molecular diagnosis and DNA typification became known and developed through the professional work proved every time when its expertise was demanded, the results it offered being highly accurate.

(Continued from page 202)

- *Synovial factors part in shoulder-kinetics*, G. S. Drăgoi, R. Melinte, P.R. Melinte, R.C. Dogaru, Biomechanics of impact/vehicle passive safety problems in central and eastern Europe, Warsaw, Poland;
- *Morphological changes of stromal components in prostatic adenocarcinoma*, I. Plesea, S.D. Enache, V. Cornanescu, M. Marcu, L. Mogoantă, F. Bogdan, Abstracts of the XXIV-th international congress of the international academy of pathology, histopathology, Journal of the British Division of the International Academy of Pathology;
- *Eeg brain mapping by burch period analysis in diagnosis of ischaemic cerebrovascular diseases*, L. Giucă, D. Cioroiaru, N. Rușci, C. Zaharia, C. Petrică, A. Neșțianu, V. Neșțianu, 11-th European Congress of Clinical Neurophysiology, Barcelona, Spain;
- *The study of visual evoked potentials in compressing sellar processes*, M. Iancău, D. Georgescu, M. Bistriceanu, M. Popescu, P. Badea, S. Ramboiu, D. Enescu - Bieru, V. Neșțianu, 11-th European Congress of Clinical Neurophysiology, Barcelona, Spain;
- *Inthrorax ectopia of a supplementary liver lobe and of right kidney imagistic diagnosed*, M. Beznă, S. Beznă, P. Ciurea, T. Ciurea, FALK Szmposium, no.124, Hannover, Germania;
- *Portal encephalopathy at patients with decompensated hepatic cirrhosis and ascites*, S. Beznă, M. Beznă, P. Ciurea, T. Ciurea, Biennial Meeting of the International Association for the Study of the Liver, Madrid, Spain;
- *Study concerning the amplitude and duration of the rader mecker complexes*, S. Beznă, M. Beznă, P. Ciurea, T. Ciurea, C. Zaharia, 11-th European Congress of Clinical Neurophysiology, Barcelona, Spain;
- *Vecd for refractory and resistant multiple myeloma*, M. Badea, D. Badea, 9th International Workshop, Salamanca, Spain;
- *The incidence of the hearing loss after spinal anesthesia in young versus elderly*, P.P. Nicolcescu, F.O. Purcaru, I. Georgescu, International Anesthesia Research Societ 78 Clinical and Scientific Congress, Tampa, Florida, USA;
- *Cardiac involment in horizontally HIV-infected children (18 month survey)*, D.M. Cupșa, A. Cupșa, F. Dumitrescu, F. Romanescu, L. Giubelan, Seventh International Congress on Drug Therapy in HIV Infection, Glasgow.

The number of scientific books published by publishing houses acknowledged abroad

3

(maximum 10 significant books)

- *Human Genetics*, I. Rogoz, Ludmila Perciuleac, 273 pp., Cartdidact Publishing House, Kishinev;
- *Sensorimotor interactions within the context of muscle fatigue*. In: "Sensorimotor Control" (Dengler R., Kossev A., Eds.), M. Tarata, 265 pag., NATO Science Series, Series 1: Life And Behavioural Sciences, Vol. 326: 84-91, isbn 1 58603 081 7;
- *Natural history of HIV infection*, Gheonea Cristian, 250 pag., Monduzi Editore, Bologna.



The CMB laboratories are equipped with a complete scale of systems necessary to analyzing DNA and RNA, including: PCR, RT-PCR, STR analysis, determination of genetic gender and also detecting genetic mutations in different types of cancer through the DGGE technique. Starting with 2004, by procuring a COBAS-Amplicor (Roche) system, we have the possibility to detect and monitor infections with the following pathogen agents: HCV, HBV, HIV, Mycobacterium tuberculosis, Neisseria gonorrhoeae, Chlamydia trachomatis.

Within the framework of this academy, in which the latest information and technique are used to throw light on pathology areas that were covered in mystery for a long time, the students have the possibility to be a part of many projects, therefore, understanding much better their role in a dynamic system of health protection.

Laboratory equipment:

- Systems of electrophoresis for agarose and polyacrilamide;
- System of mutation detection through DGGE;
- COBAS Amplicor analyser (Roche);
- Micropipette; microcentrifuges
- Thermocyclers,
- Vortex mechanical mixers;
- Incubators, autoclaves;
- Sterile hote;
- Scales;
- Vortex magnetic mixers;
- Spectrophotometer;

Genetic mutations detected through DGGE:

- BRCA1 and BRCA2 - breast cancer;
- MLH1, MSH2 și MSH6 -colorectal cancer;
- TP53 - tumoral protein p53;
- RET - gene that encodes the tirozyn-kinase receptor;
- RB - gene responsible with the emergence of Retinoblastom;
- CFTR - gene of cystic fibrosis.



International Affiliations of the University

- Agence Universitaire de Francophonie (AUF);
- Association of Medical Schools in Europe (AMSE);
- Association for Medical Education in Europe (AMEE);
- Conférence Internationale des Doyens de Facultés de Médecine d'Expression Française (CIDMEF);
- International Institution of Medical Education (IIIME);
- SIDA-NET.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	487	-
2003	65	-
2002	199	47565
2001	52	17963
2000	98	28461
1999	10	5655
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Success stories

Hepatectomy-procedure and technique in hepatic neoplasm. Medical premiere in Craiova, achieved by Prof. Univ. dr. Irinel Popescu and the medical team of the Clinic Hospital of Emergency conducted by Prof. Ion Georgescu, MD, PhD.

It was an event, which strengthened the friendship between the surgeons, the idea of finding a role-model in work and life, a role-model on whom you may rely on in your formation. For the team of surgeons from Craiova, a notion has devolved: to devote oneself to its profession means not only to be constant with the current patients, but to pay attention to everybody that look at you with interest, that follow your progress, to all of your people, that you shouldn't ever disappoint. This is the way friendship and success developed within the team of surgeons from Craiova and among the disciples and admirers of Dr. Irinel Popescu. Since

then, they started feeling as a big Romanian team, facing a future open to performance, dignity and recognition.

International program "Diabetic eye"-collaboration between the Disease of Nutrition Discipline (Head of discipline Senior Lecturer Maria Mota, MD, PhD), the Discipline Ophthalmology (Head of discipline Prof. Florica Ignat, MD, PhD) and their equivalents in Denmark.

After many years of trials, of drawing some sponsors' attention, towards the departement of Health, the first result, fragile but effective for the years to come, was achieved. The association of charity LIONS, from Denmark, receptive to the former applications of LIONS Craiova, has brought in premiere for the diabetology section, the kits to determine the blood sugar value, that could be used directly, by the patient. Thus, for the first time in Craiova, 70 children, seriously ill, were saved. Further, the diabetic's school has developed and more and more individuals with diabetes, that were included and supervised within the diabetes center of Dolj district, started to benefit of sanitary

education and kits to determine blood sugar value.. The friendship and the maintained contacts with the LIONS club in Denmark and the LIONS club in Craiova determined the achievement of a grant consisting in obtaining competitive equipment, bought from the donations of the danish clubs and of the Novo Nordisk firm. The friendship mission, the perseverance of the LIONS Craiova club member(Prof. Maria Vrabete, MD, PhD), that didn't step back from bureaucracy and rusty conceptions of the suspicious and the reluctant to what was new and of western influence, led to the successful accomplishment of a premiere in Craiova: the introduction of laser therapy as a healing mean in diabetic retinopathy. It was a success of some individuals' generosity, that today's beneficiaries don't know and those who work may not remember. It was and still is a success and a joy for those who, as old initiators and mere eye witness today, observe the evolution and the road to novelty of the Ophthalmology Section.

International Cooperations

- There were carried into effect the stipulations of the bilateral agreements signed with 10 european universities: University of Moins-Hainaut - BE, University of Patras - G, Complutense University of Madrid - E, Aristotle University of Thessaloniki - G, University of Lisbon - P, University of Maastricht - NL, Ernst-Moritz-Armdt University Greifswald - D, University of Torino - I, University Rene Descartes Paris 5 - F, University Pierre and Marie Curie Paris 6 - F hereby the students and the professors of UMF Craiova participate in mobility residential courses.
- The project of placing the students in research PL89052/S, was successfully carried on, within the european program Leonardo da Vinci;
- Within the same program Leonardo da Vinci, in present is running another project to place the students in molecular diagnosis PL93205/S;
- The service of International Relations supported the students exchange (summer

classes, bilateral exchanges with institutions from various countries), the students' and professors' participations in international congresses;

- An introductory CD was conceived and realized to present, which contains a multilateral presentation of the UMF Craiova(in English) and the architectonic objectives of the city, to attract foreign tax-payer students but also as a necessity for international exchanges of students and professors;
- A web page dedicated to international programs was designed and became functional, hosted by the institution's site, from where application forms can be downloaded in order for the foreign citizens to sign up for classes and acces information on university curricula, taxes, visas, accomodation, fares and social activities.

(<http://www.umfcv.ro/en/Organization/IntRel/index.html>)





Rector

Prof. Constantin Copotoiu, PhD

Historical Overview of the University

The University of Medicine and Pharmacy of Târgu Mureș was founded in 1945 as Institute of Medicine and Pharmacy which became a University in 1990. Education was and is still performed in Romanian and Hungarian languages. As a state academic institution, part of a national educational system, accessible to all citizens, Romanians and foreigners, it offers medical training at the level of excellence centre observing its mission assumed in its own Charta and required by its fame.



This renown is due to famous professors such as: *Mátyás Mátyás, Victor Emilian Bancu, Liviu Popovici, Corneliu Ducea, Dóczi Pál, Rácz Gabriel, Maros Tiberiu, Asgian Berdi, Olosz Egon, Boga Kálmán, Dorin Nicolescu, Simion Cotoi, Vasile Sabadean.*

Faculties and Departments

- 4 faculties: Medicine, Dentistry, Pharmacy, Midwifery;
- 4 short term specialities: Medical Assistance, Dental Technique, Dental Assistance, Pharmaceutical Assistance;
- 4 departments: Postgraduate Department, Audio - Visual, Socio - Humanities, International Relations.

Master and Doctoral Programs

Doctoral programs in three main fields: Medicine, Dentistry, and Pharmacy.

Patrimony

5 buildings with a total area destined for education of 12,288.49 m²; 4 hostels

accommodating 1133 students, sport facilities: 2 buildings (2,044.44 m²), 2 sport grounds (12,085 m²), experimental units, botanical garden and medicinal plants garden (2 ha), bio basis and experimental surgery (546.30 m²).

Fields in which human resources are trained

Health.

Presentation of research activity chart

Starting with 2004, at the suggestion of the University Senate a Department of Postgraduate Training and Research was founded. Within this structure specific actions and measurements of organization and accreditation of research centres will be taken in the near future. Groups of fundamental and applied research have been settled (12 groups belong to the Faculty of Medicine, 4 to the Faculty of Pharmacy and 4 to Dental Medicine). They are coordinated by the Department of Research and Postgraduate Training.

Structures

Research Institutes	0
Research Centers	0
Research Laboratories	8
Multi-user Research Centers	1

Top Priority Research Directions

The main strategic objectives is the development of the university by establishing clear and coherent goals, by involving each member of the community in a common effort to meet the requirements of a fundamental and applied research in medical assistance. Since 2004, research has improved in dimensions and essence, in conception and assessment. There is a certain possibility to achieve a balance between research and other fields by: a reevaluation of the objectives of the research strategies of promotion and organization; an efficient support of interdisciplinary research

Human Resources

Professors	43
Senior Lecturers	46
Lecturers	61
Assistant Lectures	161
Teaching assistant	66
Research Fellows	0
Administrative Staff	260
Students	3049
of which:	
Undergraduate	2710
Master	0
PhD - full attendance	11
PhD-attendance not required	328

programs capable to lead both to the improvement of the population's state of health and to the sanitary management by exploiting the present scientific acquisitions; forming groups of fundamental research, medical, pharmaceutical, dental, to deal with specific health problems as well as research centres to take into account the human and technological potential of our institution; stimulation for academic training in different fields including Masters Degree; permanently sustained policy of raising the interest in research of the students as well as of the teaching staff by finding the best ways to motivate and reward them; supporting educational and research programs as well as encouraging academic community for a better participation to national and international events.

Outstanding Research Infrastructure

Research laboratories:

- research and diagnosis in Molecular Biology and Cell Cultures - equipped and used by all the preclinical disciplines (research basis with multiple users)
- Molecular Biology in HIV/ AIDS Centres- Bioequivalence studies
- of Simulations in Emergency Medicine- of Medical Imagistics
- of Microsurgery and Laparoscopy
- of Immunology and Transplant, of Biological Cardiac Valve, Angiography and Interventional Cardiology

Communication and Audiovisual Centre:

- set up following the award of a CNFIS/World Bank grant (no. 286/1999) of 240,500 USD, it is the backbone of the IT structure of the University of Medicine and Pharmacy of Targu Mures. The ultramodern infrastructure of the centre (RISC servers with a storage capacity of terabits, backbone Gb-Ethernet on optic fibre) and its highly qualified staff contributed to the achievement of both an Intranet network with more than 220 computers, mainly Pentium IV and of a high speed Internet connection (11 Mb/s).
- All these enabled us to design and implement some IT solutions at very low costs: a medical virtual library accessible by Internet (more than 1000 books online); the compilation and integration of over 2000

The number of papers published in ISI-quoted journals

17

(the most cited 10 papers)

- *Spermatocytic seminoma. A clinico-pathological and immunohistochemical study of 7 cases*, Borda A., *Ann Pathol.*, 2004 Apr; 24 (2): 161-6;
- *Miscellaneous benign lesions of the bladder and the urinary tract*, Borda A., *Ann Pathol.*, 2004 Feb; 24 (1): 18-30;
- *Analysis of the kinetics of CO binding to neuronal nitric oxide synthase by flash photolysis: dual effects of substrates, inhibitors and tetrahydrobiopterin*, Bengea S., *Journal of Inorganic Biochemistry*, 2004, vol.98(7), p.1210-1216;
- *Interdependent chemical-electrochemical steps in retrometabolism-based drug and safer chemical design*, Tokes B., Suciú G., Nagy G., *Pharmazie*, 2002 Feb; 57 (2): 122-6;
- *Liquid chromatographic Enantio-separation of beta-Blocking Agents with (1R, 2R) - 1,3-diacetoxy-1-(4-nitrophenyl)-2-propyl isothiocyanate as Chiral Derivatizing Agent*, Gyeresi A., *Journal of Chromatography, A* 910, 2001, 247-253;
- *Immunohistochemical features of paragangliomas*, Pavai Z., *J Cell Mol Med.* 2001 Jul-Sept; 5 (3): 311-6;
- *Validation of an HPLC method for the determination of ciprofloxacin in human plasma*, Imre S., Dogaru M.T., Vari C.E., Muntean T., Kelemen L., *J Pharm Biomed Anal.* 2003 Sep 15;33 (1): 125-30;
- *Effects of variability in anatomical reconstruction techniques on models of synaptic integration by dendrites: a comparison of three Internet archives*, Szilagyi T., *Eur J Neurosci.* 2004 Mar; 19 (5): 1257-66;
- *Patterns of Outcome and Prognostic Factors in Primary Large-Cell Lymphoma of the Testis in a Survey by the Interantional Extranodal Lymphoma Study Group*,

G. Oltean, *Journal of Clinical Oncology*, 2003, vol. 21, nr. 1, p. 20-27

- *Complex Surgical and Medical Treatment for Secondary Thoracic Echinococcosis*, A.M. Boşianu, *Chest*, 2004, 801-2S.

The number of papers published in journals from the main stream of publications

966

(the most cited 10 papers)

- *The death of the brain*, Ion Pascu, Rodica Balasa, *BMJ- The Romanian Language Edition*, the 2004 edition; 2: p. 90-95;
- *Vesiculotectal androgenitalis sindrómá által okozott pseudohermaphroditismus femininus múltéi korrekciója után bekövetkezett terhesség esete*, Szabó B., *Orvostudományi Értesítő (Cluj)*, 2000, LXIII, p.297-301;
- *Prognosztikus mutatók értékelése és összehasonlítása emiokarcinómában*, Jung János, *Orvostudományi Értesítő (Cluj)*, 2001, vol.74, p.165-169;
- *Determination of aaprent activating energy of solubilizing of dipalmitoylphosphatidylcoline and an egg-yolk lecithin bilayers with surfactants by static light-scattering measurements*, Hobai S., 2001;
- *Investigations on the colour reactions and thin-layer chromatographic separation of five cyclodextrin derivatives*, Gyeresi A., *Proc. 10th International Symp. Instrum. Planar Chromatog., Res. Inst. Med. Plants (Budakalasz, Ungaria)*, 1998, 133-144;
- *Comparative study of results obtained at dosing the sulfonamide acid through nitrometry with electrodes*, Muntean D., *Cluj Medical Journal*, 2003, vol. LXXVI, no. 3, 711-717;
- *CO binding to the isolated oxygenase domain of neuronal nitric oxide synthase: effects of inhibitors and mutations at the substrate-binding site*, Bengea S., *Journal of Inorganic Biochemistry*, 2003, vol. 94 (4) p. 343-347;

(Continued on page 209)



resources of medical information (books, courses, films, etc.) accessible online for free.

- The communication infrastructure also permits the access of molecular data banks of more than 500,000 structures of biological importance by using ChemFinder - the online access to a series of facilities and medical resources as TORVS (Chemical Internet Services - a European Project supported financially by the EC and the German Foundation for Science which allows the access to more than 250,000 chemical structures and thousands of IR and UV - VIS spectra of biological importance for research in QSAR/ QSPR fields) respectively the Visible Human American project (supported financially by the National Library of Medicine USA).
- One of the most remarkable achievements in the last year was the development of 2 distributions of Linux Live CD type. They are dedicated to medical research and practice and can be offered to scientists from Romania for free - GPL system (General Public Licence).
- The University Communication Centre ensures the communication infrastructure and/ or the administration of the servers for two other projects implemented in our University:
 - SICOB (Integrated System Administration of Budgetary Organizations) Phare project (about 60,000 \$).
 - Electronic Administration and online access to the University Library, a project supported financially from our own resources (about 20,000\$) and based on ALICE software platform (<http://193.226.21.160/scripts/ARWinq.dll>).

International Cooperation

Since 2000 the Department of Chemistry - Physics of the Faculty of Pharmacy led by Prof. Béla Tokés, MD, PhD, has been a full right member of CEEPUS H - 076 networks. The network is based on research and cooperation in the field of Bioanalytics (Teaching and Learning Bioanalysis). It is coordinated by Prof. Ferencz Kislár, MD, PhD, from the Bioanalysis Institute of the University of Pécs, Hungary. The activity of the members of this network (16 famous universities from 8 countries) was rewarded by the Ministry of Education from the countries which are members of CEEPUS

(Continued from page 206)

- Colorectum cancer with elderly people, Coros M.F., Copotoiu C., The Medical-Surgical Journal of the Medical Society, 2004;
- Obstructive lithiasis of the lumbar ureter - the endoscopic retrograde therapy, Golea O., Boja R, Osan V., Muntei Ion, The Medicine and Pharmacy Journal of Tg. Mures, 2004;
- The ano-rectal cancer - therapeutic attitude, Copotoiu C., Coros M.F., Molnar C., The Medicine and Pharmacy Journal of Tg. Mures, 2004.

The number of papers published in volumes of international scientific conferences with reviewers

360

(10 papers presented at the most prestigious events)

- Antioxidants in Fruits of *Physalis* aikengi L., Eşianu S., 3rd Conference on Medicinal and Aromatic Plants of Southeast European Countries, 5-8 sept. 2004, Nitra-Slovakia, Book of Abstracts, p. 31;
- L'arthroplastie hybride totale d'hanche - 9eme Congres de l'AOLF (Association des Orthopedistes de Langue Francaise), O. Nagy, Montpellier, 12-15 mai 2004. Volum de rezumate, p. 151;
- Enantioseparation of Beta-Blocking Agentas with a new Isothiocyanato -Type Derivatizing Agent, A. Gyeresi, Eur. J. Pharm. Sci. 11 (Suppl.), 2000, 565;
- Side-Effects of Chemotherapy on the Gastric and Duodenal Mucosae in Patients with Hematologic Diseases, G. Oltean, Volum Folk Symposium 132, 4-11 October 2002, Freiburg, Germany, abstract 13;
- Prognostic factors and treatment outcome in B-cell non-Hodgkin's lymphoma, G. Oltean, Volumul de rezumate "EACR XVI-2000", Athos-Pallini, Halkidiki, Greece, 2000, p. 92;
- Reno-urinary Disfunction in Children with AIDS Receiving Antiretroviral Therapy", Rodica

Pascu, Seven-th Interantional Congress on Druh Therapy in HIV Infectious, Glasgow, UK; 2004, p. 93;

- Immunological improvement in HIV infected children receiving antiretroviral and isoprinosine therapies, Minodora Dobreanu, al XX-lea Congres International de Imunologie, Montreal, 18-23 Iulie 2004, 682 AM, Th. 48.56, Abat. 4964;
- Radiological and CT scan aspects in pituitary tumor diagnosis, M. Buruian, European Congress of Radiology, 2001, vol. 11, nr. 2, C-0606.
- Biomechanics Bases of foot disorders, Nicolaescu I., XII-lea International Symposium on morphological sciences, 2002, abstracts p. 230;
- The evaluation of the experimental model of osteoporosis induced through bilateral ovariectomy on mature female rats, Brînzaniuc K. XII-lea International Symposium on morphological sciences, 2002, abstracts p. 67.

The number of scientific books published by publishing houses acknowledged abroad

10

(maximum 10 significant books)

- Mérgezo növények (Plante toxice), Mária Kincses Ajtay, 2003, 125 pag., Editura Promo, Budapest; Mérgezo növények (Plante toxice), Mária Kincses Ajtay, 1993, 120 pag., Editura Kossuth, Budapest;
- Gyógyszervegyületek vékonyréteg-kromatográfiás minőségvizsgálata, Gyéresi Arpad, Kata Mihály, 2000, 545 pag., Editura Kontrapozst Bt. Budapest;
- Pathologie tumorale de la prostate, Angela Borda, coautor la 2 capitolie, 2004, 174 pag., Editura Elsevier;
- The emergency assistance of the traumatised patient, Jim Holliman, Raed Arafat, Cristian Boeriu, 2004, 298 pag., Penn State University, Hershey Publishing House, Pennsylvania USA;

(Continued on page 210)



- 2000 - 2001 TEMPUS PHARE JOINT EUROPEAN PROJECT.
- 2002-2004 - partner in PIN/MATRA program for 7 countries in Central and Eastern Europe.
- 2003-2004 - SOCRATES-Erasmus 3 - Synchronization of teaching and research issues all over Europe.

**Products created/homologated/
capitalized / Inventions/Patents**
(maximum 10 significant products)

8

- The method of obtaining drugs of yeast enriched with iron, Varga E, licence of inventor no. 118925/30.03.2004;
- The method of obtaining drugs of yeast enriched with selenium, Varga E, licence of inventor no. 118840/30.12.2003;
- The method of obtaining drugs of yeast enriched with zinc, Varga E, licence of inventor no. 118926/30.03.2004;
- The method of obtaining drugs of yeast enriched with chrome, Varga E, licence of inventor no. 118927/30.03.2004;
- The procedure of surgical treatment of pulmonary abscess with bronchiolar fistula, Botianu A, licence of inventor no. 100135 OSIM;
- Thoracic-pleural- plastic procedure for the medical- surgical treatment of the thoracic empyema with or without bronchiolar fistula, Botianu A, licence of inventor no. 100135 OSIM;
- Surgical approach for access to the suprarenal gland and the superior pole of

(Continued from page 209)

- Genesich Antal Emlékkönyv, Brasai Z., 1994, 1 capitol, 91-96 pag., Editura G.A., Budapest;
- Az alkoholizmus közös gondja, Brasai Z, Brasai Erzsébet, 1994, 1 capitol, 125-143 pag., Editura O.A.I, Budapest;
- Az urológia válogatott fejezetel, 1996, Brasai Z., 1 capitol, 138-

- 141 pag., Editura Tudomány, Budapest;
- Kardiológia Angiológia, Brasai Z., 1999, 297 pag., Editura Spinger Verlag, Budapest;
- A végtagi verérszűkületek kezelése in Humán Farmakológia, Brasai Z., 2002, 598-605 pag., Editura Medicina, Budapest.

- the kidney, Botianu A, licence of inventor no. 100135 OSIM;
- The procedure of surgical treatment of hernia and diaphragm eventrations, Botianu A, licence of inventor no. 102500 OSIM.

International scientific activities
(the 10 most important ones)

- Romanian Society for Pure and Applied Biophysics - International Summer School of Biophysics "New Trend in Biophysical methods Related to Biomedical Research", 2001;
- Romanian Society for Pure and Applied Biophysics - The Autumn School of Biophysics, 2003;
- International Symposium of Interventional Cardiology, 2002, 2003, 2004;
- Students' Scientific Conference, 2004;
- EME Scientific Conference, 2004;
- International Symposium "Mures Dentistry Days", annual edition 2002-2004.

One of the most important recent achievements at the **Communications and Audiovisual Centre** are 2 distributions of Linux Live CD type dedicated to research and medical practice, which we can offer for free for the Romanian Scientific Community in GPL system (General Public Licence):

ROSLIMS - Romanian Simple Linux for Medical Student - the first live CD distribution with complete support for Romania, which includes a 2.2 Gb Open source software together with a series of medical applications (XdrawChem - advanced molecules editor, Bibliographer + Medline Query Interface - free manager for bibliographic references and interrogation interface for Medline, CTSim-CT simulator etc.) as well as a 72 page tutorial in Romanian.





We would like to mention that ROSLIMS distribution is one of the 4 Romanian distributions of Linux registered on: www.distrowatch.com, site that monitors the most important 200 Linux distributions in the world. It is as far as we know the only one that offers complete localization for Romania. For further references see: <http://distrowatch.com/table.php?distribution=roslims>, respectively the official page of ROSLIMS www.umftgm.ro/roslims/.

Since 2000 we have been accredited as Local Cisco Academy within the Cisco Network Academy Program, which allows us to offer training in computer networks (CCNA certificates - Cisco Certified Network Associate) for students, teaching staff, network administrators from hospitals and clinics.

Laparoscopic Surgery (mini invasive) was introduced as a subject of Surgical Disciplines at the UMPH, Targu Mures in 1993. Nowadays there are more than 15,000 interventions using this technique. Considered as a revolutionary technique at the end of the millennium, it offers special advantages: decrease of post surgical pains, shorter time of hospitalization, aesthetic aspect, reduced expenses of hospitalization, fastest recovery.

Many types of celioscopic operations are based on this method: cholecystectomies, antireflux operations, splenectomies, hydatid hepatic cyst, retroperitoneal tumours, rectum and colon resections, video-assisted thoracic operations, mini- invasive genital operations. Thus our doctors' activity is known in the country and abroad too. National priorities: colon and pancreatic pseudocyst operations (Prof. Constantin Copotioiu, MD, PhD).

Institution of Cardiovascular Diseases and Transplantations, Târgu-Mures, General director Prof. Radu Deac, MD, PhD, incorporates three medical and research laboratories:



Location: TARGU-MURES, 38 Gh. Marinescu Street
Phone number: 0265-213127;

Fax number: 0265-210407
E-mail: rectorat@umftgm.ro; www.umftgm.ro

- **Laboratory of Immunology and Transplants.** During 1999 - 2000 11 heart transplants were performed - 9 in adults, 1 in a child and 1 in an adolescent. The survival rate after 1 year of follow up was 80%, two of them exceeding a period of 5 years after the operation in quite good condition of health. Part of a national program heart transplants represent a method of treatment in case of incurable heart diseases in case of active population, the institution being one of the two centres in the country with such program.
- **Biological Cardiac Valve Laboratory** - having an old tradition in this domain it is the research base which produced over 1000 cardiac valves currently used in clinics. Publications resulted from this activity led to international recognition of the team working at the ICVDT. Basic research in this domain involving compounds of collagen brought to this team the "Emil Racovita" prize of the Romanian Academy.
- **Laboratory of Cardiac Catheterism, Angiography and Interventional Cardiology** is the base for hemodynamic investigations and research.

ICVDT is one of the 7 centres of cardiovascular diseases, which ensures the surgical treatment of different types of congenital, valvular and coronary cardiopathies. ICVDT is number one on a national scale in the treatment of these cardiopathies by open heart surgery having the greatest experience in the pathology of left ventricular post myocardial infarction aneurisms in the whole country.

A new activity was developed recently - surgical treatment of congenital cardiopathies in the new born, the nursing and the infant, which is also number one on a national scale. A new investment was realized for this - operating theatre and intensive care unit dedicated to this age group.

Within the institution, parallel with cardiac patient care, intense research is performed at the same time with academic education, specialization and residency activity.

The development of the Emergency System of Mures County and training in Medical Emergency.

In 1990 our University and the Clinical Hospital of Mures County started a collaboration by experimenting an emergency system that functions in other European countries called SMURD, coordinated medically by the Intensive Care Department and operatively by

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	1705,21	9100
2003	563	-
2002	393	-
2001	89	-
2000	-	250600
1999	-	-
1998	138	-
1997	43	-
1996	-	-
1995	-	-



the Fire Department. In November 1992 the Ministry of Health appointed the new system National Pilot Centre. This centre was offered an intense program of support by the Royal Hospital of Edinburgh and the Fire Brigade of Glasgow and lately by a Foundation for an Open Society from the USA, which created the first laboratory for training. Starting from 1993 this service became SMURD - Mobile Emergency Service Resuscitation and Discharge. During this time the whole activity was coordinated by Dr. Raed Arafat, associated member of our University.

Starting from 2004 our University and this service have a Training Centre in Medical Emergencies, which is equipped with a computerized mannequin Laerdal of SimMan type. The conception of this mannequin permits the simulation of some extremely complex cases, which shows the capacity of an Emergency Medical Team to react properly in case of a patient in a critical condition.

The interface is installed in an internal network of 4 computers, where one of them is at the disposal of the instructor, who has access to all the facilities and the 3 work stations for students. This way they can follow the evolution of the patient as well as the modifications performed by the instructor, but without the possibility to make modifications themselves. These modifications can be followed in group too, when the system is connected to a video projector.

The activity of the team which performs direct interventions on the mannequin is registered by the aid of a camera, which permits live broadcast of the images. They can be visualized on all work stations or on the video projector.



The room where the mannequin is resembles an intensive care unit with one bed, trainees having at their disposal a whole range of devices and materials necessary for a complete resuscitation. This room is separated by the one where the instructor and the other students are partially by a sliding door and partially by a window that permits only to the instructor to see what happens around the mannequin, but not in reverse direction.

The internal network of computers works based on the MICROSIM system, software developed by the Norwegian Laerdal Company. This allows them to perform some simulations of computerized cases using techniques of virtual reality. The training centre owns 3 modules of this type, which permits students to be involved in advanced cardiopulmonary resuscitations, traumatology and interventions in case of chemical accidents.

In June 2000 the Senate of our University approved the foundation of the Research Organization by Contract named "Laboratory for Medicine Testing" (LMT) as a structure with special organizing system with a research profile in the domain of medicine, subordinated to the Faculty of Pharmacy, University of Medicine and Pharmacy, Tg. Mures.

Within this laboratory a laboratory for bio-equivalence - clinical studies was established, which functions corresponding to the authorization issued by the Ministry of Health no. 125/2001. The head of this institution Prof. Maria Titica Dogaru, MD, PhD, the dean of the Faculty of Pharmacy works together with a prestigious team of teaching staff. The exceptional equipment permits to the team to perform several analytical studies with biological materials based on themes included in the strategic research plan of the University.





Public Universities

**Agricultural Sciences and
Veterinary Medicine Specialization**

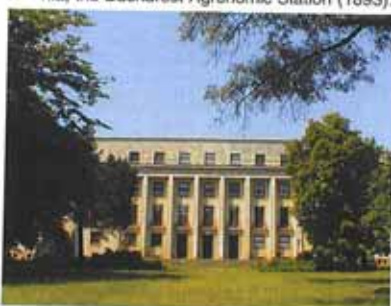


Rector

Prof. Ioan Nicolae Alecu, PhD

Historical Overview of the University

Originating in the Institute of Agriculture from Pantelimon, which started its activity in 1853, and in the School for Veterinary Learning established in 1855, the University of Agronomical Sciences and Veterinary Medicine of Bucharest (USAMVB) is the oldest and largest institution of high education in agriculture in Romania. It is also the birthplace of the first experimental educational farm (1873) and the first agricultural research facility in Romania, the Bucharest Agronomic Station (1893).



USAMVB was always in the vanguard of the activities of education and scientific research in agriculture and veterinary medicine, and had remarkable contribution to the development of these fields in our country. USAMVB has been and continues to be the workplace for a large number of Romanian specialists of international reputation.

Faculties and Departments

Faculties:

- Faculty of Agriculture (with 4 departments: Pedology-agrotechnics-agrochemistry-phytotectonics; Plant genetics, amelioration and protection; Agricultural mecanization). The faculty also includes the Department for Studies with Reduced Frequency and the Zonal University Office for Agricultural Consultancy.
- Faculty of Biotechnologies (with 4 departments: Biotechnologies; Industrial biotechnologies; Chemistry; Biological sciences).
- Faculty of Horticulture (with 4 departments: Botany and plant physiology; vegetables and flowers cultivation, and landscaping; Fruit growing; Viticulture and enology).
- Faculty of Land Reclamation and Environmental Engineering (with 4 departments:

Mathematics, physics and informatics; Constructions, technologies and topography; Land reclamation and rural development; Hydraulics and environment protection).

- Faculty of Management, Economic Engineering in Agriculture and Rural Development (with 2 departments: Management and Marketing; Economy, Accounting and Agro-tourism). The faculty also has two branches, at Slatina and Calarasi.
- Faculty of Veterinary Medicine (with 3 departments: Preclinical sciences; Clinical sciences; Animal production and public health).
- Faculty of Animal Breeding (with 3 departments: Animal nutrition and feeding; technologies; General Animal Breeding).

Departments:

- Department for Distance Studies - offers 6-year university courses in two specializations, as well as 2-year Master courses.
- Department for the Training of Teaching Staff
- Department for International Relations.

Master and Doctoral Programs

MASTER

- At the Faculty of Agriculture: "Durable Agriculture", "Soil science - foundation of durable agriculture", "Agricultural consultancy", "Project management";
- At the Faculty of Biotechnologies: "Modern applications of biotechnologies in agriculture";
- At the Faculty of Horticulture: "Strategies for obtaining unpolluted, quality horticultural products"; "Audit and certification of quality"; International Master "Vine, Wine and Terroir Management - VINTAGE";
- At the Faculty of Land Reclamation and Environmental Engineering: "Rural development and environmental engineering";
- At the Faculty of Management, Economic Engineering in Agriculture and Rural Development: "Management and rural development", "Management of quality and innovation";
- At the Faculty of Veterinary Medicine: "Veterinary clinic practice and pharmacy"; "Veterinary diagnosis and laboratory"; "Food hygiene and public health";
- At the Faculty of Animal Breeding: "Durable systems in animal breeding";
- At the Department for Distance Studies: "Management, marketing and rural development", "Management of innovation and quality".

Doctoral Programs:

- At the Faculty of Agriculture: PhD for the title "Doctor in Agronomy", 9 specializations;

Human Resources

Professors	82
Senior Lecturers	73
Lecturers	120
Assistant Lectures	107
Teaching assistant	20
Research Fellows	0
Administrative Staff	425
Students	8077
of which:	
Undergraduate	6700
Master	420
PhD - full attendance	177
PhD - attendance not required	780



- At the Faculty of Biotechnologies: PhD for the title "Doctor in Agronomy";
- At the Faculty of Horticulture: PhD for the title "Doctor in Agricultural and Forestry Sciences", specialization Horticulture;
- At the Faculty of Land Reclamation and Environmental Engineering: PhD for the title "Doctor in Agronomy" in the field "Civil Engineering and Installations" and in the field "Agronomy - Land Reclamation";
- At the Faculty of Management, Economic Engineering in Agriculture and Rural Development: PhD for the title "Doctor in Agronomy";
- At the Faculty of Veterinary Medicine: PhD for the title "Doctor in medical sciences, field of veterinary medicine";
- At the Faculty of Animal Breeding: PhD for the title "Doctor in animal breeding", 5 specializations.

Patrimony

The university campus includes buildings of the faculties and departments with 12 amphitheatres, 57 rooms for laboratories and seminars, 7 rooms with computer networks connected to the Internet, 3 libraries, a veterinary hospital, a modern sports hall and 4 sports fields, a students' club, a modern cafeteria, a botanical park, greenhouses for vegetables and flowers, solarium, grapevine, fruit and flower plantations, as well as 10 student dormitories. The practical instruction of students takes place in farms at the stations Baneasa, Moara Domneasca, Belciugatele, Pietroasa, Istria and Stoenesti, which belong to USAMV Bucharest.

Fields in which human resources are trained

1. Agriculture: Soil sciences; Administration and valorization of land; Plant protection; Forestry; Conservation, processing and commercialization of vegetal products;
2. Biotechnologies: Industrial biotechnologies, Biotechnologies for veterinary medicine, Agricultural biotechnologies;
3. Horticulture: Viticulture, Winemaking, Vegetable growing, Fruit tree growing, Flower growing;
4. Land reclamation and environmental engineering: Civil constructions and installations, Engineering of agricultural environment, Economic engineering, Geodesy;
5. Economic engineering and management in agriculture, Agricultural and food economy, Scientific management of agricultural exploitations, Marketing of agricultural and food products, Accounting and economic-financial analysis in agriculture, Rural

development and agro-tourism, Public alimentation, Administration of agricultural exploitations;

6. Veterinary medicine, Control and certification of food products
7. Animal breeding, Fish breeding, Processing technologies for agricultural products

The number of papers published in ISI-quoted journals

27

(the most cited 10 papers)

- Iacomi - Vasilescu Beatrice, Dominiuc Blacard, M. Guenard, Valerie Molinero-Demily, Emmanuelle Laurent, P. Simoneau, 2002 - Development of a PCR - based diagnostic assay for detecting pathogenic *Alternaria* species in cruciferous seeds. Seed Science and Technology, 30, 87-95;
- Raduțolu Simona, Madsen Lene Heegaard, Madsen Esben Bjernplant, 2003 - Recognition of symbiotic bacteria requires two *lym* receptor-like kinases. Nature vol. 425, pp. 585-593;
- Mitroi A., Udriou A., Caraveteanu M., 2004 - The decreasing of specific energy consumption for forage production. Journal of Agricultural Research, Tanta University Egypt, vol 30, nr.3;
- Seroth Th, Proust Carole, Vișan Luminița, Burcea Mirela - Active compounds in musts from French and Romanian hybrids by three olfactive methods, J. Agricultural and Food Chemistry, 2001;
- Cornea Calina Petruța - Production Kinetics of Acidophilin 801, A Bacteriocin Produced by *Lactobacillus acidophilus* Ibb 801, Fems Microbiol. Letters, 2001;
- Popa Mona - Gums and stabilisers for the food industry 11- book review, Nutrition Bulletin, UK, ISSN 1471-9827, volume 28, number 2, June 2003, pp 229-230;
- Elena Drăghici and Alexandru Bude, Influence of environmental factor on quality indices of malting barley, Proceedings of the Romanian Academy, series B: Chemistry, Life Sciences and Geosciences, The Romanian Academy Publishing House, vol.4, May-Aug.2002;
- Mihăilescu Mihaela, Nao impact in the summer moisture variability,

Physics and Chemistry of Earth, 2002;

- Tudoreanu L. and Phillips C. J. C.: Empirical models of cadmium accumulation in maize, rye grass and soya bean plants. Journal of the Science of Food and Agriculture Volume 84, Issue 8, pp. 845-852;
- Militaru Manuela, Ciobotaru Emilia, Dinescu Georgeta, Diaconescu Al., Canine cutaneous astocitoma: correlation between histological grading, cytological nuclear area and nucleus/cytoplasm ratio. Veterinary Dermatology, 2004.

The number of papers published in journals from the main stream of publications

875

(cele mai citate 10 lucrări)

- Roman Gh.V., Bucată Lenuța Iuliana, Ion V., Iștoc V.A., 2001 - Evolution of the assortment of field cultures in Romanian agriculture, Scientific Papers, Faculty of Agriculture, USAMV-Bucharest, Series A, Vol. XLIV, 7-17;
- Văjială M., Dumitru M., Ciofu Ruxandra, Dumitru Elisabeta, Ioan Irina, Gamenț Eugenia, Toșoe I., Petra O., 2001 - Effect of excessive doses of compost of purge mud on soil, production and translocation of heavy metals in the soil-plant-animal system. Scientific Papers, Faculty of Agriculture, USAMV-Bucharest, Series A, Vol. XLIV, 32-38;
- Davidescu Velicica, Madjar Roxana, Dima Ioana, Neață Gabriela, Lazăr Gheorghita, 2004 - Research regarding the influence of Sulphur Acidifying Substance applied in substrates on the Nutritive elements and Total salts, Proc. of the Romanian Academy, Series B - Chemistry, Life Sciences and Geosciences;

(Continued on page 217)



Presentation of research activity chart

Since 1996 the research activity is carried out in the institutional frame of the Department for Scientific Research. The departments, research centers and research teams make up research contracts with various beneficiaries in the economy. Financing is also obtained from the Ministry of Education, through national research grants and programs, as well as from the European Community and the World Bank.

USAMV Bucharest coordinates the national program for research, development and innovation AGRAL - National Program Agriculture-Alimentation.

Structures

Research Institutes	1
Research Centers	6
Research Laboratories	35
Multi-user Research Centers	1

Top Priority Research Directions

- Elaboration and promotion of efficient technologies for plant growing and animal breeding;
- Promotion of new techniques, methods and procedures for the amelioration, protection and valorization of natural resources in the context of the need to save energy, protect the environment and develop a durable agriculture;
- Biotechnologies with applications in agriculture, food industry, animal breeding and veterinary medicine;
- Amelioration of certain horticultural species.
- Conservation of biodiversity
- Veterinary public health; diagnosis, prevention and fighting certain pathogen agents; ensuring the safety of food products;
- Pharmacology, toxicology and veterinary hygiene research;
- Modernization and usage of existing land reclamation facilities in the context of the privatization of agriculture;
- Economy, management and efficiency of alternative development paths in agriculture;
- Creation of an academic business incubator to facilitate the technological transfer.

Outstanding Research Infrastructure

- Research center for the study of the quality of horticultural products and useful substances from plants;
- Micro-pilot station for microbial cultures;
- Center of excellence "Nutrition and feeding of animals"

(Continued from page 216)

- Călina Petruța Cornea, Irina Grebenișan, Rodica Mateescu, Vamanu E., Câmpeanu Gh., *Of new bacillus spp. Strains - useful as biocontrol agents of plant pathogens*, Roumanian Biotechnological Letters, 2003;
- Laura Dorina Dinu, Arina Oana Antoce - *Application of microcalorimetry to the screening of halotolerant yeast strains*, Romanian Biotechnological Letters, Vol. 9., No. 1, 2004, pp. 1545-1551;
- Burzo I., Amăruțel A., Dobrescu A., Stănică M. - *Changes of substances between some cut flower and solution, during vase life*, Acta Horti, 1995, 405: 101-107;
- I. Nămoșanu, Oana Arina Antoce, 2000 - *Romanian Viticulture on the Verge of the Third Millennium*, Die Wein Wissenschaft, Vitic. Enol. Sci., 55(2), pp. 67-72;
- Popescu Agatha - *Financial Analysis in Dairy Farming*, Buletinul USAMV Cluj Napoca, vol. 59, 2003, pp. 11-14;
- Bărtoiu A., Seicu Fl., Căpătână Fl., Diaconescu Al., Kubaszy Raluca - *Clinical and morphopathological study on the modifications of the genital apparatus of sows in puerperium and after weaning*, The Romanian Journal of Veterinary Medicine Vol 10, no. 3/2000, 391;
- E. Vamanu, Ștefana Jurcoane, A. Vamanu, Maria Virginia Costel, Sorina Dumitru, *Research at micropilot level regarding the obtaining of a bacterial product used in fodder preservation*, Romanian Journal of Biochemistry, 2001.

The number of papers published in volumes of international scientific conferences with reviewers

712

(10 papers presented at the most prestigious events)

- Roman Gh.V., Ion V., Dumbravă M., Hall D.O., Roman Ana-Maria, Bucătă Lenuța Iuliana - *Sweet Sorghum an Energetical Crop for the Romania's Conditions*. 1st

World Conference and Exhibition on Biomass for Energy and Industry, Sevilla, Spain, 2000;

- Văjilă M., Ciofu R., Stan V., Gament E., Budoi Gh. - *The cumulatv effect of a four-year application of some Sawdust and Sludge compost rates upon solarium-grown tomato yield and qualitz*, Annual Meeting of ESNA, University of Novi Sad, Working Group 3, pp. 83-88, 2004;
- Udrescu S., Mihalache M., Ilie L., Mușat M. - *Romanian Soil Resources and Food Security*, World Soil Science Congres, Thailanda, Bankook, 14-21 aug. 2002;
- Oana Arina Antoce, *Effects of inhibitors on microbial growth, studied by calorimetry. (I) Quantitative results on the inhibitory action of potassium sorbate against the growth of yeasts and molds*, 26th World Congress of OIV, Adelaide, Australia, Congress Proceedings, Section Oenology, pp. 331-338, 2001;
- Niculiță Petru, Popa Mona, *Cold Chain In Ensuring Food Quality and Safety, A Healthy Environment For Food Quality and Safety*, Organizers: BENA (Balkan Environmental Association) and ASAS, 21-22 February 2003, Bucharest;
- Budoi Gh., Danus F., Berca M., Vasile G., Soare M., Alexandru D. - *Modelling soil humus synthesis*, Annual Meeting of ESNA, University of Novi Sad, Working Group 3, pp. 59-63, 2004;
- Popescu Agatha - *Farm Management under Milk Quota System in the prospect of Romania's entry in the EU*. The 58 EAAP Meeting and FAO workshop, Bled, Slovenia, 4-9 sept. 2004;
- Berca Mihai, Chirila C. - *Mehrhährige hauptanranter des Agrarkulturen in Rumanien in der zeit Verbindung zu einiger Bodentypen*. The 22nd German Conference on Weed Biology and Weed Control. Stuttgart-Hohenheim, Germany, March 2-4, 2004;
- Vlăgioiu C., N. Tudor, A. Comarzan - *The radiological study concerning the urolithiasis incidence in dog an cat*. The 6th international symposium in animal clinical pathology and therapy, Budva, Serbia and Montenegro, 14-18 june, 2004, ISBN: 86-81043-19-6;

(Continued on page 218)

Excellence Centers

- Center for applied biochemistry and biotechnology;
- Microbial biotechnologies;
- Research center "Nutrition and feeding of animals";
- Center for research in comparative medicine.

International Cooperation

- The PECO Program: Project CE-JOU 2-930332-ERBCIPDCT (1993-1996) "Lessons of Denmark and Austria of the energy valorization of biomass";
- Program FP-5-PAXIS Contract IPS-2001-41115: Project "TRANSACT" (2003-2005);
- Program FP-6, Contract NNE502001-0619: Project "Clear views for clean fuels" (2003-2005);
- FAO Program: "WCR Network - Risk assessment for WRC" (2003-2004);
- Program FP-6, Project BIO@GRO (2004-2006);
- Theme network "University studies of Agricultural engineering in Europe" (2003-2006);
- FP-6 INCO-CT-2003-003373: European project RO-DI "Days of research and innovation in the fields of IT and bio-technology".

International scientific activities (the 10 most important ones)

- Scientific session of the teaching staff and students from the Faculty of Agriculture, with international participation, USAMV Bucharest, 2000-2004;
- Final Conference of the TEMPUS-PHARE project nr. S_JEP 14051-1000, Bucharest, 19-22 October, 2001;
- International conference of the FP-5 project "TRANSACT", USAMV Bucharest, 12-19 September, 2004;
- Conference for launching the project "Fachausbildung in Natur und Agrarwissenschaften für Landliches Raum", Bucharest, 12-16 June 2002;
- The XIVth National Symposium of Soil Science, with international participation, 23-30 August, 2003;
- Forum (closing conference of the project) "Fachausbildung in Natur und Agrarwissenschaften für Landliches Raum", Bucharest, 2004;
- Proceedings of international business and technology on environmental remediation and mine waste management. EKOLINKS 21-23 April 2004.

(Continued from page 217)

- Sofronie Ramiro, Taylor C.A., Stana Mircea, *Seismic behaviour of geogrid reinforced soil retaining walls*, Proceedings of the first Asian-Pacific Congress on Computational Mechanics APCOM, 20-23 November 2001, Sydney, Australia.

The number of scientific books published by publishing houses acknowledged abroad

6

- *Improving carbohydrate quality in grain legume seeds* - Hedley C., Halmajan H. s.a., 322 pages, CAB International, 2001;
- *A vite e l'uomo. dal rampicapo delle origini al salvataggio delle reliquie. Evidenze storico-ampelografiche per ripercorrere il viaggio della vite da oriente alle soglie dell'occidente*, El Zan F., Falla O., Scienza A., Dejeu L.C., Ed. ERS, Gorizia (Italy), 2004;
- *Development of dual-purpose pinzgau cattle* - O. Kadlecik, H.H. Swalve, J.A. Lederer, Grosu H., Editorial Center of Slovak University of Agriculture, 2004.

Products created/homologated/capitalized / Inventions/Patents

49

- (maximum 10 significant products)
- OSIM Patent no. 00047 with the title CAIS - (Armeniaca Vulgaris - sin. Prunus armeniaca) - CARMELA - Ameliorator: Balan Viorica, Bucharest.RO
- OSIM Patent no. 00048 with the title CAIS - (Armeniaca Vulgaris - sin. Prunus armeniaca) - VIORICA - Ameliorator: Balan Viorica, Bucharest.RO
- OSIM Patent no. 00049 with the title CAIS - (Armeniaca Vulgaris - sin. Prunus armeniaca) - RARES - Ameliorator: Balan Viorica, Bucharest.RO
- ISTIS Registration Certificate no. 1317 / 12.05.2003, Szilagyi Lizica, co-author of the bean variety Phaseolus vulgaris with commercial name BIANCA, homologated in 2003
- ISTIS Registration Certificate no. 2727 / 13.05.2004
- PREMIER variety of Phalaris arundinacea; Authors: Teodor Marusca, Gheorghe Motca, Alexandru Moisuc
- Varieties of sweet potato "Victoria IANB" and "CRUX" - homologated by CSIOS (1997) - Ciofu Ruxandra;
- Mangold varieties - "Smarald", "Opal" and "Rubin" - homologated by ISTIS in 2004 - Ciofu Ruxandra;
- Tanase A. - Methods for general anesthesia at horses. OSIM, Official Bulletin of industrial property, Invention Section, no. 8 /2001



Financial resources obtained for research

	National millions RON	Internat. EURO
2004	11630	172344
2003	7529	84742
2002	4519	795374
2001	4391	766059
2000	3285	149300
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



International Cooperation

At present USAMV Bucharest maintains collaboration relations in the spheres of education and science with prestigious universities of:

- **France:** University of Dijon; Center for Professional Formation for Agricultural Beausne; University of Bourgogne; School Group of Agriculture in Angers; Lille University; National School of Engineering for Agricultural Industry and Food in Nantes; National School of Veterinary Medicine Alfort;
- **Great Britain:** Royal Agricultural College-Cirencester; King's College London; Natural Resources Institute -Chatham; University of Greenwich;
- **Italy:** Perugia University; University for Studies in Bologna; University of Studies Tuscia Viterbo; Catholic University Sacro Cuore;
- **Hungary:** University of Horticulture and Food Industry Budapest
- **Spain:** federacion de Espacios Naturales Protegidos de Andalucia, Sevilla; University of Leon; University of Cordoba; University of Valladolid;
- **Belgium:** Superiour School of Charlemagne-Liege;
- **Portugal:** University of Algarve, Faro;

- **Greece:** Agricultural University of Athens; Aristotle University of Thessaloniki;
- **Germany:** Hohenheim University; University of Applied Sciences in Nurlingen;
- **Czech Republic:** University of Agriculture and Forestry Mendel in Brno;
- **Denmark:** Denkgi Veterinaer og Landbohøjscole Frederiksberg;
- **Netherlands:** University of Wageningen;
- **Republic of Moldova:** Agricultural Institute of Chisinau; State Agrarian University;
- **Turkey:** Faculty of Agriculture of the University of Ankara;
- **Egypt:** Tanta University;
- **China:** Academy of Agricultural Sciences Shanxi; Hebei Academy of Agricultural and Forestry Sciences; Ningxia Institute of Horticulture; Changli Institute of Pomology; Hebei Faculty of Horticulture and Hebei Vocation-Technical Teachers Collage; Shanxi Forestry Research Institute; Taifu Pomology Institute;
- **Peru:** National Agrarian University "La Molina" of Peru;
- **U.S.A.:** Midwest Universities Consortium for International Activities, Ohio; Iowa State University of Science and Technology; College of Agriculture, Iowa.

Faculty of Horticulture

Research Center for the Study of the Quality of Horticultural Products and Useful Substances in Plants

A program financed by the World Bank and CNCIS.



Infrastructure

To carry out the multi-discipline research the center is endowed with the following laboratories:

- laboratory of biochemistry-physiology;
- laboratory of microscopy;
- laboratory of micro-propagation;
- room for preservation and refrigeration;
- library-documentation room.

The high performance apparatuses include: gas chromatograph with FT-IR, FID and HWD detectors; gas chromatograph with ECD and NPD detectors and nitrogen, hydrogen and air generators; high pressure liquid chromatograph with UV-VIS and fluorescence detectors, automatic analyzer for photosynthesis LCA-4, infrared spectrometer NEXUS FT-IR with IR microscope, transmission, reflexion and other accessories, ion analyzer with selective membrane, CECIL spectrophotometer, UV-VIS spectrophotometer, electronic scale, centrifuges, calcination oven, conductometer, Sohlet and Kjeldahl apparatus, ultrasound, water and sand baths, automated distiller and aroma extractors, refrigerators, ELMO video camera, SANYO PLC-SU 20 projector, computers.

Research possibilities:

- Analysis of organic compounds with FT-IR, IR-Scope, GC-FT-IR, GC-MS, UV-VIS, LC/GC;
- Analysis of inorganic compounds;
- ICP, other suitable methods;
- Optical and electronic microscopy;
- Micro-propagation.

The main analytic instruments are:

- FT-IR with infrared microscope, gas chromatograph with FT-IR interface, gas chromatograph with spectrometric mass detector, inductively-coupled plasma spectrometer, chromatographs, UV-VIS spectrophotometer;



Infrared Spectrometer



Electronic Microscope

Presentation of Research Centers

Presentation of Laboratories



- Software: FT-IR TQ-Analyst software, libraries for IR spectrometry;
- Electronic microscope Tesla BS-500; optical and fluorescence microscope; stereo-microscope;
- Room for growing plants and preparation of materials; autoclave.

Research programs

Multi-discipline research is under way, along with postgraduate studies and master programs:

- research on the quality of agricultural products;
- research on the pollution of food and agricultural products with pesticides, organic and inorganic contaminants, quantitative determinations;
- research for the identification and usage of useful plant compounds (from spontaneous or cultivated species): pigments,

aromas, natural insecticides and fungicides, antioxidants;

- research on plant amelioration;
- research on the technologies for the storage of agricultural products;
- research on the physiological diseases of agricultural products;
- fundamental research on the cyto-histology, physiology and biochemistry of plants.

Services offered:

1. Micropropagation of plants;
2. Optical microscopy;
3. Physiological analysis of plants during vegetation:
 - intensity of photosynthesis;
 - intensity of respiration;
 - intensity of transpiration;
 - permeability of plasmatic membranes;
 - enzymatic activity: catalase, peroxidase, amilase, etc.



Laboratory for Endocrinology, reproduction and Seminaly, landmark for the research in the field of animal reproduction

The Laboratory was established in 2000 within USAMV Bucharest.

The required instrumentation was procured through the contract no. 246 financed by the World Bank, titled "Studies on the quality improvement of sheep embryos by the production of embryos in vivo and in vitro", as well as through other research contract.

Today the Laboratory is endowed with:

- ELISA line for hormonal analyzes;
- sperm analyzer SQA-2CP;
- optical microscope Micros with phase contrast;



- video camera connectable to computer;
- computerized morphometric system Olympus DP Soft;
- thermostated incubators;
- water distiller;
- refrigerator-freezer.

Besides these facilities, the laboratory has all the consumable materials required for the good functioning of all the existing apparatus.



The laboratory can perform studies on reproduction endocrinology, examination of seminal material, raw, diluted, frozen and unfrozen, establishing the normal indexes of sperm and realization of spermograms.

All these determinations are currently carried out in the Clinic for Obstetrics and Gynecology of the Fa-



culty of Veterinary Medicine in Bucharest. The laboratory also collaborates with many research entities in the country (I.N.C.D. Balotesti, I.D.S.A. Bucharest etc.) as well as with companies specialized in animal breeding, to which consultancy is offered in the field of reproduction.

An important aspect in the activity of the Laboratory refers to the research activities required for the elaboration of graduation theses and Ph.D. dissertations. Five Ph.D. theses and 16 graduation papers have been accomplished until 2004.

The research activity carried out in the laboratory has led to the preparation of 9 scientific papers which have been presented at scientific events in the country and abroad.



Rector

Prof. Alexandru Moisuc, PhD

Historical Overview of the University

Our University was established in 1945. Since 1948 the Faculty of Agronomy became the Agronomical Institute in Timisoara, with only one faculty, and with three faculties since 1962: Agronomy, Zootechnics and Veterinary Medicine. In 1991 it was given the name it is still bearing. It has nowadays six faculties: Agriculture, Horticulture, Farm Management, Veterinary Medicine, Food Processing, and



Zootechnics and two didactic stations. Now the university has 7000 undergraduates and over 320 didactic personnel.

Faculties and Departments

- 6 faculties: Faculty of Agriculture, with 6 departments; Faculty of Horticulture, with 3 departments; Faculty of Farm Management, with 3 departments; Faculty of Veterinary Medicine, with 5 departments; Faculty of Food Processing, with 3 departments; Faculty of Zootechnics, with 3 departments.

Master and Doctoral Programs

MASTER - 16 master programs;
Doctoral programs - 4 PhD programs (agriculture, horticulture, zootechnics, and veterinary medicine).

Patrimony

6 buildings for instruction activities: 1 Aula Magna with 800 places, 8 auditoriums, 10 course halls, 20 seminar halls, 85 laboratories, 1 central library with 400 places. Other buildings: 4 hostels with 1500 places, 1 canteen with 400 places, gymnasium, sports grounds, 2 student clubs, 2 didactic and experimental stations.

Fields in which human resources are trained

Agriculture, horticulture, forestry, zootechnics, biology, biotechnologies, veterinary medicine, environmental engineering, farm management, food processing engineering.

Presentation of research activity chart

6 research teams, departments, research centres and institutes, coordinated by the Research Department and by the Scientific Secretariat of the University Senate:

- Plant and animal produce quality; primary processing.
- Valorising and sustainable development of plant biodiversity in Western Romania.
- Ecology and Protection of Agricultural Environment.
- Animal Hygiene and Pathology.
- Modern reproduction biotechnologies in genetic improvement of livestock.
- European studies in sustainable rural development.

Structures

Research Institutes	2
Research Centers	6
Research Laboratories	15
Multi-user Research Centers	1

Top Priority Research Directions

- Developing new cultivars and hybrids of species of agricultural and horticultural interest by classical methods and genetic engineering techniques;

Human Resources

Professors	73
Senior Lecturers	53
Lecturers	99
Assistant Lectures	86
Teaching assistant	9
Research Fellows	0
Administrative Staff	91
Students	7030
of which:	
Undergraduate	6185
Master	353
PhD - full attendance	125
PhD-attendance not required	367



- Sustainable technologies in agriculture and horticulture;
- Improving crop integrated control system;
- Sustainable use of agricultural lands;
- Improving, conserving, and restoring degraded soil fertility;
- Preventing and controlling pollution in agriculture;
- Developing genetically modified plants;
- Assessing environmental and ecological restoration impact;
- Restructuring agriculture and sustainable rural development in Romania;
- Financing systems in agriculture;
- Studying chemical compounds applicable in agro-alimentary industry;
- Agro-alimentary produce quality;
- Research in the field of food science;
- Protection and welfare of livestock;
- Prophylaxis and disease control in livestock;
- Food safety and security;
- Improving and reproductive techniques and technologies in animals through embryo-transfer and genetic engineering;
- Improving animal breeding technologies;
- Improving production, harvesting, preserving, and valorising forage crop technologies.

Outstanding Research Infrastructure

- Molecular analyses: DNA amplifying and GMO identifying apparatus (PCR and real time PCR);
- Plant, animal, human caryotyping: Cyto Vision apparatus;
- Sanitary-Veterinary: HPLC Shimadzu, AAS Shimadzu, Mars X micro-wave digestion system, luminometry-photometry line;
- Pollutant residues: HPLC Bischoff, GK Hewlett-Packard, UV-VIS Shimadzu and UV-VIS Merk spectrophotometres;
- Animal-embryo transfer: Picker ultrasound, Bulo spectrometer, immersion and MC4 microscope, cryocell, embryo incubator.

Excellence Centers

- Valorising and sustainable development of plant biodiversity in Western Romania (CNCIS Excellence Center)
- European Study Center for Sustainable Rural Development;

The number of papers published in ISI-quoted journals

26

(the most cited 10 papers)

- Ianculov I., Gergen I., Palicica R., Monica Butnariu, Delia Dumbravă, Laura Gabor - *Comparative study on hydrolysis of 2-chloroethylphosphonic acid dialkylesters*, Revista de Chimie, nr. 11, 2004 vol. 55, 2004;
- Gergen I., Florina Radu, Bordean D., Isengard H.D. - *Determination of water content in bee's pollen samples by Karl Fischer titration*, Food Control, 2004;
- Ciucanu I., Kathleen Swallow, Rodica Căpriță - *Micro-solid phase extraction with helical solid-sorbent in the presence of organic solvent for gas chromatography-mass spectrometry analysis of per-o-methylated mono-and disaccharides*, Analytica Chimica Acta, 519, p.93-101, 2004;
- Rodica Căpriță, Căpriță A., Ilea Gh. - *The condensed phosphates as inhibitors of the zinc-enzyme carbonic anhydrase II*, Phosphorus, Sulfur, and Silicon and the Related Elements, Vol.179,p. 2609-2616, 2004;
- Lupea A.X., Radu Florina, Gergen Iosif - *Abietic acid ammonium salts, biodegradable surface-active agents, with antimicrobial activity*, Revista de Chimie, 2003;
- Ciucanu I., Căpriță A., Chiriac A., Barna R. - *Helical sorbent micro-trap for continuous sampling by a membrane and trap interface for on-line gas chromatographic monitoring of volatile organic compounds*, Analytical Chemistry, 2003;
- Endre G., Kalo P., Kevei Z., Kiss P., Sorina Mihacea, Szakal B., Kereszt A., Kiss G.B. - *Genetic Mapping Of The Non-Nodulation Phenotype Of The Mutant Mm-1008 In Tetraploid Alfalfa (Medicago Sativa)*, Mol. Genet. Genomics, 2002;
- Endre G., Kereszt A., Kevei Z., Sorina Mihacea, Kalo P., Kiss

G.B. - *A receptor kinase gene regulating symbiotic nodule development*, Nature, 2002;

- Căpriță A., Ciucanu I., Chiriac A. - *Continuous permeation of analytes through a thin poly (dimethylsiloxane) membrane followed by sorbent trapping for their gas chromatographic monitoring*, Journal of Chromatography A, 2002;
- Popa A., Alexandra Trif, Curtul V. Gh., Dehelean Gh., Ilescu S., Iliă Gh. - *Synthesis and toxicological characterization of poly (oxyethyl-ene) functionalized with quaternary phosphonium groups (P.B. 082)*, Phosphorus, Sulfur and Silicon, vol. 177: 2195-2196, 2002.

The number of papers published in journals from the main stream of publications

3025

(the most cited 10 papers)

- *On good behaviour in scientific research* - Otiman P. I., Pisoschi A., Lucr. St. Agricultural Management, Agroprint Publishing House, Timisoara, pp. 5-16, 2002.
- *The globalisation effect and its implications on macro and micro-economic policies* - Gosa V., Lucr. St. Agricultural Management, pp. 201-209, 2002.
- *Etudes sur la variabilite de quelques populations locales de piment fort (Capsicum annum var. microcarpum)* - Madosa E., Nedelea G., Avadanei C., Ciulca S., Lazarov Sebastiana, Chis S., Biotechnology and biodiversity, 8th series, Agroprint Publishing House, Timisoara, 73-76, 2004.
- *Research regarding the influence of some developing technological links from the technology of tomato cultivation in industrial greenhouses on the efficiency of the crop* - Horgos A., Becherescu Alexandra, Oglejan Doina, The Annals of "Aurel Vlaicu" University, Chemistry Series, 278-283, 2004.

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International Cooperation

- Programme FP6 - TECARE Project No. 016121, Project MOSSFOOD.
- Programme TEMPUS S-JEP 09187/95.
- Programme TEMPUS CME-9602050/96.
- Programme SOCRATES 210447-1C-1-2000-2, Ro-ERASMUS EPS 1 - Sustainable agriculture and water resources -European comparison.
- Agriculture and European Security.
- Programme COPBIL (with the Universities of Szeged, Hungary, and of Crete, Greece).
- Programme PHARE (with the University of Szeged, Hungary).

International scientific activities (the 10 most important ones)

- Metal Elements in Environmental Medicine and Biology Symposium (every two years: 2000, 2002, 2004)14.
- Restoration Ecology Symposium, September 20-21, 200115.
- Romanian postgraduate programmes and the EU., February 3-4, 200116.
- German-Romanian Cooperation in Agriculture, April 11, 200217.
- Soil Use, Environmental Protection, and Rural Development in Western Romania, August, 25-30, 2003.
- The 6th DKMT Meeting on Environmental Medicine and Health, Oct. 14-15, 2004, Timisoara.

Products created/homologated/ capitalized / Inventions/Patents (maximum 10 significant products)

14

- Decun M., Tibru I., Nichita I., Morar A., Dragut E. - SATIM F Disinfectant for disease control, 2001.
- Decun M., Tibru I., Nichita I., Morar A., Burghilea V. - SALIDERM Antimicrobial and antibacterial salve for infectious dermatitis treatment, 2001.
- Decun M., Tibru I., Nichita I., Morar A. - TRICOSAN antifungal substance (Compozitie antifungica pentru tratamentul tricofitiei taurinelor, TRICOSAN) 2000.

(Continued from page 222)

- *Research regarding the corn harvesting technology in open system, "with permanent vegetable carpet" in the pedoclimatic conditions from Timisoara* - Părsan P., Tabara V., Imbrea Fl., Georgeta Pop, Agriculture Scientific Papers, 2004.
- *Epidemiologic research regarding Cryptosporidium Parvum parasitism* - Darabus Gh., Cosoroaba I., Negrescu Adina, Iacobiciu I., Romanian Parasitology Journal, pp. 17-20, 2001.
- *A Romanian External Bone Fixator* - Igna C., Bolte S., Padurean D., Sala A., Veterinary Medicine Romanian Journal, vol. 11, no. 3, pp. 315-320, 2001.
- *The bacterial leaching of mining waste heaps from Rosia Polari* - Goian M., Cabulea P., Agriculture Scientific Papers, Timisoara, 2004.
- *Synthesis, structural and spectroscopic of an assembly of species between Co(II) and N,N-bis(phosphonomethyl)glycine (Nta2P)* - A. Mateescu, P. Baran, R. Raptis, C. Mateescu, A. Salifoglou, Sci. Res. Agro-alimentary Proc. & Technol, X(1), 17-20, 2004.
- *The effect of two kinds of phosphate glass fritte with microelements administrated broilers* - Stef Lavinia, Cor D., Drinceanu D., Luca I., Mojzi A., USAMV Bucharest Scientific Papers, D series, Zootechnology, 2004.

The number of papers published in volumes of international scientific conferences with reviewers

217

(10 papers presented at the most prestigious events)

- *The development and the role of feed and litter mite fauna in poultry houses* - M. Decun, D. Drinceanu, I. Nichita, C. Lăzărescu, Proceedings of XI International Congress in Animal Hygiene, 23-27 February, 2003, Mexico City;
- *Toxicology studies in laboratory animals* - Trif Al., The 6th Meeting

of European Society of Veterinary Clinical Pathology, European College of Veterinary Clinical Pathology and Continuing Education, 15-18 sept. 2004, Olsztyn, Polonia;

- *Some modification possibilities of the ducks eggs microelements content* - Ștef D., Ștef L., Căpriță R., Druga Marioara, Druga M., Nichita I., Macro and Trace Elements. Mengen und Spurenelemente. Agricultural, Biological, Environmental, Nutritional and Medical Importance of Macro, Trace and Ultra Trace Elements, 22 Workshop, Jena;
- *Soils degradation process and restoring measurements in South-West Romania* - Borza I., Târău D., Târău Irina, Proceedings of the Symposium Restoration Ecology, Ed. Orizonturi Universitare, pag. 195-201, Timisoara, 20-23 sept., 2001;
- *Research concerning the economic impact of the BT technology utilization in potato culture in Romania* - Otman I. P., Sălișcan C., Sorina Mihacea, Symposium "Development of the potato crop production in the central and east-european counties", Mamaia, România, 2004;
- *Genetic analysis of spike yield in two-rowed barley* - Ciuica S., Nedelea G., Madoșă E., International Conference on Sustainable Agriculture and European Integration Processes, Novi-Sad, Serbia and Muntenegru, 97-98, 2004;
- *Antitumor effect of magnetite nanoparticles in cat mammary adenocarcinoma* - Mariana Șincal, Diana Gânga, M. Gânga, Diana Argherie, Doina Bica, 5th International Conference on the Scientific and Clinical Application of Magnetic Carries, Lyon, Franța, 2004;
- *Behavior of high producing Holstein Friesian cows during the three months of lactation* - Bencsik I., Păcală N., Theilen T., Stănculeț Jana, Bencsik Alena, Biotechnology in Animal Husbandry, vol. 20/3-4, ISSN 1450-9156, Institute for Animal Husbandry, Belgrade-Zemun, Yugoslavia, 2004.

(Continued on page 224)

Key role played in certain fields

Presentation of Laboratories



- Dragomir Cristea N., Cristea T., Dragomir Carmen - OLTIM variety of Lotus Corniculatus (fingers-and-thumbs) certificate no. 2548/06.05.2004.
- Dragomir Cristea N., Cristea T., Dragomir Carmen - DANITIM variety of white clover, certificate no. 2549/06.05.2004.
- Popovici V., Trasca T. - Mould with core from synthetic sapphires for the extrusion of flour paste wares (A 21 C 3/04), 2004.
- Viassu Tatiana, Sasarman Elena, Stoica Ileana, Jurcoane Stefana, Vintila T. - Method for the preservation and improvement of the nourishing value of fodders through fermentation, OSIM Patent no. 119062, 2004.
- Ianculov I., Mezmer Gabriele, Manolescu N., Jianu I. - Method for obtaining some stable derivatives of vitamin U from vegetable products, OSIM Patent no. 117298/2001.
- Ianculov I., Caloianu Maria, Vermesan H., Golan M. - Method for obtaining a therapeutic and antirheumatic salve from Brassica oleracea, OSIM Patent no. 116521 B/2001.
- Pacala N. - Multipurpose kit for artificial insemination and embryo transfer at bovines, OSIM Patent no. 117060 C, 2001.

(Continued from page 223)

- *Controlled estrus with GHRH and PGF2 A at cow and heifers* - Păcală N., Corin N., Bencsik I., Dronca D., Jana Stănculeț, Carba V., Symposium "Veterinary and animal husbandry in production of healthy seif food", Faculty of Agriculture, NoviSad, Yugoslavia, 2004;
- *Some consideration concerning the evolution of vegetation in Cindrel Mountain pastures under exploitation influence* - Moisuc A., Samfira I., Ciortea G., Cojocariu Luminița, Horablaga M., Stroia C., X Simpozijum O Krmnom Bilju Srbije I Crne Gore, 10th National Symposium On Forage Crop, Cacak, 26-28 mai, 2004.

The number of scientific books published by publishing houses acknowledged abroad 7
(maximum 10 significant books)

- *Influence of metal elements on deoxyribonucleic acid* - Gârban Z., Chapter 3.6. in Elements and their compounds in the environment, 18 pag., Wiley-VCH, Weinheim, 2003;
- *Krmne, Korovske, otrovne i lekovite biljke* - Dukic D.J., Moisuc A., Janjic V.R., Kisgeci J.J., Univerzitet u Novom Sadu Poljoprivredne Fakultet, 426 pag., NoviSad, Yugoslavia, 2004;

- *Entwicklung lanlicher finanzmarkte fur den kleinbauerlichen bereich in rumanien-konzept der landlichen finanzmarktentwicklung* - Iancu T., in Transformationsökonomien, 139 pag., Verlag Grauer, Stuttgart, 2000;
- *Oxinogenic fungi and mycotoxins in Romania: chalenges and approaches* - Ittu M., Trif Al., Belc N., chapter in An overview on toxicogenic fungi and mycotoxins in Europe - 10 (p. 185-194), edited by Antonio Logrieco, Angelo Visconti, Kluwer Academic Publisher, Netherlands, 2004;
- *Wombat: World Of Molecular Bioactivity* - Olah, M., Mracec, Maria, Ostopovici, Lilian, Rad Ramona, Bora Alina, Hadaruga Nicoleta, Olah Ionela, Banda Magdalena, Simon Z., Mracec M., Oprea T.I., in: Oprea, T.I. (Ed.), Cheminformatics In Drug Discovery, 17, Wiley-VCH, New York, 2004;
- *Influence Of Metals On Deoxyribonucleic Acid* - Garban Zeno, chap. 7, in "Elements And Their Compounds In The Environment: Occurrence, Analysis and Biological Relevance" vol. 1, General Aspects (Eds. Merian E., Anke M., Ihnat M., Stoeppler M) - 14, Wiley - VCH Verlag GmbH & Co KgaA, Weinheim, 2004.

Key role played in certain fields

- The Laboratory of Embryo-Transfer and Associated Biotechnologies plays a key-role in assisted reproduction, genetic improvement, and genetic engineering in animals.
- The Laboratory of Molecular Biology and Genetic Engineering, unique in Romania, plays an extremely important role in genetic manipulation of the plant genome and in the investigation of biological processes at molecular level
- The Sanitary-Veterinary Laboratory ensures logistics for laboratory investigations in certifying food produce quality according to the E.U. Regulations

Presentation of Laboratories

The Laboratory of Molecular Biology and Genetic Engineering

Its activity is centred on the development of genetically modified organisms in the main crops using modern technologies of transformation and molecular characterisation of transgenic lines. Molecular analyses include quantity and quality assessment of the transgene in the genome, measuring the number of copies of the trans-gene, identifying and quantifying protein codified by the trans-gene, etc.



Within this Laboratory, we developed and characterised for the first time in Romania two Romanian genetically modified potato cultivars resistant to the attack by the Colorado potato beetle. The Laboratory has last generation equipment that ensures molecular analyses according to international standards.

We shall continue the development of existing facilities aiming at licensing a laboratory for the detection of genetically codified organisms in food and forage.

The Laboratory of polluting residue analysis

is equipped for research and service:

- assessing pesticide residue levels using competitive chromatographic methods;
- assessing nitrate, nitrite, ammonia, chloride, and sulphide content through spectrum-photo-metrical methods (MERCK tests);
- assessing contamination with myco-toxins



(aflatoxins and ochratoxins) of plant produce;

- assessing metal contamination of water and plant produce through spectrum-photo-metrical methods.

The Laboratory of Embryo-Transfer and Associated Biotechnologies

Is the only laboratory of Romania authorised to develop both in vivo and in vitro mammal embryos, including embryo micro-manipulations. Research aims at guiding the reproductive function in animals by developing and transferring pre-implant embryos, artificial seeding, developing in vitro embryos; developing animals of desired sex by seed and pre-implant embryo sexing; introducing artificial gemelarity in monotocyc species by double embryo transfer; developing genetically identical twins; embryo micro-surgery; embryo-associated biotechniques (trans-gensis, cloning); inducing and synchronising oestrus and ovulation; inducing and synchronising births.

The Sanitary-Veterinary Laboratory of the Faculty of Veterinary Medicine has been established due to a BCUM grant and was



conceived as a facility complex for investigation, research, and service, and is equipped with competitive apparatuses for specific activities (identifying and dosing pesticides, heavy metals, hormones and/or drug products, etc., in animal produce) at international standard levels.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	15579,5	67862
2003	12846,9	78514
2002	9933,2	73926
2001	8455,5	65401
2000	4293,7	56514
1999	1640,5	41773
1998	715,3	80588
1997	527,3	45662
1996	382,8	91729
1995	274,3	23266



International Affiliations of the University

- Interuniversity Consortium for Agricultural and Related Sciences in Europe;
- European Veterinary Association;
- European Association of Establishments for Veterinary Education.

International cooperation

- University of Hohenheim (Germany);
- University of Purdue (Indiana, U.S.A.);
- INRA France;
- École Nationale Supérieure Agronomique de Rennes (France);
- University of Wageningen (Holland);
- University/Faculty of Agriculture of Novi Sad (Serbia and Montenegro);

- Faculty of Veterinary Medicine of Belgrade (Serbia and Montenegro);
- Faculty of Veterinary Medicine of Munich (Germany);
- University of Trento (Italy);
- University of Szeged (Hungary);
- Biological Research Centre of Szeged (Hungary);
- Ministry of Agriculture of the Land Baden Württemberg (Germany);
- Agricultural University of Nitra (Slovakia);
- Ridgewater College Hutchinson Minnesota (U.S.A.);
- Agricultural Biotechnology Centre of Gödöllő (Hungary);
- Research Institute for Animal Breeding and Nutrition, Herceghalom (Hungary);
- University of Debrecen - Centre of Agricultural Science (Hungary);
- Institute for Plant Genetics and Biotechnologies of Nitra (Slovakia);
- MONSANTO U.S.A.



Rector

Prof. Liviu Al. Mărghitaș, PhD

Historical Overview of the University

The Cluj-Manastur Institute of Agronomic Education was founded in 1869 and throughout the years its name has been changed several times. In 1995, as a result of the diversification of specialisations and its modernisation, the institution was named the University of Agricultural Sciences and Veterinary Medicine (UASVM). Today UASVM comprises four faculties with 17 specialisations and two departments. The 6,000 students of UASVM benefit from modern study conditions that are comparable to those in the EU countries. In 2003, our



University was evaluated by the European University Association as a successful institution.

Faculties and Departments

- UASVM is made up of four faculties:
- The Faculty of Agriculture with the following departments: Soil Science, Agriculture, Mountain Science, Mechanisation, and Agricultural Product Processing Technology;
- The Faculty of Animal Science and Biotechnologies with the following departments: Fundamental Disciplines, Biotechnologies, Technological disciplines;
- The Faculty of Horticulture with the following departments: Horticulture - Forestry, Exact Sciences, Management and Economic Engineering in Agriculture and Horticultural Technologies;
- The Faculty of Veterinary Medicine with the following departments: Preclinical Disciplines, Animal Productions, Food Safety, Paraclinical Disciplines and Clinical Disciplines;
- Two departments:
- The Department for Distance Learning and Continuous Education.
- The Department for Teacher Training.

Master and Doctoral Programs

Master's Programs:

- *The Faculty of Agriculture:* Conservative plant breeding and seed quality control; Food quality management (International MSc, taught in English); Biochemistry and biotechnology of plant extractions (International MSc, taught in English), Territory organization, land circulation and sustainable development, Agricultural development and agrotourism in the mountain regions; Protection food products, Food product quality control; Agricultural mechanization, Plant protection;
- *The Faculty of Horticulture:* Culture of horticultural species under controlled climate; European Agrarian Economy; Agribusiness (Romanian and English); Biotechnology in Plant Breeding (Romanian and English); Mushroom Cultivation; The technology of production and exploitation of special wines and derivative products;
- *The Faculty of Animal Science and Biotechnology:* Optimisation of technologies for breeding ruminants; Genetic engineering and reproduction biotechnologies; Applied biotechnologies;
- *The Faculty of Veterinary Medicine:* Animal pathology and public safety; Laboratory Pathology Diagnosis, Control and expertise of animal products, Clinic and radiology for Veterinary Medicine, Animal nutrition and nutritional pathology, Biotechnologies in animal reproduction, Applied veterinary epidemiology, Veterinary dentistry, Veterinary pharmacy;

Doctoral Programs:

- *The Faculty of Agriculture* grants the title of PhD in Agricultural Sciences in the following specialisations: Agro-chemistry, Biochemistry, Phyto-technology, Fodder production and preservation, Genetics and plant breeding, Soil Sciences, Plant protection;
- *The Faculty of Horticulture* grants the title of PhD in Horticultural Sciences in the following specialisations: Genetics and plant breeding; Management and marketing in agriculture; Production of Vegetables; Land exploitation and appropriation; Culture of ornamental flowers and trees; Flower and ornamental production technology; Fruit production;
- *The Faculty of Animal Science and Biotechnology* grants the title of PhD in Animal Science in the following specialisations: Animal feeding; Equine and cattle management; Ovine and caprine management; The technology animal products; Production of fowl and fur animals; Fur ani-

Human Resources

Professors	66
Senior Lecturers	47
Lecturers	78
Assistant Lectures	46
Teaching assistant	9
Research Fellows	0
Administrative Staff	103
Students	5411
of which:	
Undergraduate	4476
Master	339
PhD - full attendance	182
PhD-attendance not required	414

mals, fishing, and hunting; Genetics and animal breeding and Animal reproduction.
 - As well as the title PhD in Biotechnologies, in the field of Biotechnologies;
 - The Faculty of Veterinary Medicine grants the title PhD in Medical Science in the following specialisations: Diagnosis and medical pathology; Parasitology and parasite diseases; Zoo-hygiene; Infectious diseases; Microbiology; Immunology; Veterinary and sanitary technology and expertise; Surgical pathology; Veterinary obstetrics; Normal and Pathologic Morphology; General and special animal breeding, Physiology and physiopathology.

Patrimony

UASVM has two campuses that hold 80 classrooms and laboratories, four dormitories with a total capacity of 1,200 places, a cafeteria that provides dining services to 1,500 students and a confectionery on the University premises. The University possesses two research stations of over 2,400 hectares of cultivating land, a central library that owns 210,000 books and journals, as well as its own publishing house, "Academicpress". The sports facilities comprise a gym, football, handball, and volleyball fields and tennis courts. The students' club "Agronomia" organises the performances of their own folk ensemble, theatre group, mixed choir and music bands. The students with artistic talent have founded the literary society "Octavian Goga" and their own publication, "Horizons".

Fields in which human resources are trained

- **The Faculty of Agriculture** with the specialisations: Agriculture, Mountain Science, Soil Science, Agricultural Product Processing Technology, Control and Expertise of Food Products, Biology, Engineering and Environmental Protection;
- **The Faculty of Horticulture** with the specialisations: Horticulture, Landscape architecture, Economic and agricultural engineering, Engineering and management of food products and agri-tourism; Land survey;
- **The Faculty of Animal Science and Biotechnology** with the specialisations: Animal Science, Agricultural Biotechnologies, Fishery;
- **The Faculty of Veterinary Medicine** with the following specialisations: Biotechnologies; Medical and Veterinary Biotechnologies.

The number of papers published in ISI-quoted journals 22

(the most cited 10 papers)

- Apahidean Al., 2002, *Research concerning greenhouse tomatoes growth on organic substratum in Romania*, J. Central European Agriculture, 3 (1), 39-43;
- Botez C., D.C. Pamfil, M. Ardelean, 2004, *Cloning of RADP polymorphic bands identified in potato late blight (Phytophthora infestans) from Romania*, Cell. Dev. Biology, 40, 34-35;
- Bunescu H., Ghizdavu I., Mihai G., Oltean I., Porca M., Bobis I., 2003, *The control of pests from ecosystems by unchemical methods*, J. Central European Agriculture, 4 (1), 7-12;
- Khokhlova I.S., Spinu M., Krasnov B.R., Allan Degen A., 2000, *Immune Response To Fleas In A Wild Desert Rodent: Effect Of Parasite Species, Parasite Burden, Sex Of Host And Host Parasitological Experience*, J. Exp. Biol. 207, 2725-2733;
- Khokhlova I.S., Spinu M., Krasnov B.R., Allan Degen A., 2000, *Natural Prevalence Of Infestation And Diversity Of Flea Assemblages*, Parasitol. Res., 94, 304-311;
- Luca E., Z. Nagy, M. Berchez, 2003, *Water consumption of the main crops field crops in Transylvania (1964-2002)*, J. of Central European Agriculture, 4 (2), 97-102;
- Pamfil, D., Zimmerman R.H., Naess S.K., Swartz H.J., 2000, *Investigation of Rubus breeding anomalies and taxonomy using RAPD Analysis*, Small Fruit Rev., 1, 43-56;
- Socaciu C., P. Bojarski, L. Aberle, H.A. Diehl, 2002, *Different ways to insert carotenoids into liposomes affect structure and dynamics of the bilayer differently*, Biophys. Chem., 99, 1-15;
- Socaciu, C., Jessel, R., H.Diehl, 2000, *Carotenoid incorporation into microsomes: Yields, stability and membrane dynamics*, Spectrochimica Acta, part A, 56, 2799-2809;
- Tarălungă G., 2004, *Facilitated Transport Of Cations (Copper,*

Silver, Zinc) By Solid Dense Membrane, Molecular crystals and liquids crystals, vol. 416, 213-225.

The number of papers published in journals from the main stream of publications 818

(the most cited 10 papers)

- Ardelean M. si col., 2003, *Unconventional plant breeding - a pleading for vigilance*, The Annals of the University of Craiova, vol. VIII (XLIV), 23-27;
- Bratucu GH, Muntean M., 2004, *Automation of working regime for the optimisation of functional parameters of distillation installations for alcohol production*;
- Cantor M. si col., 2004, *Streptocarpus-floral plant for interior decorative truthrough flowers*, Horticulture Journal, 31/32, 35-37;
- Dojana N., Orasanu A., Dioschiotu A., Codreanu I., Ognean L., 2004, *Research regarding the effects of acetate, propionate or butirate on the secretion and composition of the pancreatic juice at the rabbit*, Scientific papers, Series C XLVIXLVII, Veterinary Medicine, Bucharest, 89-99;
- Mihai Gh., C. Man, Albert I., 2004, *Role of biofarmers association - Bioterra in promotion of Romanian ecological agriculture*, Bull. USAMV-CN, 60, 243-247;
- Muresan Gh., M. Chiorean, 2004, *Creating a Breeding Horse Center for Genetic Amelioration of Sport Foals*, Bull. USAMV-CN, 60, 75-79;
- Oltean I. Tomsa, E. A guiding scheme for the integrated eradication of the diseases, pests and weeds of strawberry plants;
- Puia C., 2004, *The phito-sanitary state of apples stored after being treated with ozone*;
- Rusu T. et al. 2004, *Influence of the system of minimally tilled soil on weed growth and crops of soy, wheat, potato, rape, and maize*;
- Tofana, M., C. Socaciu, Manusoiu C., 2000, *Determination of composition of bitter acids contained in hops through high-performance liquid chromatography*.

(Continued on page 229)





Presentation of research activity chart

Research activity in our University is coordinated at the institutional level by the Scientific Council of the Senate, which establishes the strategy and the main orientations. At the operational level, research is carried out under the guidance and supervision of the scientific vice-dean and a grant office. At the faculty level, research is organised by the scientific secretaries and the scientific councils of the faculties.

The research centres have their own organisational structure and are coordinated by directors, who are accountable to the Senate. Currently, research is being carried out within 119 research projects whose value exceeds 1,000,000 Euro. 91 contracts are financed by CNCIS, while the others are either internally financed through national research programmes like BIOTECH, AGRAL, INFRAS, VIASAN, CERES, the World Bank, PHARE, ASAS, the Romanian Academy, or internationally financed on the basis of bilateral contracts (FP6, NATO).

Annually, ten doctoral students do research overseas for a two-year period within joint doctoral programmes or supported by Marie Curie scholarships.

Publication of scientific research is stimulated by the USAMV Bulletin (in English), which circulates abroad and will soon have an ISI quotation, and the existence of our own publishing house, Academic Press, which is recognised by CNCIS and where most of the teaching staff publish their courses and lectures. Our University is co-editor of 'Journal of Central European agriculture', a prestigious e-publication that disseminates the findings of our research work.

Structures

Research Institutes	0
Research Centers	8
Research Laboratories	31
Multi-user Research Centers	1

Top Priority Research Directions

The Scientific Council of the University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca has established the following priorities in research:

- Agriculture**
- Control of soil fertility, soil reclaiming and reconstruction;

(Continued from page 228)

The number of papers published in volumes of international scientific conferences with reviewers

521

(10 papers presented at the most prestigious events)

- Andrei S., Pinteau A., Catoiu C., Baba A.I., 2004, *Comparison Of Fatty Acids Composition in Different Types Of Mammary Gland Tumors*, 29th World Small Animal Veterinary Congress - Wsava, Greece, 320-322;
- Borda C., 2004, *Double Settling Efficiency of Slaughterhouse Wastewater*, 11th Int. Conf. FAO Escorena Network on Recycling of Agricultural, Municipal and Industrial Residues in Agriculture, Murcia (Spain), 348-352;
- Mărghitas L.A., D. Dezmirean, D. Pamfil, Grația Dezmirean, 2002, *The effect of hydrosoluble fraction of honey and propolis in carnation (Dianthus caryophyllus) in vitro micropropagation*, Inovacio a Tudomnay es Gyakorlat Egysege al Eyred Fordulo Agrariumaban, Debrecen, 282-283;
- Miclea V., Zahan M., Cseh E., Ratiu A., 2002, *Influence of some extenders on short term cryopreservation of fowl spermatozoa*, Proc. 3rd Int. Symp. "Prospects for 11th Millennium Agriculture", 57, 235-239;
- Morar R., 2004, *Le Diabete Experimental Chez Les Rats. Modifications Biochimiques Et Hematologiques*, Proc. Symp. Univ. Gent, 32-35;
- Naghiu Al., 2004, *Mixes of the Diesel fuel with vegetal oil - alternative fuel for Diesel engines*, Proc. CONAT Congress, 231;
- Pop A., Daraban S., Muresan Gh., Miresan V., 2002, *Present and perspective aspects concerning milk production in sheep*, Proc. 3rd Int. Symp. Prospects for 11th Millennium Agriculture, Bull. USAMV-CN, 57, 24-29;
- Rotar I. și col., 2004, *The effect of organic and mineral fertilisation*

on *Festuca rubra* grassland, Symp. Land use systems in Grassland Dominated Regions, EGF Luzern, Elveția, 325;

- Rusu M. și col., 2004, *Agrochemical measures for soil reclamation in connection with heavy metals pollution*, Proc. XXXIV Annual Meeting of European Society for new methods in agricultural research (ESNA), 146;
- Vlaic A., Pamfil D., Ioana Gaboreanu, B. Vlaic, R. Renaville, 2003, *Increasing milk production in cattle using DNA marker assisted selection (p1-1)*, Proc. 3rd Int. Symp. Prospects for 11th Millennium Agriculture, Bull. USAMV-CN, 59, 188-191.

The number of scientific books published by publishing houses acknowledged abroad

78

(maximum 10 significant books)

- Baba I. *Comparative oncology*;
- Marghitas L. *Bees and their products*;
- Perju T., *Pests of fructification organs of cultivated plants and their integrated eradication*;
- Naghiu Al., *The energetic basis for agriculture*;
- Socaciu C. et al., trad. in Rom. *Illustrated Biochemistry* (engl. P. Campbell, N. Smith-Churchill Livingstone), Romanian Academy Publishing House, 2005;
- Apahideanu Al.S., Apahideanu M., *Cultivation of vegetables and mushrooms*;
- Ardelean M., Savatti M. Nedelea G., *Treaty of plant breeding*;
- Groza, I., Morar I., *Veterinary androgyology*;
- Rotar I., Carlier L., *Cultivation of pastures*;
- Suteu I., Cozma V., *Veterinary clinical parasitology*.



- Sustainable utilisation of soil resources and optimisation of energy consumption;
- Technologies for the mechanisation of agricultural operations with low energy consumption;
- Integrated technologies for the protection of crops and quality assurance of crops;
- Creation of new breeds of hop, medicinal plants and fodder;
- Improvement in the extraction, analysis and utilisation of carotids.

Horticulture

- Biotechnologies in breeding horticultural plants;
- New technologies in the cultivation of horticultural plants;
- Operations of reclaiming fields and controlled lands.

Animal Science and Biotechnologies

- Optimisation of technologies for animal breeding and exploitation;
- Genetic breeding and management of genetic resources;
- Management of apiculture and silk-worm farms in Transylvania;
- Optimisation of food rations and exploitation of new fodder resources;
- Management of animal exploitation;
- Biotechnologies in animal reproduction;
- Applied biotechnologies in animal breeding and environmental depollution.

Veterinary Medicine

- Creation of new diagnosing techniques;
- Modifications caused by certain diseases in living organisms;
- Selection of new products with maximum therapeutic effects;
- Comparative oncology; diagnosis, epidemiology and experimental reproduction;
- Control of catching diseases;
- Investigations into etio-pathogenesis and diagnosis of animal dismetabolism;
- Spontaneous and induced arteriosclerosis in correlation with internal and external factors and environmental protection;
- Bio-techniques in animal reproduction;
- Testing and implementation of bio-preparations in therapy and vaccinology.

Excellence Centers

"Control and supervision of soil fertility and protection" - Director: Professor Mihai RUSU, PhD. The centre was accredited by CNCISIS as a centre of excellence in academic research on 7 May, 2004, with Certificate No. 4 CE.

Outstanding Research Infrastructure

CENTRE OF EXCELLENCE - CONTROL AND SUPERVISION OF SOIL FERTILITY AND PROTECTION (CMFPS)

The centre was accredited by CNCISIS as a centre of excellence in academic research on 7 May, 2004, with Certificate No. 4 CE.

Infrastructure:

The centre owns the following laboratories for multidisciplinary research:

- laboratory for agrochemical tests, and pre-treatment of samples for physical and chemical tests;
- laboratory for the analysis of volume and distribution of chemical elements;
- laboratory for instrumental analysis;
- laboratory for mineralisation and determination of N;
- library for documentation.



The state-of-the-art analytical equipment includes: UV-2005 Selecta spectrophotometer; Bloc Digest Selecta mineralisation unit; Pro Nitro I Selecta distillation unit; Cruma 670-G chemical niche, Shimadzu AA-6300 (2005) spectrophotometer with atomic absorption, Consort C831 (2004) multiparameter, Specol spectrometer, refractometer, polarimeter, Fhapho 4 photometer, analytical and electronic scales, drying closet, water and sand baths, refrigerators, computers.

Research facilities:

- AAS analysis of metals;
 - Agrochemical analysis of soil and plants (determination of pH and conduction, determination of humus, total nitrogen, mobile forms of phosphor and potassium);
 - Analysis of compounds with UV-VIS
- The main analytical instruments are:
- UV- VIS spectrometry, spectrophotometry with atomic absorption.



International Cooperation

Our university has a wide network of international relationships and has signed cooperation agreements with 82 universities in 28 countries. The TEMPUS programmes, the first European cooperation programmes, with prestigious universities in Germany, England and Belgium allowed us to initiate bilateral exchange of teaching staff. In the last ten years, these programmes have continued together with new programmes like Socrates, Leonardo and Marie Curie, which gave over 1,200 students and teaching staff the opportunity to participate in useful educational programmes and do research in the laboratories of 32 European universities. In recent years, the resources of the CEEPUS network have been used for cooperation in Central Europe, where our university has partnerships with other 8 institutions, which have arranged an exchange of 100 students and teachers.

Scientific research is carried out in close connection with our European and American partners through programmes of the European community, such as FP5, FP6, COST, ISEKI, NATO, SAFO, EPIROVET, or



Library

through bilateral programmes. In addition, six joint doctoral programmes are in progress and four foreign associate professors are doctoral supervisors in our university.

Recently, we have inaugurated the first joint degree Master's programme in Agribusiness in cooperation with the University of Nevada, Reno, and two more are to be initiated soon.

Every year, over 150 students carry out a four-month practical training on private farms in Germany, a programme which has been extended to France and Belgium as well.

International Scientific Activities (the 10 most important ones)

- International Symposium of the Romanian Society of Biochemistry and Molecular Biology, 2000.
- International Symposium of UASVM, 2001;
- International Symposium of UASVM, 2003;
- International Symposium of UASVM, 2004.

Products created/homologated/ capitalized / Inventions/Patents (maximum 10 significant products) 3

- CANTOR Maria: the species of carnation "Cosmina", 2000;
- The species of gladiolus "Speranta" ("Hope"), 2003;
- The species of Gladiolus Hybridus "Cipriana" 2004.

International Affiliations of the University

- EUA: European University Association, since 2003;
- EARMA: European Association of Research managers and Administrators, since 2002;
- ICA: European Interuniversity Consortium for Agriculture, since 2001; AUF: Association Universitaire de la Francophonie, since 2000.



Financial resources obtained for research

	National millions RON	Internat. EURO
2004	18.505	448.730
2003	9.381	385.608
2002	4.685	675.230
2001	1.860	235.630
2000	896	85.630
1999	516	-
1998	218	-
1997	-	-
1996	-	-
1995	-	-



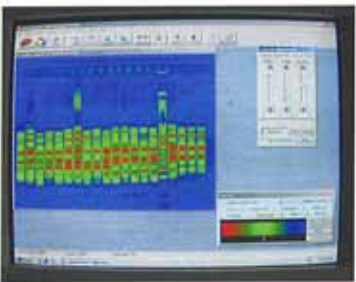
Success Stories

The Centre for Applied Biotechnologies

With the reform of university education in the 1990's, UASVM proposed the introduction of some modern disciplines in the curriculum, and one of these, Biotechnology, was to become an accredited section. The only location available at that time was that of the military department, which had left behind three deserted rooms. In spite of the scarce equipment and the lack of prospects of



success, the small collective of teachers did not give up hope and oriented themselves towards CNCISIS grants and international grants. Our intention was to attract extra budgetary financing for adequate equipment. This initiative turned into a success story as in the years that followed, especially after 2000, the funds obtained through research projects exceeded 600,000 Euro. Thus, having become a priority in the institutional strategy of our University, Biotechnologies have recently been rewarded with the complete overhaul of the old building and the inauguration of



1,5000 square metres of modern space for study, research and micro-production. The building of the Centre of Biotechnologies holds 18 up-to-date laboratories for undergraduate students, master and doctoral students, a library, the conference hall, a micro-production unit and teaching staff offices.

The courses for undergraduate students in Agricultural biotechnologies, Veterinary Medicine and Food industry, as well as for postgraduate students on three Master's programmes in the same specialisations. The Centre integrates the only doctoral school in the country in the field of biotechnologies with 18 full-time students.



Research includes the participation of many master's and PhD students and is organised in three research centres for genetic markers, applied biotechnologies, animal breeding, protection of the environment, and apicultural biotechnologies.

So far, 15 CNCISIS grants have been finalised, including a BCUM (Research Centre for genetic markers), a FP5 INCO-COPERNICUS project, a bilateral project with the Institute of Plant Sciences in Beltsville, a COST project and a NATO project.

Other 9 CNCISIS grants are in progress, as well as 5 BIOTECH projects, one INFRAS and participation in two European projects. The Centre also participates as a partner in the European programme IRC, hosting the National Bureau of contact for the domain of biotechnologies.

Given the research results and the services and products obtained, the Centre is self-financed and hopes to be able, through international cooperation, to receive international scientific recognition, which will allow it to integrate in the new European Research Area.





"ION IONESCU DE LA BRAD" UNIVERSITY OF AGRICULTURAL SCIENCES AND VETERINARY MEDICINE OF IASI



Rector

Prof. Gerard Jitireanu, PhD

Historical Overview of the University

The year of birth of the agricultural university education in Iasi is considered to be 1912, when, according to the Law of Higher Education, the foundation of the Section of Agricultural Sciences within the Faculty of Sciences of Iasi University is decided. In 1948, in Iasi The Agronomy Institute with its Faculty of Agro-technics is set up, to which the Faculty of Horticulture and the Faculty of Animal Husbandry will be added in 1951 and the Faculty of Veterinary Medicine in 1961. Since 1990, the Agronomy Institute has been known as "Ion Ionescu De La



Brad" University of Agricultural Sciences and Veterinary Medicine (U A S V M). Well-known professors have taught in this university: *Haralamb Vasiliu, Agricola Cardas, Gh. Ionescu Sisesti, Stefan Barsanescu, Mihai Ravarut, Neculai Zamfirescu.*

Faculties and Departments

- 4 faculties (agriculture, horticulture, animal husbandry, veterinary medicine);
- departments: training of the teaching staff, agronomy research, professional counselling, education without attendance required.

Master and Doctoral Programs

MASTER - 14 programs within the 4 faculties;

Doctoral programs - 2 fundamental domains: agricultural and sylvicultural sciences = 3 domains; medical sciences = 1 domain

Patrimony

7 buildings for educational activities with a total area of 16700 square metres, 4 hostels that can accommodate 1218 students, a gym of 619 square metres, 2 sports grounds, 1 canteen where 252 students can take their meals, 1 training station, with 3 farms and a land patrimony of 7182 hectares.

Fields in which human resources are trained

Agriculture; Horticulture; Animal Husbandry; Veterinary Medicine; Engineering of processing foods; Engineering and management in agriculture; Biology.

Presentation of research activity chart

The regulations of UASVM regarding organizing, carrying out the activity and financing the scientific research stipulate that the scientific research is performed within departments, research centres, laboratories and is led by a Scientific Board subordinated to UASVM Senate through the Scientific Research Commission. The operational management is ensured by the General Chancellor (responsible for scientific activities) and by the director of the University Department of Agricultural Research.

Structures

Research Institutes	0
Research Centers	6
Research Laboratories	54
Multi-user Research Centers	0

Top Priority Research Directions

The scientific research has as a strategic goal the development of science in agriculture and veterinary medicine domains as well as

Human Resources

Professors	52
Senior Lecturers	35
Lecturers	57
Assistant Lectures	28
Teaching assistant	21
Research Fellows	0
Administrative Staff	121
Students	3785
of which:	
Undergraduate	3195
Master	213
PhD - full attendance	30
PhD - attendance not required	347



the discovery of certain solutions in order to modernize agricultural production so that it may become comparable and competitive to the one in the EU countries. The topics of research are varied corresponding to the diversity of the domains, profiles and subjects, but restricted to the priorities established by the main financiers. This large diversity of topics and the complexity of the objectives of the research projects allow, ensure and even induce a preponderant interdisciplinarity both fundamentally and applicably as regards innovation and technological transfer.

Outstanding Research Infrastructure

The Oenology laboratory in Iasi is authorized to make analyses for wines and other drinks based on must and wine which are going to be exported and also for wines with names of controlled origin. It is equipped with chromatograf Agilent HP1100, gaz chromatograf Shimadzu GC17A, spectrofotometre UV-Vis Analitic Jena, electronic densimetre Anton Paar DMA 5000, rotavapor, pH-metre WTW, electronic biurete, distillation machine with Jaulmes type water vapors, Metler analytic scales.

International Cooperation

INCO/COPERNICUS IC15CT96-1009 - The requirements of the consumer as the main agent in the modernization of the flux of agro alimentary products in the Eastern and Central Eastern European Countries - partnership with Great Britain, Germany, Hungary;
 FP5 - G6RD - CT- 00646/2001 - setting up a data basis for extracommunitary wines, achieved with partners from Germany, France, Italy, Great Britain, Belgium, the Czech Republic, Hungary, Slovenia;
 Leonardo da Vinci, pilot project - rehabilitation and development of the handicraft skills for enterprizing villagers - with partners from Denmark, Finland, Greece, Spain.
 Leonardo da Vinci, pilot project - rehabilitation and transformation of mine zones into forest areas - with partners from Italy, Greece, Spain.

International Scientific Activities (the 10 most important ones)

- Conference on the topic: Management of the Biological and Ecological Products In E.U. 27th of March 2002, with participants from Angers University, France;
- Conference on the topic: Animal Breeding and the Rules Regarding Agricultural Exploitations in E.U. 26th of June 2003, with participants from Angers University, France;
- Reunion of group works - 12 Phare veterinary programmes Ro 00-IB- OT- 01 - Mutual acknowledgement of professional qualifications, combined with the Forum from the Francophone University Cooperation, March, 2003;
- Workshop: "Promoting Access Of The Romanian Research Projects to the Frame Programme no. 6 of E.U.," held by German experts in the field from the Centre of Technological Transfer And Innovation Zenit GmbH, November 2004;
- Workshop: "Accessing European Programs On Agricultural Development in The Eastern Region", held by specialists from Writtle College, England, March, 2004;
- Conference on the topic: Integrated Helicicol Farms - Source Of Financial Incomes in Romania, 28th of July, 2004, with participants from the International Institute of Heliculture, Cherasco, Italy.

Products created/homologated/ capitalized / Inventions/Patents (maximum 10 significant products) **28**

- Methode pur l'action du taux de croissance des poissons dans les milieux marins Miron L., Miron I., Gold Medal. International Invention Exhibition , Geneva;
- Complex Decontaminating Agent With Dissociative Electrochemical Pump - Coman I., Mares M. Genius Prize, Invention Exhibition, Budapest;
- Methode et installation pur elevage de moules - Miron L., Miron I. Gold Medal, International Invention Exhibition Eureka, Bruxelles. Garden climbing bean variety - Violeta of Iasi, Stan N., Munteanu N., Stan T.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	4347	15300
2003	1398	27500
2002	1381	45100
2001	730	62300
2000	478	81600
1999	250	16700
1998	440	8850
1997	284	-
1996	170	-
1995	170	-



The number of papers published in ISI-quoted journals
(the most cited 10 papers)

12

- Condurache D., Bulancea V., Foca N., Oancea Servilia, 2004 - *Graphyte-polyamide-dtanium equilibrium diagram. Molecular Crystals and Liquid Crystals J.*;
- Foca N., Servilia Oancea, Condurache D., 2004 - *Growth and photosynthetic activity for tomato plants treated with different cations. Molecular Crystals and Liquid Crystals J.*;
- Grădinaru G., Grădinaru Felicia-Sanda, Istrate M., Dascălu M., 2002 - *Native Apple Germoplasm in Romania, Al XXVI-lea Congres Internațional de Horticultură Toronto-Canada, Acta Horticulture, Nr. 622*;
- Lerescu A.I., Constandache N., Oancea Servilia, Grosu I., 2004 - *Collection of master-slave synchronized chaotic systems. Chaos, Solitons, Fractals*;
- Moroșan S., Payan C., Lunel F., 2003 - *Les modeles experimentaux de replication du virus de hepatite C. Hepato Gastro, vol. 10, no. 2*;
- Rapa Alina, Oancea Servilia, Creangă D., 2004 - *Fractal dimension in red blood cell. Turkish Journal Of Veterinary Research*;
- Rosca P., 2004 - *Observations regarding the some physicochemical modifications of mastitis milk. Veterinary Bulletin, vol. 74, no.10*;
- Rosca P., 2004 - *Researches regarding the bacteriological test of milk obtained from dairy cows with clinical mastitis. Veterinary Bulletin, vol. 74, no.10*;
- Solcan Gh., Mitrea I., Csuma, A., Fantanaru M., Savuta Gh., Solcan Carmen, 2004 - *Bioequivalence of two oxytetracycline products in pigs. Veterinary Bulletin, vol. 74, no.10*;
- Trailhao G.J., Roudier J., Moroșan S., Giannini C., Hong Tu, Carnot F., Zavala F., Joulin V., Kremsdorf D., Brechot C., 2002 - *Paracrine in vivo inhibitory effects of hepatitis B virus X-protein (HBx) on liver cell proliferation: An alternative mechanism of HBx - related pathogenesis. PNAS may 14, 2002, vol 99 nr 10.*

The number of papers published in journals from the main stream of publications
(the most cited 10 papers)

1553

- Beceanu D., Nechita B., Cofret, S., Roman Carmelia Nicoleta, 2004 - *Les caracteres chromatiques des quelques extraits de plantes aromatiques en provenant de la (lore spontanee du departement de Iasi. Scientific Studies U.A S. V. M., Horticulture series, vol. 47*;
- Boisteanu P.C., Margareta Confederat, Iolanda Margarint, 2002 - *Enzymatic Role Of Miozine In Biochemistry Of Muscular Tissue. Scientific Studies, Animal Husbandry series, vol. 45, U.A S. V. M. Iasi*;
- Cotea C., Oprean O. Z., Boisteanu P., Carmen Solcan, Cotea I. 2004 - *Secretion Neurons In Hipotalamus Nuclei In Cow. Scientific Studies. U.A S. V. M Iasi, vol. 47*;
- Creanga St., V. Maciuc, I. Galca, M. Pantea, Margareta Confederat, 2002 - *Dynamics of Genetic Structure for Bovine Kappa-casein Locus, in b.n.r., Cow Breed, Scientific Studies., Animal Husbandry series, vol. 45, U.A S. V. M. Iasi*;
- Dorina Timofte, Gh. Solcan, M. Carp Carare, Carmen Solcan, Geta Pavel, V. Vulpe, Felicia Tirca, C. Carp Carare, 2003 - *Diagnosis Of Self Immune Diseases In Dog. Scientific Studies., U.A S. V. M. Iasi, Veterinary Medicine series, vol. 46*;
- Grădinaru G., Birescu L., Birescu Geanina, Dorneanu Emilia, Gavriuta I., Budoi Gh., 2002 - *Non Conventional Means Of Fertilizing And Increasing Fruit Production. Scientific Studies., U.A S. V. M., Horticulture series, vol. 45, Iasi*;
- Leonte C., Simioniuc D. P., Simioniuc Violeta, 2004 - *Study of Certain Recently Obtained Garden Beans Cultures under the Conditions from S.D.E. Iasi. Scientific Studies, Agriculture series, vol. 47, U. A S. V. M. Iasi*;
- Savu P., Bucur D., 2000 - *Soil Erosion Control, Major Component Of Maintaining Ecological Balance In The Moldavian Table-Land. Scientific Studies., U. A S. V. M., Horticulture series, vol. 1 (43), Iasi*;
- Simioniuc D. P., Ahlemeyer Jutta, Friedt

- W., Ordon F., 2004 - *Analysis of genetic diversity in some barley (Hordeum vulgare L.) Cultivators using molecular markers (SSR-Simple Sequence Repeat), Scientific Studies, Agriculture series, vol. 47, U. A S. V. M. Iasi*;
- Solcan, Gh., Mitrea, I. L., Csuma, A., Fantanaru, M., Savuta Gh., Solcan, C., 2004 - *Bioequivalence Of Two Oxy Tetracycline Products In Pigs. University Bulletin of U. A S. V. M. Cluj-Napoca, Veterinary Medicine series, Vol. 74, No. 10.*

The number of papers published in volumes of international scientific conferences with reviewers

109

(10 papers presented at the most prestigious events)

- Bucur, D., Savu, P., Avarvarei, I., 2003 - *The erosion control - a necessary condition for a sustainable agriculture and the environment protection in the Moldavian Table-land (North-Eastern Romania). International Soil Tillage Organisation (ISTRO), 16th Triennial Conference, The University of Queensland Brisbane, Australia*;
- Călin, M., Leonte, C., Gălea, D., 2003 - *Fuzzy querying method with application in plant breeding. Fuzzy information processing, theories and application. Proc. of the International Conference FIP, Beijing China. Springer and Tsinghua University Press*;
- Grădinaru G., Birescu L., Grădinaru Felicia, Dorneanu Emilia, Gavriută I., Birescu Geanina, Dana Daniela, 2003 - *The foliar fertilization - technological, unconventional and unpolluting action method upon tree metabolism for a lasting development. Analele Univ. Tuscia, Viterbo, Conf. a XXXIII-a, E.S.N.A.*;
- Jitoreanu G. și colab., 2001 - *The mixed effects of the subsurface drainage on the main agrochemical properties of the albic luvisol from the high terrace of Moldova River. The XIV Memorial CIGR World Congress, Tsukuba, Japan*;
- Jitoreanu G., Avarvarei I., 2000 -

Key role played in certain fields

Presentation of Laboratories



Influence of different tillage systems on soil physical and chemical characteristics in the East of Romania. Proceedings of ISTRO International Conference, Fort Worth - Dallas, USA;

- Mareș M., Bosnea Daniela, Tinică G., Carlan Maria, Coman Gabriela, Buiuc D., 2004 - *Fungemia due to infrequent Candida species.* Proc. 10th Congress of the European Confederation of Medical Mycology, Wrocław, Poland, (Medical Mycology);
- Mareș M., Ștefanache Alina, Popa Lavinia, 2004 - *Evaluation of anti-*

microbial activity of Almagyn ovules - Laboratory and clinical studies. Proc. International Meeting on Pharmaceuticals, Biopharmaceutics and Pharmaceutical Technology, Nuremberg, Germany;

- Roguț Odette, Mareș M., Ștefănescu Eugenia, Coman I. 2004 - *Evaluation of antifungal activity of some R-pyridazinic compounds.* Proc. 10th Congress of the European Confederation of Medical Mycology, Wrocław, Poland;
- Ștefanache Alina, Mareș M., Popovici Iuliana, Popa Lavinia, 2004 -

ALMAGYN - A new formula of glycerogelatinous ovules with antimicrobial action. Proc. International Meeting on Pharmaceuticals, Biopharmaceutics and Pharmaceutical Technology, Nuremberg, Germany;

- Vintu, V., Avarvarel, I., Dumitrescu, N., Iacob, T., Samuil, C., 2003 - *The improvement of the degraded rangelands from Romania's forest steppe by organic and mineral fertilisation.* Proceedings of the VII - th International Rangeland Congress, Durban, South Africa.

Key role played in certain fields

"Ion Ionescu De La Brad" University Of Agricultural Sciences And Veterinary Medicine is an institution specialized in agricultural and veterinary medicine higher education, being well-known both at national and European level; its fundamental mission is to train engineers (specialized in agriculture, mountain agriculture, horticulture, animal husbandry, economic engineering, agricultural products processing), graduates in agricultural biology, veterinary medicine doctors. The structure of the university has also the possibility to provide post graduate education (master and Ph.D), long distance education and university scientific research.

Oenology Laboratory

The activity of the laboratory includes fundamental and applied scientific research as well as analyses of wines and other alcoholic drinks both for export and home consumption.



The laboratory is certified to issue analysis bulletins and customs documents VI 1, the latter being necessary for wine export within the EU area. In this respect, the laboratory has service contracts with 14 commercial companies from the North Eastern region of Moldova. The Oenology lab makes the following current analyses: volume mass at 20°C alcoholic concentration in volumes, total dry extract, reducing sugars, total acidity, volatile acidity, citric acid, sorbic acid, sulfur dioxide, chromatic characteristics ecc.

Laboratory of fodder quality analysis Its main aim is to make chemical tests of the fodders with the view to determine their nutritive value.

Laboratory activity:

- helps with the scientific studies for different subjects within the university;
- contributes to thoroughgoing studies and lab practice for master students and candidates for Ph. D. so as to be able to carry out their research;
- makes the chemical tests for research contracts;





- makes the chemical tests for those who have cooperation relations with the Animal Husbandry Faculty.

The laboratory has rooms equipped with cupboards, desks, heating sources, specific apparatus: analytical scales, electronic scales, technical scales, drying house, burning oven, sand bath, magnetic agitating apparatus, Soxhlet battery, Parnas-Wagner instalations, snail mills and grinding machines, rotating evaporator, distiller, pH-portable electronic metre, calculation systems. All this equipment can determine the raw chemical composition of the samples which are to be tested, as well as some land determinations.



Success stories

FPS-G6RD-CT-00646/2001, entitled "The Setting up of an analytical database for extracommunitary wines"; it was achieved with partners from Germany, France, Italy, Great Britain, Belgium, The Czech Republic, Hungary, Slovenia.

The main aim of the project was to extend the measuring procedures of certain parametres of the wine, according to Reg. EECNo. 1937/97 (2348/ 91) and to get some authenticity certificates. The samples are analysed for those parametres by which the authenticity of the geographical origin of the wines, of the grapes varieties etc. are checked

The results of this study might influence the future elements which can ensure a better interpretation of the rules established by E U.

Objectives:

- to achieve systems of sampling and drawing up documents in accordance with the regulations of the EC in the countries in course of accession;
- to achieve a data base of the wines common on the market of the countries in process of accession;
- to improve the methodology of measuring the isotopic and analytical parametres of wines;
- multifactorable statistic evaluation of all data and their correlation to the authentic wines and to the common ones present on the market;
- applications of the acquired knowledge to solving the present problems;
- to train the researchers from the countries in course of accession as regards the transfer of the analytical knowledge and the endorsement of EU measures to the wine control;
- to achieve laboratories which have already been accredited in the Central and East European countries;

ISFRADA

The French-Romanian Agroalimentary and Agricultural Development Higher Institute (FRAADHI) is an organism for initial and continuous training which was founded in 2001 by the Higher Institute of Agriculture from Lille, France and the "Ion Ionescu de la Brad" University Of Agricultural Sciences And Veterinary Medicine.

ISFRADA has two aims:

1. to train Romanian staff for the French and Romanian companies in agroalimentary and rural development domains;
2. to train Romanian trainers for rural development who will work within the Ministry of Agriculture in Romania and the county offices of agricultural consultance.

ISFRADA proposes two specializations:

- master in "Agroalimentary Production";
- master in "Rural Development".

The training lasts for a year (September - August) its structure is: 3 months in Iași, courses delivered by teaching staff and researchers from ISA (France), 9 months in France, on distinct modules, 3 months - courses at ISA Lille, 6 months - practice in companies or agricultural chambers. The courses are delivered in French. For both specializations, the students have to take a final exam (project) in order to get a Master's Diploma. The companies and institutions which are in partnership with ISFRADA are: UASVM Cluj-Napoca and UASVM Bucuresti, the National Agency of Agricultural Consultance, the Agency of Consultance and Training in Agriculture from Moldova Republic and the firms: Danone, Carrefour, Limagrain, Soufflet, Syngenta, Zaharul - Diamant Oradea and Dorna Dairy Products.

Success Stories

International Affiliations of the University

International Cooperation



Success Stories

At the Faculty in Veterinary Medicine the staff who teach **Immunology and Immunopathology** lead by Prof. Mihai Carp-Carare, PhD, achieved research on self-immune diseases in animals, for the first time at national level. The research began with a CNSIS grant, lead by Reader Dorina Timofte, PhD, during which a specialization stage at the Faculty of Veterinary Medicine in Liverpool played an important role. During the research the candidate for a doctor's degree veterinary doctor Cristina Rebegea entered the team with a thesis on "Research regarding self



immune diseases in dogs". It is remarkable that the research which has been made so far in an interdisciplinary team including teaching staff from Microbiology, Pathology, Medical clinic, Semiology, Imagery, Cell Physiology, Histology and Embriology, Morphopathology succeeded in diagnosing some cases of Lupus Eritematos (systemic and localized) rheumatoid arthritis. The research is still going on within a cooperation contract with international financing elaborated by the Faculty of Veterinary Medicine in Liverpool and having as partners the Center of Medical Genomics from Manchester and the Faculty of Veterinary Medicine from Iasi.

In the field of **aquaculture**, a team headed by Lecturer Liviu Miron, PhD, and Prof. Ionel Miron, PhD, from Al. I. Cuza University got outstanding achievements which ended with 3 Invention Licenses: "Method and Instalation for Breeding Mussels", "Method for Stimulating Fish Growth in Sea-Water", "Equipment For Plankton Collection". For these inventions, the authors were awarded 10 prizes at the International Invention Exhibitions: gold and silver medals at the International Invention Exhibition - Geneva, 2002-2003, gold medal at the 53rd World Exhibition Of Invention, Research and New Technologies - Eureka (Bruxelles - 2004), silver medal at the Interantional Invention Exhibition "Genius Europe" - Budapest a.s.o.



Members in international associations

The Faculty of Veterinary Medicine is affiliated to the European Association of Establishment for Veterinary Education (EAEV).

International Cooperation

Bilateral cooperation agreements with similar universities from: Perugia, Bologna, Bari, Udinese, Florence - Italy, Prague - The

Czech Republic, Assiut - Egypt, Geisenheim, Wissboden, Giessen, Hohenheim - Germany, Chisinev - Moldova Republic, Lisbon - Portugal, Bournemouth, Liverpool - Great Britain, Angers, Dijon - France, Gent, Liege, Louvain, Vienna - Austria, Plovdiv - Bulgaria, Krakow - Poland, Budapest, Godollo - Hungary, Novisad - Serbia, with the Institute Of Veterinary Practice Old Church, Donegal - Ireland, the National Veterinary School in Alfort, the Public Institution of Agricultural Education Rethel, Higher Institute of Agriculture Lille, France.



Public Universities

Arts/Architecture/Sports Specialization

"ION MINCU" UNIVERSITY OF ARCHITECTURE AND URBANISM BUCHAREST



Rector

Prof. arch. Emil Barbu Popescu, PhD

Historical Overview of the University

The first higher education form in Romanian architecture was established in 1892 as a private school of the Romanian Society of Architects. In 1897 it became a self-contained state institution under the name of The National School of Architecture. Over the following decades it took various names and functioned either as a self-contained institution or as a Faculty within the Politechnical School. In 1952 it was named "Ion Mincu" Institute of



Architecture, and since 1997 it holds its current name. Among the famous professors in the country one can mention *Ion Mincu, Petre Antonescu, Dulliu Marcu, Cincinat Stintescu, G. M. Cantacuzino, Grigore Ionescu, Mircea Alifanti, Horia Maicu, Octav Doicescu, Alexandru Cismigiu, Ascanio Damian*, etc.

Faculties and Departments

- 3 Faculties (Architecture, Urbanism, Interior Design), Academic College with 4 sections (in Bucharest, Sibiu, and Craiova), The School of Advanced Studies, and the Doctoral School.
- The teaching process develops within 2 departments (Architecture Design and Synthesis of Architecture, each with 2-3 Chairs), 4 Chairs (History, Theory, and Heritage Conservation, Urbanism and Territory Planning, Representations, Study of Form and Architectural Ambience, Technical Science and Architectural Technologies).

Master and Doctoral Programs

MASTER - 1 Programs of Advanced Studies, 8 Master Programs (of which one French-Romanian);

Doctoral programs - Doctoral Programs full attendance / attendance not required.

Patrimony

Educational spaces (lecture, seminar rooms, design studios, laboratories, etc.) - 67; gymnasium -1; sports grounds -1; hostels -3; fortified ensemble at Dealu Frumos, Sibiu County (for students' practice).

Fields in which human resources are trained

1. Architecture;
2. Urbanism and territory planning.

Presentation of research activity chart

Research activities are organized according to the major interests of the university through 5 research centers: Center for Research, Design, Expertise and Consulting (CRDEC), Center for Architectural and Urban Planning Studies (CAUPS), Center for Vernacular Architectural Studies (CVAS), Center of Excellence for Image Study (CEIS) and Data Base in Construction, Architecture, and Urbanism (DBCAU). The latter works as a data base for multiple users.

Structures

Research Institutes	0
Research Centers	4
Research Laboratories	0
Multi-user Research Centers	1

Top Priority Research Directions

The strategic objective is excellence in research by pursuing the following priorities:

- critical enquiry of the contemporary architectural phenomenon
- problems of urban and territorial planning
- architectural and urban conservation
- sustainable development.

Outstanding Research Infrastructure

The medieval fortified ensemble at Dealu Frumos, Sibiu County, dating as early as the 13th century.

Human Resources

Professors	35
Senior Lecturers	41
Lecturers	60
Assistant Lectures	75
Teaching assistant	80
Research Fellows	1
Administrative Staff	159
Students	2593
of which:	
Undergraduate	2275
Master	127
PhD - full attendance	48
PhD - attendance not required	143

source

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Rector

Prof. Dan Buciu, PhD

Historical Overview of the University

In the landscape of the Romanian Culture, this university has a privileged position. Thousands of composers, singers, instrumentalists, critics, and teachers were trained and gained knowledge in this institute. The prestige of the University has been constant since its foundation, as a Conservatory, by Prince Alexandru Ioan I (1864), due to the teachers and the alumni. Important names for national and international music are connected with



the Conservatory: *Alexandru Flechtenmacher, George Enescu, Dinu Lipatti, Mihail Jora, Ionel Perlea, Constantin Brailoiu* in the past and, in the present, the name of soprano *Angela Gheorghiu* speaks for the latest fame of the school.

Faculties and Departments

- Faculty of music performance;
- Faculty of music pedagogy, composition and musicology;
- The Research and Artistic Activities Department;
- The Department for continuous education;
- The Department of Artistic Productions;
- The media center.

Master and Doctoral Programs

MASTER • Modern methods of analysing music; Musical semiotics; Languages, musical forms and choral arrangements; Elements

of semantics in 20th century music; Specific matters in the choral repertory for teenagers; Currents, styles and componistic languages in the 2nd half of the 20th century; Techniques and styles in Romanian and foreign music in the 2nd half of the 20th century; Artistic and cultural management; Composition assisted by computer; Parallels in folklore; History of culture; Music aesthetics.

Doctoral programs - Training in musicology, composition, theory and practice of interpretation; Training in aesthetics and history of culture; Elements of writing in contemporary music; Music and computer science.

Patrimony

In addition to the 3 buildings (A, B and C) where classes are held and where offices are, the NUMB has one of the most modern student dormitory buildings in the city, situated at 8, General Berthelot St.

Fields in which human resources are trained

Vocal interpretation; Instrumental interpretation; Vocal pedagogy; Instrumental pedagogy; Orchestra conducting; Choral conducting.

Presentation of research activity chart

1. The Research and Artistic Activities Department;
2. The Research and Artistic Activities Center of the Faculty of music pedagogy, composition and musicology (National centre of excellence);
3. The Research and Artistic Activities Center of the Faculty of music performing.

Structures

Research Institutes	0
Research Centers	2
Research Laboratories	1
Multi-user Research Centers	2

Human Resources

Professors	50
Senior Lecturers	37
Lecturers	58
Assistant Lectures	30
Teaching assistant	2
Research Fellows	0
Administrative Staff	53
Students	1362
of which:	
Undergraduate	1173
Master	63
PhD - full attendance	18
PhD - attendance not required	251



Top Priority Research Directions

For the Faculty of music pedagogy, composition and musicology, the main area of research is Art and culture through knowledge. Fields: musicology, composition, theory & practice of the interpretation.

For the Faculty of music performance, the main area of research is Art & Science of music interpretation. Fields are Analytic interpretation, applied research, music creation, and composer-performer interaction.

Excellence Centers

Research and Artistic Activities Center of the Faculty of music pedagogy, composition and musicology.

International Cooperation

- CEEPUS, SOCRATES, ERASMUS programmes;
- Academic partnership with US;
- The international program Culture 2000;
- Academic partnership with Accademia Santa Cecilia (Italy);
- Artistic tours (individuals and groups).

International Artistic and Scientific Activities

(the 10 most important ones)

- The "George Enescu" International Festival - partner;
- The "George Enescu" International Competition - partner;
- The International Competition for Double Bass "Joseph Prunner";
- The International Competition "Jeunesses musicales" - partner;
- *La traviata*, sesquicentennial, in the US;
- The International Festival "Mostly Tchaikovsky";
- Romanian music festival in the US;
- Paradiso del amore - contemporary music season in Italy.

Attendances to specific international activities / events 2340

(10 most prestigious attendances)

- Mircea Tiberian - jazz concert. *Expo Hanover*;
- Mircea Tiberian - project *Penderecki jazz, project Interzone*;
- Dan Dediu - comic opera *Münchenhausen*, Berlin, Germany;
- Mihail Ghiga - *Academie d'Ambronay*, soloist;
- Dana Borsan - concert at *Deutsche Rundfunk*, Berlin;
- Dan Dediu - *Ubu Blues for piano*, Holland;
- Mihai Cosma - *Tchaikovsky concerts*, US;
- Mihaela Vosganian - *Komponistinnen in Rumanien*, Germany;
- Events in international partnership organized by Serban Nichifor and Liana Alexandra;
- Academic orchestra - *Concert in Berlin*, Germany.

Attendances to specific national activities / events 7748

(10 most prestigious attendances)

- Recitals and concerts at the Romanian Athenaeum;
- Concerts with National Radio Orchestra;
- Concerts and recitals in Romania;
- Composers' portraits;
- National symposiums;
- Livia Teodorescu-Ciocanea: *Le rouge et le noir*, ballet, National Opera Bucharest;
- Radio & TV shows: Grigore Constantinescu, Dan Dediu, Valentina Sandu-Dediu, Liviu Danceanu, Mihai Cosma;
- CD of composers and of groups of musicians;
- CD's of performers;
- CD-ROM-s performers and composers portraits;
- Mihaela Vosganian: *CD*;
- Dan Dediu: "Verva" for orchestra, commission of The National Radio Orchestra;
- Composers works;
- Musicological works.

Attendances to international festivals, symposiums 1500

(10 most prestigious attendances)

- Liviu Danceanu, *The New Music Week*, Bucharest;
- Mircea Tiberian, *New-York International Festival*;
- Mihaela Vosganian, *International Festival of Women in Music Today*;
- Livia Teodorescu-Ciocanea, *ControcANTO Festival*, Italy;
- Liviu Danceanu, *Hochschule fur Musik*, Augsburg, Germania, 2004;
- Dana Borsan, *Workshop at Hochschule fur Musik Franz Liszt*, Weimar;
- Nicolae Brandus, *The Romanians of the Day*, Australia;
- Alexandru Matei, *International New Music Week*;
- Nicolae Brandus, CD with the piece *European Parody* (National Taipei Orchestra);
- Ladislau Csendes, *International Festival Appenzeller Winter*, Switzerland.

Attendance to Biennials and Triennials recognized arts, personal exhibitions at international galleries and museums 282

(10 most prestigious attendances)

- Georgeta Stoleriu - CD *FRANZÖSISCHE LIEDER*;
- Dana Borsan: Frédéric Chopin: Concerto for piano no.2, EMI;
- Liviu Danceanu - *Concierto en Bucarest (EMEC Madrid) CD*;
- ECCA en concierto (EMEC Madrid) CD
- Liviu Danceanu... con *ARCHAEUS (EMEC Madrid) CD*;
- Livia Teodorescu-Ciocanea: CD Australia, performers: Pierre-Yves Artaud, Symphonic Orchestra of the University of Huddersfield, UK, conductor Barrie Webb;
- Dana Borsan: CD with piano concerto by Robert Schumann: C major Fantasy op.17 for piano; Fantasies op.12 for piano; Symphonic studies op.13 for piano, KU Classics;
- Concerts of Romanian music throughout the world;
- Individual performances throughout the world

Key role played in certain fields

Presentation of Studios



Homologated brevets and papers with intellectual property right in every artistic fields (maximum 10 significant products) 1163

- Octavian Lazar Cosma: The National University of Music at 140 years;
- Livia Teodorescu-Ciocanea: Le rouge et le noir, ballet;
- Octavian Nemescu: PreSymphony no. 6;
- Doina Rotaru: 3rd Symphony;
- Doina Rotaru: Autara;
- Dan Dediu: Grana;
- Dan Dediu: Munchausen, opera;
- Dan Buciu: Nostalgic suite;
- Liana Alexandra: Concert for organ and orchestra.



Arta Florescu



Virginia Zeani

Key role played in certain fields

NUMB is the oldest artistic educational institute in the country and one of the oldest in Europe. It has a glorious tradition in highest level training of instrumentalists, singers, chamber groups, choruses, orchestras and opera ensembles, as well as composers, musicologists, and teachers.

Among its alumni are world famous artists, like Angela Gheorghiu, Ileana Cotrubas, Dan Grigore, Horia Andreescu, Cristian Mandeal etc.

NUMB proved to be both a centre of education and a centre of culture and musical performances, promoting on stage its best students and teachers.



NUMB Symphonic Orchestra on the "George Enescu" Philharmonic stage

Nowadays it is the only institution to develop all types of musicians, from singers to instrumentalists, from composers to musicologists, from teachers to church singers, from conductors to jazz musicians.

Presentation of studios

The Opera Studio

It is an artistic creation lab for singers, orchestra players and chorus members. The projects are oriented towards the complete realization of an opera performance, from the primary stage of reading the score up to the public performance. There is musical training, acting training, and scenery and costumes are made, under the supervision of highly competent, prestigious and innovative teachers.

The recording studio

ETHis is a lab for sound capture and editing. Its role is to make live recordings or studio recordings and to edit them on modern computer programs, finalizing this with CD's.

The media center

This is an information center, with a books section, an audio recordings section (CD's, LPs, tapes), and a video recordings section. It has a huge collection, with Romanian and international books and records.



Angela Gheorghiu

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	135	-
2003	31,2	-
2002	-	-
2001	44	-
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



International Affiliations

NUMB is member of the Union of European Conservatories.

Success Stories

- *Celebration of the Conservatory's 140th Anniversary*

In the summer of 2004, the NUMB celebrated the 140th Anniversary of its foundation. For this occasion, many spectacular events were organized - symphonic and chamber concerts, opera performances, anniversary symposiums, etc. Teachers, students, and NUMB alumni participated among the most renowned musicians. Foreign guests participated along with American conductor Dr. David G. Williams, the American instrumental group De Klokkenluiders, and Romanian



George Enescu

soloists who have moved abroad. In honor of the 140th Anniversary, the first book (along with shorter summaries of the book in both English and Romanian) of the Conservatory's history was published, written by Dr. Octavian Lazar Cosma.

- *Symphonic Concert performed by student orchestra of NUMB at Young Euro Classics Festival in Berlin, August, 2004*

Conductor- Dorel Pascu-Radulescu. Cello soloist- Laura Buruiana, student of associate professor Marin Cazacu. Performed works include: The world premiere of Grana, Dan Dediu's work commissioned especially for this festival, Anatol Vieru's *Concerto no. 1 for cello and orchestra*, George Enescu's *First Suite for orchestra*, *Three pieces for string orchestra* by Constantin Silvestri, and *Innen-Zeit* by Gabriel Yranyi.

- *Gift of top-quality instruments and Yamaha pianos equaling \$400,000 from The Japanese Government*

This success demonstrated solid relations between NUMB and the Japanese culture in addition to financially aiding the conservatory and bolstering the international prestige of the conservatory.



Madrigal National Chamber Choir conducted by Marin Constantin



Madrigal National Chamber Choir conducted by Marin Constantin



Frederic Chopin Hall



Audition Media center



Library



Rector

Prof. Gh. Cismaș, PhD

Historical Overview of the University

In 1922 ONEF was founded, the first institution for organizing and directing the whole physical education activity in the country. It has changed its name along years: National Institute of Physical Education, Sports Institute of Physical Education, National Academy of Physical Education, Society for Sports and Physical Education, The Institute of Physical Education and Sports, National Academy of Physical Education and Sports. University staff



of high professionalism have taught in this institute: *prof. Francisc Rainer PhD* (anatomy), *prof. N. Paulescu* (physiology), *prof. D. Mezincescu* (hygiene), *C. Radulescu - Motru* (psychology and pedagogy), *academician Octav Onicescu* (mechanics and statistics applied to physical education), *scientist C. Kiritescu* (history, theory and organizing of physical education). During 8 decades there have been 80 series of PhD graduates specialized in various sports disciplines.

Faculties and Departments

- 2 faculties: Faculty of Physical Education and Sports, Faculty of Kinetotherapy;
- 1 department: Department of Didactic Training and Improvement.

Master and Doctoral Programs

MASTER - 3 programs: 1. Motor anthropology. 2. Bio-psycho-sociomotor skills in physical education and sports. 3. Kinetology and bio-mechanics.

Doctoral programs - 1 domain: Science of Physical Education and Sports.

Patrimony

3 didactic - sports and research complexes in Bucharest, Eforie Nord, Parang mountains, covering over 100.000 square meters, including : 2 gyms, 1 athletic gym, 1 football stadium, handball, basketball and lawn tennis courts, gym halls (4), wrestling, judo, boxing, self defence, fencing, target shooting, body building halls (2), 5 student hostels, 3 canteens, library, 30 classrooms (seminars, practical works, laboratory), 7 course halls, 2 amphitheatres, ski slope, swimming complex with 32 tourist huts.

Fields in which human resources are trained

1. Physical Education and Sports;
2. Kinetotherapy.

Presentation of research activity chart

The research activity is carried on within the departments, chairs and the research center and is supervised by the Scientific Council subordinated to NAPES Senate. The management of the activity is performed by the pro-rector responsible with the scientific research and by the research center director.

Top Priority Research Directions

Contributions to the study of the sportman's body reactivity to physical effort. Contributions to the elaboration and the improvement of the methodology and technology of scientific investigation in the physical education and sports domain. Contributions to the scientific direction of the sports training process and of its reevaluation in sports competitions. To stimulate the scientific creativity in the physical education domain.

Structures

Research Institutes	0
Research Centers	1
Research Laboratories	3
Multi-user Research Centers	0

Human Resources

Professors	16
Senior Lecturers	20
Lecturers	28
Assistant Lectures	18
Teaching assistant	7
Research Fellows	2
Administrative Staff	104
Students	1303
of which:	
Undergraduate	1007
Master	96
PhD - full attendance	0
PhD - attendance not required	202



Outstanding Research Infrastructure

Interdisciplinary scientific research staff; Integro - correlative method for investigating the body reactivity to physical effort; Original apparatus using the IC investigating method.

International Cooperation

Signing up bilateral agreements with other institutions in the European area - universities in Artois, Nice, Bordeaux (France), Alicante (Spain), Bologna, Torino (Italy), etc; carrying out Socrates, Erasmus and Comenius community programs, with European financing, targeting students' and teaching staff's mobilities, intensive projects or thematic networks; the didactic staff participation in the activity of some forums, international scientific and sports bodies (FISU, FEPSAC, ENSSHE, IAU, international sports federations, as experts or lecturers); participations in international sports festivals, to which our students are invited every year.

International Scientific Activities (the 10 most important ones)

- 2001 - Present circumstances and prospects in physical culture.
- 2003 - Priorities, prospects and creativity in physical culture.
- 2004 - Social dimensions, diversity, present interests in physical culture.



Attendances to specific international activities / events

11
(10 most prestigious attendances)

- Organizational background of permanent education in the field of formativ, sport, rehabilitation and leisure motor activities;
- The motivation of practicing high performance artistic gymnastics;
- Multidimensional perspective on the phenomenon of withdrawing from the sports activity;
- A logico-mathematical pattern of the exogenic agressed steam cell. Theoretical approach of sport science;
- Extrasensory communication channels in man?;
- How will advanced science influence sport performance?;
- Advanced science and doping?

Attendances to specific national activities / events

193
(10 most prestigious attendances)

- Educational approaches and consequences regarding physical exercises practiced by seropositive persons;
- Present day tendencies in adapted physical education;
- Aspects regarding motor re-learning in persons with special educational requirements;
- Motor activities for institutionalized children - organizing and financing opportunities;
- Medical gymnastics for pregnant women;
- How to breathe correctly;
- Yoga - relaxation method in obstetrical kinetoprophyllaxis;
- Physical education and sports within an interdisciplinary and intercultural perspective;
- Inclusive school - a necessary prospect of modern education;
- Analysis of the main elements of contemporary technique in competition alpine skiing.

Attendances to international festivals, symposiums

4
(10 most prestigious attendances)

- Advanced science and top sport;
- Neurosurgery in the Republic of Moldova;
- Microdissectomy in lumbar disc herniation;
- Advanced science and athletic performance.

The number of scientific books published by publishing houses acknowledged abroad

8
(maximum 10 significant books)

- *Theory and Method of Physical Education and Sport Practice*, Bocioacă Laurențiu, pp. 161, Piaget Publishing House, Visu, Portugal;
- *Physical Training of High Performance Judokas*, Bocioacă Laurențiu, pp. 198, Central Publishing House-Kishinev;
- *Handball - The Play in Defence*, Hantău Cezar, pp. 40, The Association of Romanians of Macedonia - Mbela Struga;
- *Biomechanics and physique in Sport Medicine*, Gagea Adrian, pp. 191, Arnould Publishers Ltd., 1976, London;
- *Jogos de sportivos colectivos*, Bota Ioan, Dumitru Colibabă-Evuleț, Bota Ioan, pp. 120, Piaget Publishing House, 2001, Visu, Portugal;
- *Andebol 500 exercitios/Asua aprendi zagem*, Bota Ioan, Bota Maria, pp. 178, Piaget Publishing House, 2001, Visu, Portugal;
- *Handball - Play Patterns and Training*, Bota Ioan, pp. 230, Piaget Publishing House, 2004;
- *Andebol - Model i modelason*, Bota Ioan, pp. 202, Piaget Publishing House, 2004, Visu, Portugal.



IAC - NAPES Zone

It comprises an area designed for public and didactic activities including 3 research laboratories.

Interdisciplinary Research Center was founded in 1968 (the first in Europe) accredited OM 761/6.04.1977.

IRC is specialized in research regarding the acute biological effects of the occupational physical effort, especially of the sports one. The scientific activities performed by the interdisciplinary staff of IRC, belong to the following domains: physiology of the physical effort, biochemistry of physical effort, biomechanics of sports, methods to develop the effort capacity and the technology of electrophysiological investigations.

IRC has a wide experience and remarkable results: 118 contracts and annual grants with various federations and sports clubs, the Academy of Medical Sciences, Ministries, SRNCHE, etc.

The interdisciplinary team is made up of NAPES teaching staff and associates: doctors, biologists, biochemists, psychologists, biometrists, engineers, etc. The interdisciplinary collective has 21 members, according to the contract requirements.

The IRC director is Prof. Adrian Gagea, PhD, main researcher, 1st degree, EC member of International Federation of University Sports, 1991-1995, 1995-1999, 1999-2003, 2003-2007.

From the original achievements of IRC mention must be made of:

- The elaboration of performance factors graph in target shooting and fencing;
- The influence of GH3 upon the physical effort (Institute of Gerontology);
- The study of some circadian rhythms (Institute of Endocrinology);
- Scaling of suggestibility (Academy of Medical Sciences);
- Study of Alpha cortical biofeedback (Academy of Medical Sciences);
- Logical-mathematical pattern of acute capacity of effort (Academy of Medical Sciences);
- Estimate of biological echo of occupational effort (Bucharest Subway Operation Enterprise);
- Unknown sensory communication ways (Ministry of Research and Technology). (Some of these have been taken over and

mentioned internationally, being found afterwards in scientific data bases, such as The Siemens-Hellige, one in Bonn, Monash-Melbourne, Internet, etc.).

The following original scientific results may be considered scientific priorities:

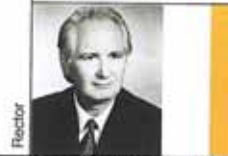
- Simulation with an original logical-mathematical pattern of the behaviour of the paucineuronal networks involved in the motor reaction in humans;
- Identification of minimal quantity of electricity which determines the muscular secusa in humans and naming it "quebese";
- Discovering the phenomenon of physical-tonic compensation in the neuro-muscular excitability by increasing the muscular strength;
- Theoretical and experimental identification of unity of Tarchanoff, Veragouth, Fere phenomena, Galvanic skin reflex within the electrodermal human reflexes;
- Elaboration of some quantity-quality conversion functions named "Alpha-Gamma" functions (generalization of Fuzzy sets);
- Elaboration of the indicator of instantaneous anaerobic maximal strength (78);
- Simulation of over-compensation in the effort - recovery interaction by a hysteresis relationship of the effort - capacity of effort difficulty;
- Elaboration of a mathematical pattern predictive for the stem cell behaviour (genetic engineering).

International Cooperation

- Signing the bilateral agreements with institutions within the European area - universities in Artois, Nice, Bordeaux (France), Alicante (Spain), Bologna, Torino (Italy), etc.;
- Carrying out the Socrates-Erasmus and Comenius communitary programmes, with European financing, targeting students' and teaching staff's mobilities, intensive projects or thematic networks;
- Teaching staff participation in some forums, international scientific and sports bodies (FISU, FEPSAC, ENSSHE, IAU, international sports federations, as experts or lecturers);
- Participation in international sports festivals, where our students are invited every year.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	519,348	0
2003	81,000	0
2002	110,000	0
2001	50,000	124183,0
2000	0	0
1999	0	0
1998	0	0
1997	0	0
1996	0	0
1995	0	0



Rector

Prof. Viorel Munteanu, PhD

Historical Overview of the University

The School of Music and Declamation was founded following Al. I. Cuza's decree of October 1st 1860; in 1864 it was renamed The Conservatory of Music and Declamation. In 1918 George Enescu was appointed honorary rector of the institute. In 1931 the Conservatory was given the name The "George Enescu" Academy of Music and Drama. In 1948 The Art Institute of Iasi included three faculties: Music, Drama and Fine Arts; in 1977 it was named Conservatory, in 1990 Academy and eventually The "George Enescu" University of Arts in 1999.



Faculties and Departments

- The Faculty of Musical performing;
- The Faculty of Composition, Musicology and Pedagogy;
- The Drama Department;
- The faculty of Fine Arts, Decorative Arts and Design.

Master and Doctoral Programs

MASTER - Music: 1. Style and Interpretation at the turn of the 21st century; 2. Musical Philosophy in the 20th century. Syntheses and Perspectives;

MASTER - Drama: The Art of performance;
MASTER - Fine Arts: 1. Investigation of reality by means of form, value, colour and volume; 2. Visual strategies of presentation in Decorative Arts and Design.

Doctoral programs - Music: 1. Musicology; 2. Theory of Interpretation; 3. Composition;
Doctoral programs - Drama: 1. The theory of Drama; 2. The arts of theatrical performing.

Patrimony

Teaching premises of 8,114 square meters including: 1. an audio laboratory with 6,500 records, 1,459 tapes, 350 CDs; 1 photo-video laboratory; 1 restoration-conservation laboratory; 2 reading rooms; 2 book storerooms housing 153,925 books and rare items, 36,449 musical magazines; 1 gymnasium of 6,00 sq. m., 1 workshop area (1,620 sq. m.), 1 multifunctional hall (600 sq. m.) and 1 hostel (256 beds). Musical instruments: 78 keyboards instruments, 54 strings, 11 percussion, 65 wind and brass.

Fields in which human resources are trained

Arts:

1. Music (Performing, Musical pedagogy, Composition, Musicology, Conducting);
2. Theatre (Acting, The puppeteer's Art);
3. Fine and Decorative Arts (Fine Arts: Painting, Sculpture, Graphics; Decorative Arts: Textile arts, Mural art; Pedagogy of art - art teachers; Design; Conservation-Restoration).

Presentation of research activity chart

The research and creation activity is organized in faculties and specialties.

- Research centres: 1. Musical science; 2. The art of Theatre - Research and creation; 3. Aesthetics and artistic creation; 4. CREART - preservation, restoration and fine arts;
- Individual programmes of research and creation within departments;
- The academic season (music, drama and fine arts);
- Conference sessions and symposia in musicology, drama, aesthetics and the history of art;
- National Student Contests: Musical performance, Composition, Jazz, Musicology, Drama, Visual arts.

Human Resources

Professors	17
Senior Lecturers	26
Lecturers	42
Assistant Lectures	21
Teaching assistant	26
Research Fellows	0
Administrative Staff	84
Students	1279
of which:	
Undergraduate	1029
Master	120
PhD - full attendance	14
PhD - attendance not required	116



Structures

Research Institutes	0
Research Centers	4
Research Laboratories	4
Multi-user Research Centers	4

Top Priority Research Directions

Byzantine music in the Romanian cultural area; The Romanian composers' musical poetics in an European context; Modalism and the structuring of musical form in the 20th century; The stylistics of interpretation in music and the arts of theatrical performance; Modern aesthetics and techniques in the visual arts

Outstanding Research Infrastructure

"Unique" research fields: Musical reverberations of Byzantine tradition in the creation of Romanian composers; The modal world and the structuring of the musical form; Tradition and modernity in performing the works of George Enescu; The singing voice: exploration, education, evaluation; The animation theatre and the young audiences; Modern techniques of conservation and restoration - the monasteries in Northern Moldova.

Excellence Centers

CNCSIS grants from the Centre of Music Science Research: Unity and diversity of Christian spirituality reflected in choral liturgical music; Musicology and journalism. Classical music in post 1989 Romanian media.

International Cooperation

INCO-COPERNICUS IV in 1999; UNESCO in 1999-2002; MLPTL-PROCEMA in 2001-2002; SOCRATES-ERASMUS exchange of professors and students since 1999; LEONARDO DA VINCI II, B-procedure - pilot projects since 2004; FULBRIGHT in 2002, 2003.

Attendances to specific international activities / events 220

(10 most prestigious attendances)

- V. Munteanu, *Concerto per Archi, Kishinev*, 2001
- A. Simion, Fl.Simion, *Chamber Concert for Percussion Instruments*, Germany 2001;
- L. Suhar, *Visionen 2001* Germany;
- C. Tofan, *Personal Exhibition*, Magdenburg, Germany 2004;
- A. Severin, *Recital Faure-Enescu*, France 2002;
- M. Bejenaru, *Desequilibrium*, USA 2003;
- D. Acostioael, *Art in Public space*, Slovakia 2002;
- N. Gasca, *Musical journey*, Swiss 2004;
- D. Vitcu, Gh. Marinca, *Duos & Plus-minus, France 2003*, *Zamfira Barzu, Hills from Bucovina and sand dunes from Sahara, Expo at International Culture Centre Hammamet, Tunis*, 2004.

Attendances to specific national activities / events 541

(10 most prestigious attendances)

- Gheorghe Dutica, *Harmonic Stratifications in Oedip* by George Enescu, *Musical Review* no.2-3, Bucharest, 2000;
- V. Munteanu, *Roman Vlad-Open Opera*, *Music Magazine* no.1, Bucharest, 2000;
- L. Vasiliu, *The Role of the tonal-harmonic functionality in structuring the postromantic form*, *Music Magazine* no.1, Bucharest, 2001;
- F. Bucescu, *Romanian Preoccupations of Musical Byzantinology in the 20th sec*, *Byzantion Romanicon Magazine*, Iasi, 2003;
- L. Gherman, *The Lieds on Lucian Blaga's lyrics by Sigismund Toduta: a possible interpretation of the melodic configu-*

- *ration, Artes, Iasi*, 2003;
- C. Popa, *Imi voi*, I. Ciuratu, Liviu Suhar, Tiberiu Vlad, Cornelia Borda[iu, Miruna retrace melancolia, on own lyrics, Cotroceni, 2004;
- N. Danaila, *De-a Sanziana si Pepelea*, National Theatre Festival, Piatra Neamt, 2004;



Misha Katz

- Dumitru N. Zaharia, M. Urma, Laura C. Ionita, Jeni Pralea, Matei Bejenaru, T. Gavrilean, Ioana Olaru-Ha[egan, Octaviana Marinca], Dumitru Alexosie, Carmen Solomonea, Mihai Pop, Bogdan Ungureanu, *The Confluence of Arts, Artes*, 2004;
- Dimitrie Gavrilean, *Romanian mythology in painting*, Art Museum, Cluj, 2004.



Attendances to international festivals, symposiums

339

(10 most prestigious attendances)

- Viorel Munteanu - *Invocations and Concertino*, Italy 2000;
- Florin Simion - *Percussion Concert*, Heidelberg 2001;
- Corneliu Gh. Solovastru - *Great Priest*, Cddp, BBC 2001;
- Emil Coseru - *The liar*, Italy, 2001
- Natalia Danaila - *Pinocchio*, Prague 2000;
- Raluca Bujoreanu - *A love story*, France 2003, Budapest 2004;
- Nicolae Gasca - *Festum Hibernum*, Bruxelles and Luxemburg 2004;
- Octaviana Marincas, Carmen Solomonea, Jenő Bartos - *Research and Conservation in Romanian educational programs*, Rhodos 2003;
- Atena Simionescu - *Ex libris Men and Fish*, Croatia 2003;
- Corneliu Ionescu - *Pfleggerichtshaus*, Austria 2003.

Attendance to Biennials and Triennials recognized arts, personal exhibitions at international galleries and museums

55

(10 most prestigious attendances)

- *Glasurile Putnei*-V. Munteanu, Thurgauer Jugend Symphonie Orchester Elvetia, CD, TGJSO702-47;
- *The 2nd Christmas Suite*-V. Munteanu, CD, Moldova Symphonic Radio Orchestra, Kishinev 2002;
- *Millenium* - N. Gasca, CD, Don Quichot Production, Bruxelles 2001;
- *Dacofonia I* - T. Chiriac, Chisinau 2001;
- *Concert de Noel* - N. Gasca, CD, Cds Audio Production CH-Bienne, Swiss 2001;
- *International Print Biennial Exhibition* - A. Simionescu, China 2003;
- *Perpetuum mobile* - C. Hutanu, Festivalul "A. Goldfaden", 2004;
- *Commemoration Stefan 500* - O. Marincas, V. Munteanu, C. Stratulat, FI, Bucescu, Romanian Cultural Institute Vienna, 2004;
- *I am here, you are there* - Expo Group, M. Bejenaru, GFZK, Leipzig, Germany, 2004;
- *Soleil de fest* - Expo C. Ionescu, Orleans, France.

International Artistic and Scientific Activities

(the 10 most important ones)

Byzantinology Symposium-2000; The Science of Music Symposium-2001, 2002, 2003; Visual arts Symposium-2004; First Role-2001, 2003; Master class: Composition, Musicology (Roman Viad-Italy) 2004; Bass (W. Gutler-Germany) 2004; Clarinet (G. Giument-Italy) 2004; Design (J. Langenhagen-Germany) 2003, 2004; Restoration (J. Weber-Austria) 2004; Theatre Directing (A. Andreev - St. Petersburg) 2004.

Homologated brevets and papers with intellectual property right in every artistic fields

(maximum 10 significant products) 257

- V. Munteanu-*Simfonia I Glossa* (lyrics by Mihai Eminescu);
- D. Gavrilean - *Chapel of "George Enescu"* University of Arts;
- V. Spatarelu - *Epitaf*;
- R. Cosma-*Solo Piano in Paris*;
- N. Danaila-*The new adventures of Pinocchio*;
- T. Chiriac - *Dacofonia II*;
- M. Urma - *Unique dwelling ensemble Iasi*, Bacau;
- F. Buliga - *Patrimony HADLU* - Croatia;
- L. Suhar - *Eminesciana*;
- C. Ionescu - *Arte per Arte*.



Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	136000	35513
2003	38100	-
2002	-	-
2001	-	-
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-

Key Role Played in Certain Fields

Presentation of Laboratories

Success Stories



Key role played in certain fields

1. Promoting interdisciplinarity in keeping with the trend of contemporary art to open up to various fields of human knowledge and activities;
2. Performances of syncretic art (drama, music, visual arts);
3. Conservation and restoration of interior and outer mural decorations - the monasteries of Northern Moldova;
4. Musical creation (Vasile Spatarelu, Viorel Munteanu, Tudor Chiriac, Romeo Cosma), visual arts creation (Dimitrie Gavrillean, Jenő Bartos, Liviu Suhar, Dan Covataru, Valentin Sava, Ilie Bostan, Valeriu Goncareiuc, Dragos Patrascu, Mihai Tarasi, Constatin Tofan, Matei Bejenaru, Magda Obreja-Sficlea), research: musicology (Florin Bucescu, Liliana Gherman, Gabriela Ocneanu, Melania Botocan, Laura Vasiliu, Gheorghe Dutica), teatrology (Constatin Paiu, Florin Faifer, Natalia Danaia), the history of art (Dumitru N. Zaharia), technical sciences (Maria Urma, Florin Grigoras, Octaviana Marincas), members of unions of creation at home and abroad.

Presentation of Laboratories

The preservation and restoration laboratory in the CREART Research Centre: Scientific investigations for the analysis and characterization of the constituent materials of works of art pending the evaluation of their state of conservation and suggestions for treatment. Equipment: an Olympus stereo microscope with a cold light device and photo



camera assembly device for recording images from the microscope; an Olympus photo digital camera; a stereoscopic lens for laboratory interventions; an ultraviolet lamp and an infrared lamp; specific intervention kits.

The computer laboratory assists all specialties by supplying computer-generated images: the graphics and textile arts for the computer-assisted designs and for graphic advertising and artistic graphics as well as for digital audio-visual technologies.



Success Stories

Cantores Amicitiae

Founded in 1976 and made up of 34 students, the choir "Cantores Amicitiae" sets itself the goal of acquainting the music lovers with the most beautiful musical pieces throughout the world. Through representative choral pieces belonging to the Renaissance, Classicism, romantic and contemporary music, mesas and oratorios, liturgical music, Romanian and foreign Christmas carols, Cantores Amicitiae have imposed their own style in the Romanian musical life.

National and international awards: ● 6 first prizes at National Festival of Students' Art; ● First Prize of the Vienna International Contest "La Jeunesse et la Musique", 1980; ● Third Prize at Liangollen, Pays de Galles, 1991; ● Commendation of Excellency of the International Contest at Montreux, Switzerland, 1995; ● Second Prize of the Eisteddfod International Music Festival, Liangollen, Wales, 1991; ● Special Prize of the International Music Festival at Cantonigròs, Spain, 1995.

These students, turned into genuine ambassadors of peace and friendship, have toured: Austria, Germany, Belgium, Luxemburg, Swiss, France, Italy, England and Spain. They have recorded at the Romanian Radio and TV, Electre-cord, 6 CDs in Swiss, at CDs Audio Production J. D. Brandt, C.H. Bienne. The musical ensemble is conducted by Nicolae Gasca.





An International Project for the preservation and restoration of interior and exterior paintings, conducted by UNESCO with "international support for the restoration and preservation of the PROBOTA Monastery"

The financial backing was offered by the Japanese Government for the entire period of the intervention (nearly 4 years).

Project objectives :

- The preservation and restoration of the monument at all levels (architecture, interior and external decoration, lighting system, heating, monitoring the interior climate of the church, restoration of the pavement). The work on the roof and the surrounding walls of the church were financed by the Romanian state.

- The involvement of restoration experts from Romania, Austria, Italy, Portugal, England, USA, Columbia, France, Japan, Poland; Experts: chemists, biologists, architects, archeologists, engineers from Romania and Swiss, Austria, Italy.

- The project provided the opportunity of field practice for the Romanian students from the departments of preservation-restoration and mural art of the art universities of Iasi and Bucuresti conjoined with foreign students from similar departments in Czechoslovakia, Serbia, Austria, Germany, Italy (Florence), Spain, Swiss, Columbia (Bogota), England.

- The publishing of a documentary album of the Probota project, as regards restoration, architecture, mural painting and archeological research.

The "Saint Nicholas" Church at Probota is to-date the only UNESCO monument in Moldova restored according to international standards, the special merit of this outstanding project lying in the safeguarding of the monument and the exhibiting of the most spectacular set of paintings of the Moldavian 16th century.

Lecturer Carmen Solomonca was in charge of the Romanian students and restorers in the interventions and restoration of the interior and external painting, jointly with Prof. Ovidiu Boldura from the University of Arts, Bucuresti, the general coordinator.

The Iasi puppets in Prague

The participation of our puppeteer students at the International Festival of Puppeteer Art in Prague, Czech Republic in June 2000, was one of the outstanding successes of the "George Enescu" University of Arts Iasi. The performance

of **Pinocchio** and **A marriage of Convenience** directed by Natalia Danaila won the appreciation of both the Prague audience and the other guest, and **The Special Prize for the originality of the artistic creation**. On one of the days of the festival, the Prague television made Pinocchio the host of the artistic manifestations. The success of the Romanian students made Todor Ristic, the director of the International Puppets' Institute start, after a few months, a joint project of the "George Enescu" institute of art in Iasi and the institute of Prague.

The project was carried out in February-June 2001, when the students received scholarships, and eventually were hired by the institute after graduation. Through their creation, the professors of the drama school, Prof. Natalia Danaila, PhD, Lecturer Aurelian Balaita, Lecturer Raluca Bujoreanu, joined the artistic project on the Study and evolution of the traditional art of puppeteering. In the same period of time, the students performed in the puppet opera shows Don Giovanni and Marriage of Figaro, directed by Todor Ristic and in the puppet parody of the famous musical Cats, directed by Jerry Pasova, professor at a similar faculty in Sofia.

International Affiliations of the University

- AEC - Association Européenne des Conservatoires, Académies de Musique et Musikhochschulen;
- ICOM - The International Council of Museums;
- UNIMA - Union Internationale de la Marionnette.

International Cooperation

- The Art of Byzantine Icons (Mcneese State University, Louisiana, USA);

- University exchanges (Manchester Metropolitan University, Falmouth College of Arts, Dartington College of Arts, Universidad de Salamanca, Conservatorio Superior de Musica de Salamanca, Universidad del Pais Vasco Bilbao, Universidad de Vigo, Universidad de Murcia, Politecnico di Milano, Conservatorio di Musica "Giuseppe Verdi" di Milano, Erasmushogeschool Brussel, Provinciale Hogeschool Limburg Hasselt, Hogeschool voor de Kunsten Utrecht, Ecole Supérieure D'Arts de Lorient, Conservatoire National de region de Rennes, Université de Bourgogne, Academy of Arts Banska Bistrica).



Rector

Prof. Ioan Sbârciu, PhD

Historical Overview of the University

The first art school in Romania was founded in Cluj-Napoca, in 1781. After the foundation of High Dacia University in 1919, the Ruling Council of the province also planned the foundation of a "fine arts" school. Through the project of the Ruling Council of High Dacia University, there was accomplished, on November 15, 1925 the foundation of the School of Fine Arts, with two departments: Painting and Sculpture, which would open their doors in January 1926. In 1950, the



school moved back to Cluj-Napoca under the name of "Ion Andreescu" Institute of Visual Arts. In 1990 the name of the school became "Ioan Andreescu" Academy of Visual Arts, and in 2001 the University of Art and Design (UAD).

Faculties and Departments

- The Faculty of Fine Arts;
- The Faculty of Applied Arts and Design;
- The Department for Teacher Training.

Master and Doctoral Programs

MASTER - The Master Program "Creative explorations in fine arts, decorative arts and design".

Doctoral programs - The PhD Program in Visual Arts.

Patrimony

The university has eleven buildings where the activity of the departments is carried out, the library, there are laboratories, workshops of artistic creation and research, micro-production

studios, maintenance studios, exhibition rooms, a sale shop, storehouses and warehouses for the raw materials and different materials for end products of artistic creation (which make up the academic documentary). The university owns 28 places in the hostel and does not have eating halls for students. In the second phase 30 more rooms will be provided.

Fields in which human resources are trained

1. Fine and applied arts
2. Visual arts

Presentation of research activity chart

Management and infrastructure staff; fundamental theoretical research staff; applied research in art and design staff; editorial activity staff; document storage and processing staff.

Structures

Research Institutes	0
Research Centers	1
Research Laboratories	10
Multi-user Research Centers	0

Top Priority Research Directions

1. Art Theory;
2. Fine Arts;
3. Applied Arts;
4. Design

Excellence Centers

"Creative Explorations in Art and Design" Excellence Research Center.

International Cooperation

The Erasmus/Socrates project "The Center of documentation in the contemporary art";

The Leonardo da Vinci Project "Partnership for continuous professional forming in cultural management";

The Leonardo da Vinci project "Infoart - perfecting formators in iconography";

The Leonardo da Vinci project "Euro-professionalization and quality assurance in conservation and restoration";

Phare Project "The center of continuous education EArt".

Human Resources

Professors	5
Senior Lecturers	13
Lecturers	35
Assistant Lectures	13
Teaching assistant	5
Research Fellows	0
Administrative Staff	78
Students	961
of which:	
Undergraduate	742
Master	122
PhD - full attendance	48
PhD-attendance not required	81

International Artistic Activities / Events
(the 10 most important ones)

- The Symposium "Painting, painters, where to?", first edition, in 1999, in cooperation with important Painting Schools from Europe;
- "C'est l'heure exquise", the series of conferences referring to the major themes of the contemporary art with the participation of the Royal Academy of Fine Arts from Brussels, The Academy "Francisco Ferrer from Brussels and of the Higher School of Applied Arts in Brussels, December 2000;
- "UAD Days, the 75th anniversary of artistic education in Cluj", 2001;
- "Europa Artium" Autumn Academy, 2002-2004";
- "La nuit blanche de la video", 2003;
- The representative exhibition of UAD at Ljubljana, in cooperation with the Academy of Fine Arts in Ljubljana, 2003;
- "Ateliers croisés", workshop organized by UAD together with ERBAN, Nantes - 2004;
- "Brilliant" Conference organized together with E.L.I.A., March, 2004;
- The reunion of the Socrates/Erasmus net, coordinated by Jordanstone College of Art and Design from Dundee (Scotland), April, 2004;
- "European Meetings" a manifestation organized together with the French Cultural Center from Cluj-Napoca, 2004;
- The UAD and ERBAN Exhibitions at Cosmopolis, Nantes, 2004.

Homologated brevets and papers with intellectual property right in every artistic fields
(maximum 10 significant products) **2301**

- I. Sbârciu, "Don Quixote" (painting);
- I. Sbârciu, "Transylvanian Landscape" (painting);
- I. Sbârciu, "Labyrinth" (painting);
- I. Sbârciu, "Corpus" (painting-objects);
- I. Sbârciu, "Europe's kidnapping" (painting);
- I.A. Muresan, "The Wonderful Adventure of the Duke d'Ivry" (painting);
- I. Horvath-Bugnariu, "Sequences" (graphic);
- I. Horvath-Bugnariu, "The Circus" (graphic);
- I. Horvath-Bugnariu, "The Coca-Cola Civilization" (graphic);
- R. Moraru, the busts "Ferdinand I", "Queen Mary" (sculpture);
- Elian, "Happy End" (painting);
- D. Moise "Artistic Anatomy Guide".

Attendances to specific international activities / events **448**
(10 most prestigious attendances)

- "Hand Painted" Exhibition, at the Fine Artists' Gallery from Budapest;
- The Painting and Photography Exhibition at the "Saint-Luc" Institute Gallery in Liege;
- The itinerant exhibition "A sign for peace";
- The itinerant exhibition "Bachus";
- The itinerant exhibition "Angeli";
- The painting - sculpture exhibition "Roma where at" at The Academia di Romania from Rome;
- Exhibition at the Gallery "Dino Scalabrino" in Montecatini Terme;
- The "Birds" Exhibition at the City Hall Gallery, Köln;
- Exhibition "Homage to Magnelli" at The Etruscan Museum in Murlo.

Attendances to specific national activities / events **1150**
(10 most prestigious attendances)

- I. Sbârciu, "CORPUS" Exhibition, Radio Galleries, Cluj;
- I. Sbârciu, Painting Exhibition at UAP Galleries, Bistrita;
- I.A. Muresan, Painting Exhibition at UAP Galleries, Cluj;
- ELIAN, Personal Exhibition "Happy End" at UAP Galleries, Cluj;
- T. Toncian, Ceramic Exhibition, National Art Museum, Cluj;
- I. Sbârciu, Painting Exhibition at UAP Galleries, Miercurea Ciuc;
- I. Antoniu, Painting Exhibition, Radio Galleries, Cluj;
- Kolozsi T., Sculpture Exhibition, UAP Galleries, Cluj;
- D. Gaina, Graphic and photo exhibition;
- I. Tanase, Sculpture Exhibition, UAP Galleries, Cluj.

Attendances to international festivals, symposiums **282**
(10 most prestigious attendances)

- Group exhibition "INCONTRO" at Academia di Belle Arti in Rome;
- I. Sbârciu, participation at the Rome Project,

- Group exhibition "ESSENTIA" at Kaposvar, Hungary;
- Group exhibition at Montecatini Terme, Academia Dino Scalabrino;
- Exhibition "A sign for peace" at Pistoia, Marino Marini Museum;
- Group exhibition "11+1, Painters and photographers de l'" at the "Saint-Luc" Institute Gallery in Liege;
- Graphic exhibition at Ljubljana;
- Graphic exhibition at Budapest;
- I. Sbârciu, Painting Exhibition at New York;
- I. Sbârciu, Personal Painting Exhibition at Romanian House in San Francisco;
- Group Exhibition "Bachus" at Murlo, Italy;
- Group Exhibition "Homage to Magnelli" at the Gipsotech "Libero Andreotti", Pescia, Pistoia.

Attendance to Biennials and Triennials recognized arts, personal exhibitions at international galleries and museums **144**
(10 most prestigious attendances)

- I. Sbârciu, Personal Exhibition at the Etruscan Museum from Murlo, Italy;
- I. Sbârciu, Open Shop at the International Cultural Center in Delphi;
- I. Sbârciu, Personal Exhibition of Painting at Köln;
- I. Sbârciu, Personal Exhibition of Painting at Mannheim;
- I. Sbârciu, Personal Exhibition of Painting at Stuttgart;
- T. Toncian, Personal Exhibition of Ceramics at Wuppertal, Germany;
- I. Horvath-Bugnariu, Participation in the International Biennial of Engraving, Miskolc, Hungary;
- I. Horvath-Bugnariu, curator of the Contemporary Romanian Engraving Exhibition "GRAPHIKONEX";
- I. Horvath-Bugnariu, Participation in the International Symposium of Lithography, Sweden;
- I. Horvath-Bugnariu, Retrospective Exhibition at the MK Gallery in Pecs;
- I. Horvath-Bugnariu, Personal Exhibition of graphic art at the Romanian Cultural Institute in Budapest;
- D. Gaina-Gherendi, "TANDEM" Exhibition at the Romanian Cultural Center in Vienna.

Activity Program for the year 2003-2004



1. 2-28 September 2003 - organizing a representative exhibition of UAD at Ljubljana, in cooperation with the Academy of Fine Arts in Ljubljana;
2. 5-10 October 2003 - the visit of professor Volker Schaible (restoration) from the Art Academy in Stuttgart;
3. 6-14 October 2003 - the artists' exhibition at Miskolc, Hungary;
4. 10-12 October 2003 - organizing the fine art exhibition of some artists from Pecs (Casa Matei Gallery) and the photography exhibition of the artist Toth Karoly (Atas Gallery);
5. 18 October 2003 - organizing an exhibition of the Ceramics Section ("Homage to the Etruscans") at the Civic Museum from Murlo, Italy, invited by the mayor Alessio Manetti;
6. 28 October-3 November 2003 - continuing the project "Recontres autour de la jeune création franco-roumaine", by organizing at Cluj-Napoca a series of video exhibitions and a workshop having as a theme the construction of exhibitions (organizers: UAD and the Superior School of Applied Arts from Strasbourg);



7. 3-8 November 2003 - UAD organized the second edition of "Europa Artium" Autumn Academy (guests: the artist Markus Lupertz, rector of the Academy of Fine Art in Düsseldorf, art theoreticians like Jean-Pierre Greff, the director of the Superior School of Applied Arts in Strasbourg, Martin Koettering, the rector of the Art Academy in Hamburg and Hartmut Frank, vice rector of the same academy, professor Martin Koeppel, vice rector of the Art Academy of Schwabisch Hall, the curator Werner Meyer from Goppingen etc.);
8. November 2003 - the video exhibition signed by the French artist Francisco Ruiz de Infante, organized by UAD, the Superior School of Applied Arts from Strasbourg and the Fine Artists Union-Cluj branch;
9. 25 November-15 December 2003 - UAD's exhibition organized at Strasbourg in cooperation with the Higher School of Applied Arts from Strasbourg and FRAC Alsace and managed by the directors of the two French institutions;
10. 2nd December 2003 - UAD's exhibition at the Romanian Cultural Institute from Budapest;
11. 2-12 December 2003 - the participation of UAD's rector and UAD's chancellor at the International Managers Symposium, organized at Los Angeles by the J. Paul Getty Trust and ELIA;
12. January-March 2004 - initiation of the workshop "Ateliers croisés", second edition with the presence in Cluj of a five students group from the Regional School of Beautiful Arts in Nantes;
13. February 2004 - the participation of an UAD's group at the workshop Discovery the real spirit of the Cinque Terre organized by Romualdo del Bianco Foundation, Florence, Italy;
14. 5-6 March 2004 - UAD organized the ELIA meeting (The European League of the Institutes of Art) at Cluj-Napoca;
15. March 2004 - Martin Koeppel's exhibition at Schwaebich Hall;
16. March-May 2004 - continuing the workshop "Ateliers croisés" by sending a group of five UAD students to Nantes;
17. April 2004 - the presence at Cluj of a group from the Regional School of Fine Arts in Nantes (Hubert Bernier, Guy Bauza, Andre Zemiri, Marek Walcerz) having as an occasion the donation of photo-video material; at the same time, the French representatives also realized a

Financial resources obtained for research

	National millions RON	Internat. EURO
2004	97	47097
2003	103,79	107510
2002	300	39394
2001	306,73	27870
2000	-	10866
1999	-	3074
1998	-	38500
1997	-	17000
1996	-	15400
1995	-	-

- training course for operating the materials donated by the French institution;
18. 24-26 April 2004 - UAD organized at Cluj-Napoca a reunion of the Socrates/Erasmus net, coordinated by Jordanstone from Dundee (Scotland);
 19. 25 May 2004-15 June 2004 - UAD and ERBAN exhibition at Cosmopolis, Nantes;
 20. June 2004 - the UAD graduates' exhibition in a partnership with Expo Transylvania.



**Events and Cultural
Activities Programme
February - December 2005**

1. 14th February - 28th February, "Nerodiluce" exhibition of Italian Graphic Art organized by UAD and the Italian Institute of Culture in Bucharest at "Casa Matei" Gallery;
2. 18th February - 19th February, visit of the exhibition British sculpture "From Moore to Hirst" organized by the British Council and the National Museum of Art Bucharest (a group of teachers and students shall go; the group will be sponsored by the British Council Cluj and UAD);
3. 7th March - 8th March, the conference and workshop of the Tunisian artist Nja Mahdaoui, a guest of CCF Cluj and of UAD, at Matei Corvin House;
4. 14th March - 4th April, collective exhibition "Face to face" organized by UAD at UAP Gallery;
5. 15th March - 15th April, painting exhibition organized by UAD and the Art Academy from Düsseldorf at the National Museum of Art Cluj (Markus Lüpertz - Ioan Sbărțiu);
6. 1st April - 31st May, painting exhibition organized by UAD at the Brâncoveanu Palaces from Mogoșoala;
7. 4th April - 8th April, icons painting workshop of professor George Kordis (Art Academy from Athens, Greece) organized by UAD in the painting section pavilion;
8. 4th April - 10th April, "Lettering" exhibition of the artist-professor Carolyn Puzollo (Great Britain), organized by UAD at "Matei Corvin" Gallery;
9. 25th April - 9th May, exhibition of the Austrian artist Martin Anibas, a guest of the Austrian Library from Cluj and of UAD, organized at UAP Gallery;
10. 26th April - 27th April, workshop of the Austrian artist Martin Anibas, organized by UAD at Matei Corvin House;
11. 7th May - 30th May, UAD exhibition at the Romanian Cultural and Humanist Research Institute in Venice, Italy;
12. 10th May - 30th May, exhibition "Homage to Magneli" organized by Misericordia in Pistoia (Italy), the Cultural Center "Il Tempio" (Pistoia, Italy) and UAD at the National Museum of Art Cluj;
13. 15th May - 31st May, exhibition organized by UAD at Unagaleria from Bucharest;
14. 22nd May - 10th June, exhibition of the Belgian group De Verenigde Muze organized by UAD at the UAP Gallery;
15. 20th June - 30th June, UAD Graduates' exhibition organized by UAD at Expo Transylvania;
16. 1st July - 30th July, general UAD exhibition organized at UAP Gallery;
17. 1st August - 25th August, selection exhibition of the UAD graduates at the National Museum of Art Cluj;
18. 1st October 2005, opening ceremony of the new university year;
19. November 2005, the fourth edition of "Europa Artium" Autumn Academy, international manifestation with the participation of remarkable personalities of contemporary art from Europe and from the USA.

International Affiliations

The University of Art and Design is a member of the Union of the Universities of Cluj-Napoca, of the European League of Institutes of Arts (ELIA), whose headquarters are in Amsterdam, of the European University Association (EUA), of the International Council of Fine Arts Deans (ICFAD), and of the art schools network head by Duncan of Jordanstone College of Art and Design in Dundee.

- Great Britain - *Duncan of Jordanstone College of Art and Design* in Dundee; *University of Central England* in Birmingham; *College of Art and Design* in Lincolnshire; *International Textile Centre (ITN)*; "Design for Transformation" Organisation; "Gwent" College for Higher Education in Newport; *National Association for Higher Education in Video and Film* in London;

International Partnerships

The University of Art and Design values the national partnerships with similar institutions of art in higher education, as well as with cultural and professional institutions and organizations - embassies, consulates, cultural centres, businesses.

International partnerships represent an essential component of UAD institutional development policies. Consequently, the University of Art and Design has established numerous working contacts with several prestigious institutions from:

- Austria - *Academy of Visual Arts* in Vienna; *Austria Design (AD)* in Kufstein; *Union of the Artists* from Tyrol;
- Belgium - *Royal Academy of Fine Arts* in Brussels; "Euro Media" Activities in Brussels; "Saint-Luc" Higher Institute of Fine Arts in Liège;
- Czech Republic - *Yale University - Civic Education Project (CEP)* - in Prague; *Academy of Fine Arts, Architecture and Design* in Prague; *Faculty of Fine Arts* within *Technical University* in Brno;
- Croatia - *Academy of Fine Arts* in Zagreb;
- France - *City Hall* in Nantes; *Regional School of Fine Arts* in Nantes; *Superior School of Decorative Arts* in Strasbourg; *National School of Decorative Arts* in Paris; *Superior School of Fine Arts* in Cornouaille, Quimper; *Esmod International* Paris; "Stendhal" University in Grenoble; "Kenzo" Fashion House in Paris; "Lapidus" Fashion House in Paris;
- Germany - *Academy of Art* in Düsseldorf; *Academy of Art* in Hamburg; *State Academy of Fine Arts* in Karlsruhe; *City Hall* in Cologne; *Kunsthalle* Göppingen; *High School for Video and Film* in Munich; *Siegen University*; *Kleinassen Gallery* in Fulda; *College of Applied Arts* in Schwäbisch Hall; *School for Adult Education* in Heremberg;
- Greece - *Athens School of Fine Arts*; "Omilos Dimitreli" School in Thessaloniki;
- Hungary - *University of Pécs*; *University of Visual Arts* in Budapest; *Miskolc Gallery*; "Hungexpo" Art Fair in Budapest; *Union of Hungarian Graphic Artists* in Budapest; *Hungarian University of Craft and Design*;
- Italy - *Romanian Institute for Culture and Research in Humanities* from Venice; *Romanian Academy* in Rome; *Academy of Fine Arts* in Cararra; "Dino Scalabrino" Academy in Montecatini Terme; the city halls in Pistoia and Murlo; *Romualdo Del Bianco Foundation* in Florence; *Academy of Fine Arts Abadir San Martino delle Scalle* in Palermo; *Academy of Fine Arts* in Macerata;
- Ireland - *School of Art and Design* in Limerick;
- Netherlands - *European League of Institutes of Arts* in Amsterdam; *International Society for Art Education (INSEA)* in Amsterdam; *Utrecht School of the Arts*; "Minerva" Academy in Groningen;
- Republic of Moldova - "Ion Creanga" State University of Arts in Kishinev; "Perspectiva" Private University in Kishinev;
- Sweden - *University College of Arts Crafts and Design* in Stockholm;
- Switzerland - *Engraving Workshop* in Lausanne;
- USA - *Cleveland Institute of Arts*; *Fine Arts Department* and *Columbia Centre for Visual Arts* at *Missouri University* in Columbia; *Yale University* in New Haven.



THE ROMANIAN NATIONAL UNIVERSITY OF DRAMA AND FILM "I. L. CARAGIALE"



Rector

Prof. Florin Zamfirescu, PhD

Historical Overview of the University

The first Drama Faculty started its activity in Bucharest in 1834, within the Philharmonic School. In 1948, The Directing Faculty was created within the Art Institute, which unified in 1948-1950 the whole art educational system in Bucharest. In 1950, the Film Institute was founded, while the Drama Institute "I.L. Caragiale" (named after the great Romanian dramatist) was set up as an independent higher education institution. In 1954, the two institutes merged under the



name of Drama and Film Institute "I.L. Caragiale", kept until 1990, when it became the Academy of Theatre and Film. Since 2001, the former Academy became the National Romanian University of Drama and Film.

Faculties and Departments

- The Drama Faculty: 1. Acting Art; 2. Puppets and Marionettes Art; 3. Vocal and Corporal Expression; 4. Theatre Directing, Choreography, Scene design; 5. Drama theory and aesthetics.
- The Film Faculty: 1. Film and Television Directing, 2. Film and Television Cinematography, 3. Multimedia Editing and Sound, 4. Audiovisual Communication.

Master and Doctoral Programs

MASTER:

- The Film Faculty: Audiovisual Programs (4 semesters), Film and Television Editing (4 semesters), Animation - Multimedia Design (4 semesters);

- The Drama Faculty: Acting Art (3 semesters), Contemporary Theatre Directing (3 semesters), Puppets and Marionettes Directing (3 semesters), Drama Theory and Aesthetics, Cultural Management and Marketing (3 semesters), Dramatic writing (3 semesters).

Doctoral programs:

- The Film Faculty: Cinematography and Media;
- The Drama Faculty: Theatre.

Patrimony

Educational space: Classrooms - 6759 sqm (3988 sqm belonging to the Drama Faculty, 2771 sqm belonging to the Film Faculty), The Casandra Studio (Drama school) - 1486 sqm; 2 aria sets - 198,3 sqm, student hostels - 2505 sqm, 330 rooms, surgery - 26 sqm.

Fields in which human resources are trained

1. Drama;
2. Cinematography and Media.

Presentation of research activity chart

The research and creation activity is developed within departments, research centers and laboratories and is coordinated by the Research Council, which is submitted to the University Senate. The executive coordination is ensured by the Research Professor and by the Research Department.

Structures

Research Institutes	0
Research Centers	2
Research Laboratories	8
Multi-user Research Centers	0

Top Priority Research Directions

The main goal is to promote excellence in the scientific research and creation process, to develop contemporary specific theories in

Human Resources

Professors	28
Senior Lecturers	25
Lecturers	43
Assistant Lectures	19
Teaching assistant	19
Research Fellows	0
Administrative Staff	182
Students	843
of which:	
Undergraduate	521
Master	95
PhD - full attendance	24
PhD-attendance not required	203

drama, cinematography and media and to insert the Romanian drama and film school into the contemporary theory in art, culture and the interdisciplinary area of art, communication and technology; to create a dialogue space between contemporary theorists, artists and managers; to integrate the heritage of the theatrical and cinematographic creation of different ages in the art history and cultural memory.

Outstanding Research Infrastructure

The Pilot Center for Scientific Research and Artistic Creation in Cinematography and Media - Center of Excellence accredited by the National University Research Council in 2004, the unique center of excellence in art in Romania, recognized at national level and highly appreciated abroad. The human resource includes all categories of personnel: professors, lecturers, readers, teaching assistants. The director of the Center is Professor Cristina Nichitus, Ph. D.

Excellence Centers

The Pilot Center for Scientific Research and Artistic Creation in Cinematography and Media.

International Cooperation

The CILECT Congress 2004 - the 50th anniversary; the lead theme of the debate was "Sustaining the unitary development of film schools in Europe and in the world" (the Film Faculty and the Research Center's activity were recognized as a standard of quality, mentioned in the CILECT catalogue no. 20/2004); The international project organized by UNESCO/CILECT with the theme "Intensifying the dialogue between communities, cultures and civilizations", with the short film "Wild East", project for Eastern Europe.

International Artistic and Scientific Activities / Events

(10 most important events)

The International Student Film Festival CINEMAUBIT reached in 2004 its 9th edition.

Attendances to international specific activities/events 60

(10 most important ones)

- Gelu Colceag - international tour in USA and Canada with <Queen Mother>, 2000;
- Mitran Doru - cinematography director of the film <First Gipsy in Space>, directed by Agneta Fagerstrom Olsson - Sweden, co-production, 2001;
- Pepino Cristian - <Cinderella>, the International Puppets and Marionettes Festival Subotita (Serbia), 2001;
- Velnicic Stefan - the Romanian - Italian project <Euroart>; the show <Lupo, capra e tre capretti>; roles <The Story-teller> and <The Smith>; played in Riberra, Sicily, 2001;
- Bandac Mihai - personal exhibition in Orly - Paris, organized at the invitation of the City Hall, 2002;
- Igaszag Radu - personal exhibition of photography and graphic <Aktcio>, Kultiplax, Budapest, 2002;
- Pepino Cristian - the performance <Chorus and Fly Lesson for the Baby Crane>, Italy tour, 2002;
- Damian Anca - participated with the film <Freedom Exercise> at Festival International du film sur art, Montreal, 2004;
- Damian Laurentiu - colloquium on the theme <A New Aesthetics in the Cinematographic Debut>, at Medifest International, Prague, 24-27 January 2004;
- Igaszag Radu - participation in the International Film Festival Balkanima, Belgrade, Serbia, 2004.

Attendances to national specific activities/events 329

(10 most important ones)

- Vasiliu Dan - produced the performance <Money from the Sky>, The Comedy Theatre, 2001;
- Ionescu Cristina - edited the film <Everyday God Kisses Us on the Mouth>, directed by Sinisa Draghin, the Romanian Filmmakers Union Award for best editing, 2002;
- Zamfirescu Florin - a role in <Filantropia>, directed by Nae Caranfil, 2002;

- Alexa Felix - directed the performance <The Chairs>, Bulandra Theatre, 2004;
- Mihailescu Florin - cinematography director of the film <Orient express>, directed by Sergiu Nicolaescu, 2004;
- Pepino Cristian - directed the performance <Cinderella>, Children Theatre, Ploesti, 2004;
- Popovici Adriana - director of the publication <Workshop. Studies, research, experiments>, accredited by the National University Research Council in 2004;
- Soptorean Marius - director and screenwriter of the film <Clouds' Shape>, 2004;
- Tonitza Iordache Michaela - dramatized the performance <Obiomov>, Bulandra Theatre, the UNITER Award, 2004;
- Zamfirescu Florin - a role in the film <Timisoara Syndrome>, directed by Marius Barna, 2004;

Attendances to international festivals/symposiums 62

(10 most important ones)

- Bucur Florica Viorica - the lecture <New Names in the Romanian Film>, within <Volte, Voci e Souni dalla Romania>, organized by The Cultural Foundation ITARO-ARTE and Accademia di Romania at Palazzo delle Esposizioni, Rome, 2002;
- Cernat Manuela - observer at the European Culture Society Congress <Romania and the Integration in Europe>, Venice, 2000;
- Dumitriu Corneliu - scientific exposure on the theme <Theatrical Higher Education in the World Nowadays>, The World Theatre Congress, Athens, 2002;
- Nedelcu Marius - organized the participation of the University at the International Educational Fair BestInfo 2002, Vienna, 2002;
- Bucur Florica Viorica - participated as a film critic in the International Film Festival <Il Cinema Ritrovato>, Bologna, Italy, 2003;

(Continued on page 267)





(Continued from page 266)

- Cernat Manuela - the conference <Romanian Cinema of the '40es> within the International Symposium <Cineromit - Proiect italo-roumain>, the Italian Cultural Institute, Paris, 2003;
- Nichitus Cristina - participated with the exposure <Romanian Film School Today> to the CILECT 50 Congress on the theme <Maximizing the Moment>, May 2004, Helsinki;
- Nichitus Cristina - participated in the European Forum for Media, organized by the European Institute for Media on the theme <Expanding the horizon; new countries, new players, new platforms>, with the exposure <A new platform of Romanian Film and Television school / advanced digital techniques and technologies>, Vienna, November 2004;
- Patianjoglu Ludmila - organized lecture-performances to the International Theatre Festival at Sibiu, 2000-2004
- directed by the student Catalin Mitulescu, 2001, 100 pages;
- Pepino Cristian - the performance <Birds' Gathering> at the International Festival PIF Zagreb, Croatia, Creation Award, 2001, 130 pages;
- Nichitus Cristina - nominated at the Cannes Festival with the film <17 Minutes Late> directed by the student Catalin Mitulescu, 2002, 150 pages;
- Nichitus Cristina - participated in the annual conference of the European Council of Artists (E.C.A.) on the theme <Artists - partners without frontiers. Cooperation in the process of the extension of the European Union>, September 2003 - projection of the film <M.B. - The Lady with Roses>, 700 pages;
- Nichitus Cristina - Grand Prix of the International Documentary Festival Govora for the film <M.B. - The Lady with Roses>, 2003, 700 pages;
- Pepino Cristian - the book <El teatro de marionetas en Rumania>, Ventana a Rumania, Centro de Iniciativas de Tolsa Publishing House, Spain, 2003, 150 pages;
- Constantinescu Iuliana - won the participating grant to the E.C.A. (European Council of Artists) Congress, Amsterdam, 2004; Congress observer; closing the conference with the film <Wild East>, 120 pages;
- Damian Laurentiu - Grand Prix at the International Film Festival Angers, 2004, for the film "Story at the "C" Stair", directed by the student Cristian Nemescu, 140 pages;
- Porumboiu Corneliu - Second Place for the film "A Trip to the City" to the Cannes Festival CineFondation, 2004, 190 pages.

Attendance to Biennials and Triennials recognized arts, personal exhibitions at international galleries and museums 114
(10 most important ones)

- Szekely Anton Luminita - the performance <Lovers' Trap>, directed by the student Gabriela Dumitru, the International Festival <Theatre of Change>, Athens, 2000, 200 pages;
- Nichitus Cristina - nominated at the Cannes Festival with the film <Bucharest - Vienna>

Homologated brevets and papers with intellectual property right in every artistic fields 15
(maximum 10 significant products)

- Georgescu Ovidiu - Dacin Sara copyright for the script of "Dupe", 2002;
- Ovidiu Georgescu - Dacin Sara copyright for the script of the film "Romanian Legends";
- Georgescu Ovidiu - Dacin Sara copyright for the script of "I Will Get the Best of You (Iti vin de H@ck)", 2002;
- Nichitus Cristina - Dacin Sara copyright for the direction of the film "M. B. - The Lady with Roses", 2002;
- Constantinescu Iuliana - Dacin Sara copyright for the script of "Wild East", 2003;

- Constantinescu Iuliana - Dacin Sara copyright for the direction of "Wild East", 2003;
- Nichitus Cristina - Dacin Sara copyright for the script of the film "And... Everything was Nothing", 2004;
- Porumboiu Corneliu - Dacin Sara copyright for the script of the film "May", 2004.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	1660,5	5000
2003	172,600	15330
2002	111,510	8553
2001	210,068	27531
2000	0	59413
1999	30,00	121500
1998	206,60	151992
1997	120,25	0
1996	134,8	0
1995	0	0



Presentation of Laboratories

Within the Drama Faculty, the "Ion Sava" Directing Studio (experimental studio) was created, endowed with a high-level light installation which surpasses even the studios of



some important theatres (ADB-Siemens/48 channels light installation with an ETC light organ - USA). In this studio there were initiated many research projects on contemporary dramaturgy, from which important performances of the "Casandra" Studio were born, played later on other stages (at the Act Theatre for instance). Another unique studio is the Puppets and Marionettes studio, conceived and realized under the guidance of Professor Cristian Pepino, Ph. D.

Within the Film Faculty, there is a digital sound studio (SSD), which includes four rooms and a passage, with specific nature. Three rooms are isolated by any exterior vibration (fulfilling the N 25 Standard) and have a quite satisfactory internal reverberation time. Two of the studios have the architectonic configuration based on the "classical" formula of professional "Cyclops eye". Technicians use the fourth room. The studios have Internet connection and are separated by the University server by a firewall. The studio platform is connected in a 100Mb network, but also by audio connections. Among the digital sound standards accomplished:

- Word clock (intern and extern - if necessary - house sync);
- Full range 24bit resolution, 48kHz sampler (the professional level for film perfectly covered), but with 24/96 islands, almost able to cover also the professional level for music for certain processing;
- Studio microphones at international standards (Neuman U67 and CAD with MOS);
- JoeMic microphone pre-amplifiers and

RME Standard Converter (varying for every professional digital size known);

- P4 computers with quite efficient memory and terminals (DVD, Jaz, DVD RAM), but also with semi-automatic remote system (EzBUS and NUENDO HUSTON);
- HHB Circle 5.1 audio monitors with LFE (in the mixing studio) and HHB Circle 3 (in the editing studio);
- HD DoReMi video support (with SCSI or Jaz, but also in the network;
- Mixing mixer;
- All the three studios are endowed with a 72 cm diagonal monitor (TV) and the mixing studio also with a specific cinema screen;
- External sound sources: a MD and a HD ZAXCOM DEVA II, a microphone set and external sound mixers (two AKG, a Sennheiser MKH 416 and two Sony radio microphones).

The main professional soft systems are Steinberg NUENDO, with up-to-date plug-ins and Steinberg Wave Labs.

Within the Film Faculty there is also a laboratory for synthesis image, animation, multimedia communication, non-linear editing, endowed with:

- 2D synthesis image (PC platform with negative scanner)



- Professional non-linear editing (MAC G4 platforms, PC Matrox RT 2500 dual monitor platforms)
- DVD authoring
- Sony VX1000 professional DV camera
- Sony DSR-20 DVCAM video recorder
- Amplifier and Dolby Surround system
- DVD player
- Olympus Digital cameras
- Monitor (TV)
- UPS
- Air conditioning
- Classroom and laboratory.





Excellence, creativity and performance are some of the principles promoted in the Romanian National University of Drama and Film "I.L. Caragiale". Promoting and sustaining young artists from the fields of both theatre and film, whose merits were recognized in the past years is one of our main goals.

Within the Drama Faculty, an interesting project who attracted both public and critics is **dramAcum**, whose aim was to promote the contemporary dramatic writing: it was initiated by a group of theatre directing students (Andreea Valean, Gianina Carbanariu, Radu Apostol, Alexandru Berceanu), under the guidance of Reader Nicolae Manda. After organizing a contemporary play contest and some lecture-performances based on translated contemporary plays, the project was awarded in 2003 with Critics' Award of the International Theatre Critics Association, Romanian section.

A traditional event of the Drama Faculty, the **Graduates Gala**, is an opportunity for beginner actors, directors, scene designers, choreographers, and theatre theorists to introduce themselves to the public. Starting with this year, due to the great number of significant performances, the Graduates Gala will be organized biannually, in February and in June. In the past years, the graduates' performances were regularly selected in important festivals (The International Festival from Sibiu or the National Festival "I.L. Caragiale" for instance).

The **Open Doors** Festival was also created for the young artists, acting, directing, scene design, choreography and puppets and marionettes students of the University. Workshops, seminars, book launches, exhibitions and more are presented within the Festival, which reached this year its 9th edition, becoming one of the traditional events of our University, highly appreciated by the public.

Another important goal is the experience exchange with analogous institutions from abroad. Directing, acting, choreography and theatre theory students participated in post-graduate programs in France, U.S.A., Great Britain and Netherlands, being highly appreciated for their good qualification. Fulbright professors also sustained workshops within the University (Roberta Levitow - dramaturgy, Michael Giamitti - light design, Calvin McCClinton - musical theatre).

The Film School of the University has known in the past years great international success, by its presence in one of the most

prestigious film festivals in the world (München, Karlovy Vary, Sankt Petersburg, Moscow, Tampere, Oberhausen, Tel Aviv, Angers, Poitiers, Milan, Madrid, San Sebastian, Potsdam, Cottbus, Berlin, Tai Pei, New York, Palm Springs, Cannes CINEFONDATION) and also by the great number of awards. The **Best Film School Award** at the International Film School Festival at München (in 2000 and 2001), at Karlovy Vary (2000) and Moscow (2003) confirmed the excellence of the program proposed by the young film directors of the School. **Two consecutive nominations at the Cannes Festival**, for "Bucharest - Wien" (2001) and "17 Minutes Late" (2002) of the film director, student at that time, Catalin Mitulescu (professor Cristina Nichitus) were followed, not accidentally, two years later, by the **Grand Prix Palme d'Or** at the short film section for "Traffic". At the CINEFONDATION section of the same festival, in 2004, the film director Corneliu Porumbolu was awarded the second prize for "A Trip to the City". Another international success was winning in 2003 the international project on the theme "Intensifying the dialogue between communities, cultures and civilizations" initiated by UNESCO and CILECT by Iuliana Constantinescu (Professor Cristina Nichitus) with the short film "Wild East", project for the Easter Europe

The International Student Film Festival **CineMAIubit** will reach this year its 10th edition. Including programs of one of the most important film schools from Europe, the festival gives every year the opportunity of an exceptional cultural and artistic dialogue.

The Romanian National University of Drama and Film "I.L. Caragiale" has conferred the title Doctor Honoris Causa to different remarkable personalities of Romanian and world culture: Liviu Ciulei, Ion Zamfirescu, Radu Penciulescu, Krystof Zanussi, Radu Beligan, Paul Bortnovski, Mihnea Gheorghiu, Dina Cocea, Roman Polanski, David Esrig, Lorand Lohinszky. It was also visited by legends of the world cinema, like Roman Polanski or, recently, Francis Ford Coppola.

Within the intercultural exchange, we must also mention the doctoral program of the Romanian National University of Drama and Film "I.L. Caragiale", open also to foreign students who choose the University to sustain their theses or to make their films and performances, in view of a fruitful dialogue between different experiences and artistic traditions.



In January 2005, the great American film director *Francis Ford Coppola* visited the Film Faculty, previewed some of the graduates' films and talked with the Romanians about his own creation experience

The conversation was carried in English, without translation and the atmosphere became incendiary in a creative way and that is why the meeting lasted about three hours instead of 20-30 minutes, like it was predicted. The students talked openly to the guest, who was very generous with his answers.



Francis Ford Coppola, with the Dean of the Film Faculty, answers to the students' and professors' questions



The official reception



Francis Ford Coppola signing in the University's Guest Book; by chance, the film director Roman Polanski signed on the same page



The presence chamber became too small for the great number of students and professors who participated in this special meeting, acquiring the aspect of a real "ship"



Rector

Prof. Sorin Ilfoveanu, PhD

Historical Overview of the University

Prince Alexandru Ioan Cuza founded The National School of Fine Arts in 1864. In 1904 The Decorative Arts School was founded too. In 1931 it transformed into The Belle Arte Academy. In 1942 the Academy changed its title again into The Superior Arts School at Bucharest. In 1948 The Institute of Arts is founded, in Bucharest. In 1950 comes into being The Nicolae Grigorescu Fine Arts Institute. In 1990 this becomes The Academy of Arts, which is now, The National University of Arts. Among the students and teachers of



national and international importance we name: Theodor Aman, Gheorghe Tattarescu, Constantin Brancusi, Stefan Luchian, Ioan Andreescu, Dimitrie Paclurea, Francisco Sirato, Camil Ressu.

Faculties and Departments

- The Fine Arts Faculty; The Decorative Arts Faculty; The History and Theory of Arts Faculty;
- Department of Research.

Patrimony

Amphitheatre and lecture halls: 4; Seminar and workshop classes: 7; Laboratories: 30; Studios: 65; Students shelter P+4 with 300 places.

Fields in which human resources are trained

1. Fine Arts;
2. Decorative Arts;
3. History and Theory of Arts.

Location: BUCHAREST, 19 Budisteanu Street;
Phone number: 021-3125429;

Presentation of research activity chart

The Research Centre is composed from several research centres (in the present: The Central Unit of the Management of Activity of Fundamental and Practical Research of UNAB, The Research and Restoration Unit, both with their headquarters in Grivita Street 28, and ARTLAB - the laboratory for the analysis and for the creation of the artistic imagine), located in Budisteanu Street 19, where the activity of the members of the research staff takes place.

The Research Centre staff is composed from professors and MA students, permanently and part-time employed personal.

Structures

Research Institutes	0
Research Centers	3
Research Laboratories	1
Multi-user Research Centers	0

Top Priority Research Directions

The research activities, following the mission and the objectives from The Strategic Plan, cover the following areas:

1. Fundamental Research
2. Research-Development, with capitalisation on results

Research area: Visual Arts

Research chapters:

1. study of tradition in the artistic creation;
2. the study of traditional and modern technologies;
3. applied research in visual arts.

Outstanding Research Infrastructure

Laboratory for experiments in Vadastra Village; Location: Vadastra Village, Olt County.

Human Resources

Professors	23
Senior Lecturers	20
Lecturers	55
Assistant Lectures	34
Teaching assistant	25
Research Fellows	0
Administrative Staff	99
Students	823
of which:	
Undergraduate	654
Master	196
PhD - full attendance	0
PhD - attendance not required	96

Fax number: 021-3125429
E-mail: rectorat@unarte.ro; www.unarte.ro

Excellence Centers

ARTLAB - the laboratory for the analysis and for the creation of the artistic image - CNCIS CA B Type 37/11.05.2005 belongs, both as premises and as personnel, to the Fine Arts Faculty in UNA-B, painting and engraving departments. The main domain for ARTLab research is Fine Arts.

Existing equipment in the laboratory space: 26 computers connected in a network.

International Cooperation

UNAB is member of CUMULUS and ELIA:

On November 2004 SSA-ACC call, ARTLAB proposed the following project: PAN - Promoting European visual Art Network (a framework to debate the contemporary communication issues in the conditions of new media, multimedia and computing reality). The task of the project is structuring a network of laboratories for analyzing the artistic image, where defining new models is the main goal:

VISUAL ART DATA MINING - IJCAI, International Joint Conferences on Artificial Intelligence, UK;

2002 - the Experimental Pyrotechnology Group is founded, involving archaeologists from The European Association of Archaeology EAA and UNAB artists.

International Artistic and Scientific Activities / Events (the 10 most important ones)

- scientific sessions organized at Bournemouth 1999, Lisbon 2000, Thessalonica 2002, St. Petersburg 2003
- round table organized at Esslingen;
- "The Romanian Art Days", Frankfurt 2004
- Creation Studio, Trondheim University 2002
- "Design and Transfer" symposia in collaboration with Stuttgart University of Arts
- "Experimental Archaeology" in collaboration with Bradford and Bournemouth Universities, and CNRS, France

Attendances to specific international activities / events

15

(10 most prestigious attendances)

- Dumitrescu, M., *Exhibition, Frankfurt*, 2004;
- Antonescu, St., *film stage-design "The Wolf-Woman"*, Italy, 2003;
- Gorduz, V., *Eminescu Monument, Canada*, 2003;
- Lie, S., *Exhibition, Essen*, 2003;
- Preda-Sanc, M., *Exhibition, Gyor*, 2003;
- Ilfoveanu, A., *Exhibition, Muenchen*, 2003;
- Kiraly, I., *In Search of Balkania, Neue Galerie, Lands museum, Gratz*, 2002;
- Manescu, M., *Exhibition, Thessalonica*, 2002;
- Caltia, St., *Kunsthau Boskarp Exhibition, Hohenloeksted*, 2002;
- Zamfirescu, M., *Exhibition, Aixles Bains*, 2002.

Attendances to specific national activities / events

563

(10 most prestigious attendances)

- Chira, A., *The Monumental Assemblage Tauseni*, 2000-2004;
- Tanasoca, N.S., *Les aroumains et la conscience identitaire balkanique, Bulletin Aisse*, 2004;
- Gorduz, V., *Ioan Alexandru Monument*, 2003;
- Grimalski, V., *Restoration of the painting of The Monastery from One Wood*, 2003;
- Caltia, St., *Exhibition, Timisoara*, 2003;
- Antonescu, St., *Documentary film Maramures*, 2003;
- Aslam, C., *Nae-Ionescu - the theory of the cultural foundation of the metaphysics, Journal of Philosophy*, 2003;
- Mohan, D. and others, *Laser microscope for cleaning art objects*, 2003;
- Ilfoveanu, S., *Exhibition, Apollo*, 2002;
- Spataru, M., *Serban-Cantacuzino Monument, Cotroceni*, 2002.

Attendances to international festivals, symposiums

74

(10 most prestigious attendances)

- Tolan, V., *Exhibition, The Romanian Cultural Centre, New York*, 2003;
- Semencescu, V., *Exhibition, Ludwigsburg*, 2003;
- Preda-Sanc, M., *Exhibition, DVO Gallery, Brussels*, 2003;
- Scutaru, E., *Group Exhibition, Soho in Ottakring, Vienna*, 2003;
- Cojocariu, I., *Ceramic Symposium, Troian*, 2003;
- Ilfoveanu, A., *Schloss Almoshoff Symposium, Nueremberg*, 2003;
- Parvu, A., *Ambient Sculpture, Rostok*, 2003;
- Trestioreanu, R., *Film - The Baptism, Paris & Strasburg*, 2003;
- Orban, A. M., *The International Book Fair, Frankfurt*, 2002;
- Rusen, M., *International Fine Arts Symposium, Samothraki*, 2002.

Attendance to Biennials and Triennials recognized arts, personal exhibitions at international galleries and museums

20

(10 most prestigious attendances)

- Stend, I., *Exhibition, Regensburg Gallery*, 2004;
- Dumitrescu, E., *Exhibition, Civitta Vecchia*, 2003;
- Popa, C., *Arbeitskreis fur Siebenburgische Landskunde, Heidelberg*, 2003;
- Dup, D., *Exhibition, Artabraxas, Civitta Vecchia*, 2003;
- Margineanu, A. I., *Exhibition, The National Modern Art Gallery, Rome*, 2002;
- Vlad, A., *Monument, Berathausen*, 2002;
- Anghel, G., *Monumental Work, Patras*, 2002;
- Lucaci, P., *Exhibition, Phalsburg*, 2002;
- Gomoiu, I. and others, *Limit of Nd: YAG laser application in art-work restoration, Opto-electronics Review*, 2002;
- Kiraly, I., *Creation Studio, Institut Français, Thessalonica*, 2002.

Presenting Some Laboratories

ARTLAB (CNCSIS cod CA B tipe 37/11.05.04)

Director: Lect. Univ. Dr. Catalin Balescu,
UNAB Scientific Secretary.

Located: The Fine Arts Faculty, 19
Budisteanu, Bucharest.

ARTLAB is a centre for the creation and research of the artistic image, with the help of IT, coordinated by the Painting Department of the Fine Arts Faculty. The laboratory was created to define a new model of communication through the artistic image, allowing the study of the blocking elements that come up during the dynamic of the creation act. The main area of activity is "fine arts".

General Objective:

ARTLAB tries to define new forms of image expression and to renew the existing artistic forms through identification of the quality parameters of the image, using statistical models and quantifying parameters, in this way sustaining the approach of the languages complementary to painting. ARTLAB holds courses and seminars for the understanding of the IT languages and technologies by the students of the painting and sculpture departments, as well as collaborative projects with interdisciplinary character. It also develops the idea of software creation and applications within the programs consecrated to the processing of the image.

Functioning process

From the total of 30 units existing in the lab, 8 are all the time available for research projects. Research teams can use the whole network after classes. The image processing classes are taught by permanent members of the ARTLAB.

LABORATORY FOR EXPERIMENTS IN VADAstra VILLAGE

Director: Prof. Arh. Dragos Gheorghiu,
PhD, Pro-rector, Department of Research
Location: Vadastra Village, Olt County.

UNAB received in Vadastra Village, Olt County, for a period of 10 years, a laboratory-house (surface 200mp.) and a land with a surface of half a hectare, for experiments with traditional technologies, experimental archaeology (the study of the prehistoric and medieval technologies) and ethno-design.

This space is used during the summer holidays for research grants, and during the academic year for short-time experiments.

The laboratory is equipped during summer with laptops, projectors, digital cameras for



ARTLAB Laboratory



Vadastra Laboratory,
central room

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	50	-
2003	1781,789	-
2002	1598	-
2001	-	-
2000	1185	87800
1999	150	-
1998	100	-
1997	-	-
1996	-	-
1995	-	-

photographing and filming, thermocouples, and a specialized library.

Until now different BA and MA projects and theses in design, ceramics and mural art were developed there. On the land near the laboratory an architectural complex (archeopark) was built in the last three years, including the reconstruction of Neolithic houses and

Calcolitic kilns, where the students together with the invited professors and villagers experiment old technologies, trying to familiarize themselves with ecological design and trying to renew both urban and folk arts.

Success Stories

VĂDASTRA: THE REVITALIZATION OF THE TRADITION - EXPERIMENTS WITH TRADITIONAL TECHNOLOGIES

Project Director: Prof. Arh. Dragos Gheorghiu, PhD, Pro-rector, Department of Research

The Vadastra Project* brings together the study of the old ceramics and design with experimental archaeology, in one science named ethno-design, that undertakes the rediscovery of old technologies and their reintroduction in contemporaneity; in order to create an ecological design and to revitalise the local tradition in the communities where the research on archaic technologies takes place.

Ethno-design can be a solution for a newly created labour market, through an ecological and contextual design, that insists upon the relation that can exist between science and art, and between the two and society. The newly innovative side of a direct influence on society of the results of scientific research is a characteristic of Vadastra Project and it was presented as such in the book: "Prehistoric Pottery in Britain and Ireland", published by Dr. Alex Gibson at Tempus (USA & England, 2002). The results of the scientific and artistic activities are processed and directly transmitted by the students to children and adults from the village. Therefore in the last five years ceramics objects modelled by children under 14, prehistoric and roman kilns, a village museum and a fresco - logo for the Vadastra community were made with traditional technologies.

Through the knowledge acquired during the project, one of the villagers, Mr. Ion Cococi, has become one of the most important potters in the south Oltenia region, being

now an instructor for the children in the village. Now, in Vadastra Village, a ceramic centre produces an original splendid ceramic, inspired from the prehistoric pottery. As part of the project a museum for the village children (a design BA diploma), a monumental fresco for all the village (a postgraduate studies diploma in mural painting) and an archeopark for students, villagers and tourists (a MA diploma in design) were built with the intention to develop a participatory tourism.

Thanks to Vadastra Project a rural community has built, and is still building, a new identity. Old folk customs from the area were rediscovered with this occasion.

Some of the research themes became diploma themes at UNAB as well as at Polytechnic University Bucharest, a partner in the project.

Specialized books were published with the results of the experiments both in Romania and abroad.



Aspect of the Vădastra archeopark



BA and MA students from UNAB had the chance to experiment with invited teachers (from UK, Belgium, France, SUA and Finland**), some of their solutions being applied immediately in the community of Vadastra. Workshops were organized with the invited professors in Bucharest, Vadastra, Bournemouth and Esslingen, and scientific sessions at Lisbon, Esslingen, Thessalonica, St. Petersburg. The development of the project was published in the bulletin of The Prehistoric Ceramic Research Group from UK (see also <http://www.pcrp.org.uk/iframe/articles/vadastra.html>).

In 2002 the Romanian and foreign participants have decided to found an international network of pyrotechnology

UNAB Gallery Exhibition,
January 2004



studies "to encourage experimental research through a multidisciplinary approach" and established the bases of an international bulletin: the Experimental Pyrotechnology Group Newsletter.

The Vadastra Project intends to create a regional collaboration in the Danube region and to build the identity of some social groups, in the same time bringing to life the urban art and the folk artistic tradition of the area.

The Vadastra Project was presented by CNCSIS at last EARMA Congress at Bucharest, in several exhibitions in Romania (The National Museum of History of Romania; the UNAB gallery), in UK (Bournemouth University) and in some European scientific journals (at Oxford, Liege and Milan).

* The Vadastra Project benefited during 2000 and 2003 from different grants from The Ministry of Culture, The Department of Archaeology (2000), CNCSIS and The World Bank (Grant No. 112) (2000-2002), from CNCSIS (in 2003) and from the Old Culture Department (during 2000 and 2004)

** The invited professors who participated in the experiments at Vadastra were: A. Gibson, J. Chapman, G. Nash, R. Carlton, B. Induni, K. Andrews, R. Doonan, R. Rowlett, P.L. van Berg, M. Vander Linden, A. Desbat, A. Puukainen, A. Chohadziev and K. Kovacs



Rector

Prof. András Béres, PhD

Historical Overview of the University

The Tg-Mures University of Theatre, founded in 1946 on the basis of the Royal Decree no.276 is a public multicultural institution of higher education. It also presents a theatrical season according to the artistic and administrative requirements of repertoire theatres in two languages: Romanian and Hungarian.



Faculties and Departments

- Faculty of Theatre - Dept. of Dramatic Art and Theatre Studies - Romanian Section.
- Faculty of Theatre - Dept. of Dramatic Art and Theatre Studies - Hungarian Section.

Master and Doctoral Programs

MASTER - "Speech and Language in Performance Arts"- Masters Course.

Patrimony

The University's educational and artistic activities are carried out within its own properties. There are two buildings for study and courses and a third one housing the students' lodgings. There are 18 lecture rooms, 2 movement rooms, a research laboratory, a library and the Studio Theatre with 200 seats and the additional production workshops.

Fields in which human resources are trained

1. Theatre (acting, puppeteering, directing for the stage, theatre studies);
2. Music (music pedagogy).

Presentation of research activity chart

Artistic creation and scientific research are organized at the Center for Theatre Studies and Creation. Scientific research is carried out within the framework of national projects as well as in individual research programs organized at the level of departments. Artistic creation is present in the repertoire of the Studio Theatre as well as individual contracts of the teaching staff.

Structures

Research Institutes	0
Research Centers	1
Research Laboratories	2
Multi-user Research Centers	0

Top Priority Research Directions

There are two major directions of the teaching staff's creative activities:

- 1) Artistic creation (the interpretation of roles, directing for the stage, stage design, choreography, musical direction, translation and adaptation of dramatic texts, musical composition);
- 2) The study of the theatrical phenomenon. History, theory, aesthetics and pedagogy of theatre and drama.

Outstanding Research Infrastructure

The Tg-Mures University of Theatre is - beside the "I.L.Caragiale" National University of Theatre and Cinema Art - the only other Romanian institution of higher education with a theatre hall of its own. The Studio Theatre functions as a professional theatre and is simultaneously a location of artistic creation and artistic as well as scientific experiment.

Human Resources

Professors	2
Senior Lecturers	7
Lecturers	14
Assistant Lecturers	7
Teaching Assistant	1
Research Fellows	-
Administrative staff	44
Students	206
of which:	
Undergraduate	195
Master	11
PhD - full attendance	-
PhD - attendance not required	-

International Cooperation

- Exchange of performances with the Theatre and Film University Budapest, Hungary (2002, 2004) and the Theatre Faculty of Kaposvar University (Hungary);
- performances staged at the Studio Theatre with the support of foundations such as: The Hungarian National Cultural Foundation, Hungarofest, Teleki Foundation (200, 2001, 2002, 2003, 2004).

International Artistic and Scientific Activities / Events

(the 10 most important ones)

- **National conferences of theatre studies:**
 - "Text and Context"- November 2000
 - "Theatre and Theatrical Education" - November 2001
 - "The Art of Theatre at the Beginning of the Millennium - November 2002
 - "European Schools of Stage Direction"- November 2003
 - "Literality and Theatricality"- November 2004

- **International events:**
 - "Anniversaire Eugene Ionesco en Roumanie"(Section de Târgu-Mures)- "Eugene Ionesco-Notre contemporain", May 2004;
 - "French Theatre Studies", visiting lecturer: Professor Magdolna Jakfalvi, PhD, May 2004;
 - "The New Generation of Directors in Budapest" ; visiting lecturer: Szucs Katalin-Chief Editor of the Critical lapok - Hungary, March 2004;
 - "Staging Milan Fust's dramas "The Unhappy" and "Catullus", visiting lecturer: Professor Gábor Székely, PhD - Rector of the Budapest University of Theatre and Film - April 2004;
 - "Acting Techniques of Classical Comedy", visiting lecturer: Csába Kiss -from the Budapest University of Theatre and Film April 2004.

Attendances to international specific activities/events

14

(the 10 most important ones)

- **András Györfly**, the role "Baron Dory" in the performance of the play "Strange Marriage" by Kálmán Mikszáth, directed by Péter Lener, at the József Attila Theatre-Budapest, 2003;
- **András Györfly**: the role "Old Biki" in the play "Love" by Lajos Bartha, directed by Eszter Novák, at the Vidám Színpad-Budapest, 2004;
- **András Györfly**: the role "Cell mate" in the film "Salto mortale", directed by Robert Koltai -Budapest, 2004;
- **Klára Tompa**: leading role in "Fény hull arcodra"(Light Falls on Your Face), directed by Gyula Gulyás, Budapest, 2001;
- **Klára Tompa**: "Desdemona" in the performance "Strangers", directed by András Éry-Kovács;
- **Júlia Gyéresi** - poem recital, Duna Television, Budapest, 2004;
- **Ibolya Farkas** - "Ancient Comedy" by Arbuzov, Duna Television, Budapest, 2004;
- **Elemér Kincses**: "Delict pe insula caprelor" (The Crime on Goat Island) by Ugo Betti Pécs, Hungary, 2001;
- **Levente Kovács**, the gala show of the Festival of Hungarian Theatres Abroad, Kisvárdá, Hungary, 2004;
- **Boldizsár Csiky** - "Divertimento pentru instrumente de suflat" (Divertimento for wind instruments), London, 2004.

Attendances to specific national activities/events

18

(the 10 most important ones)

- **Klára Tompa, Zsolt Zayzon, Aba Sebestyén, Ibolya Farkas, Erzsébet Fülöp** in the performance "Boldogtalanok" (The Unhappy) By Milán Fust, directed by Victor Bodó (Hungary), 2004 (Best performance at the Kisvárdá Festival, Hungary, 2004 four nominations for UNITER 2005);

- **Constantin Dojjan, Dana Lemnar** și **Cristinela Olăreanu** in the performance "Baby-sitter" by R.de Obaldia, directed by Radu Olăreanu, Studio Theatre (Centre for Theatre Studies and Creation), 2003;
- **Klára Tompa, András Györfly, Ibolya Farkas, Eva Balázs, Erzsébet Fülöp** in the performance "The Awakening of Spring" by F.Wedekind, directed by Anca Bradu (best direction)Uniter-2000);
- **Loránd Lohinszky și Ibolya Farkas** - in "Love Letters" by Gurney, directed by Mircea Cornisteanu (best interpretations at the Festival of Contemporary Theatre, Brasov, 2001);
- **Elena Moaleș** in "Prostii sub clar de luna" (Fools in Moonlight) by T.Mazilu, directed by Dan Glasu, Târgu-Mures: National Theatre, 2002;
- **Ștefan Roman**, in "The Wedding" by Gogol, Timisoara National Theatre, 2003;
- **Levente Kovács** - staging of "Old-Fashioned Story",at the Oradea State Theatre, 2002; staging of "Györgyike, Dear Child", by Dezso Szomory, at the Târgu Mures National Theatre,2004;
- **Marius Oltean** - direction of "Agnes, the Chosen" by Pielmeier, at Odeon Theatre Bucuresti, 2004; adaptation and direction of the radio-play "Bolero at Midnight", by Costin Manoliu, National Broadcasting Society, Bucharest, 2004;
- **Oana Leahu** - direction of "The Tale of Panda Bears ...", by Matei Visniec, for the International Underground Theatre Festival, Arad, 2004; direction of "Middle-Aged Lady for the Role of Dostolevski's Wife "by Eduard Radzinski, at Teatrul De Nord Satu-Mare, 2004;
- **Radu Olăreanu** - direction "Baby-Sitter" de R.de Obaldia, Studio Theatre Târgu-Mures - Center for Theatrical Creation and Studies, 2003; direction of "The Challenge" by Kostas Asimakopoulos, at the National Theatre Târgu Mures, 2004.

(Continued on page 279)



Homologated brevets and papers with intellectual property right in every artistic fields (maximum 10 significant products) 12

- Sin Mihai-"The Residence", dramatized version of the novel dr "Quo vadis, domine", contract with the Territorial Radio Station Studioul, Târgu-Mureș, 2003;

- Cristian Stamatoiu - "Caragialumea-matrice și prefigurare" (Caragiale-land - Matrix and Prefiguration) Copyright ISBN, The Publishing House of the Târgu-Mureș University of Theatre, 2003;
- Cristian Stamatoiu - "Privegherul anotimpurilor", (Watchkeeper of Seasons) Tipomur Publishing House, Târgu-Mureș, 2001;

(Continued from page 278)

Attendances to international festivals/symposiums 13

(the 10 most important ones)

- 2000 - attendance at the International Theatre Festival Blaye, France with the performance "Masks of Love in Classical French Comedy", directed by Oana Leahu;
- 2001 - *Ibolya Farkas*, the role "Gloria Marc" in "Actresses" by J.M.Benet, Târgu-Mureș National Theatre, International Festival of Hungarian Theatres Abroad, Hungary, 2001;
- 2001 - *Levente Kovács*, direction of "Actresses" by J.M.Benet, Târgu-Mureș National Theatre, International Festival of Hungarian Theatres Abroad, Hungary, 2001;
- 2002 - attendance at the International Theatre Festival at Kisvárdá with "Romeo and Juliet", by Shakespeare, directed by Gábor Rusznyák
- 2003 - attendance at the XIth International Meeting of Drama Schools (Skomrahi) at Skopje, with "The Seagull", directed by *Andreea Vulpe*, as well as attendance at the Festival of Hungarian Theatres from Abroad at Kisvárdá;
- 2003 - participation at the International Festival of Student Theatre International, Iasi, with the performance "Belgrade Trilogy" by *Biljana Srbijanovicz*, directed by *Radu Ōtareanu*, with the students of the Romanian section;
- 2004 - participation at the National Theatre Festival, Pécs, Hungary with "Penthesilea" by *Kleist*, directed by *Gábor Rusznyák*, with the students of the Hungarian section;
- 2004 - participation at the International Festival of Hungarian Theatres, Kisvárdán - Hungary with "Penthesilea" by *Kleist*, directed by *Gábor Rusznyák* and with "Blood Wedding" by *Lorca*, directed *Kincses Eimer*, with the students of the Hungarian section.

Attendance to Biennials and Triennials recognized arts, personal exhibitions at international galleries and museums 12

(the 10 most important ones)

- *Ibolya Farkas*, Mures National Theatre - The International Theatre Festival Kisvárdá, Hungary, 2001;
- *Levente Kovács*, director of the performance "Actresses" by J.M.Benet, produced by the Târgu-Mureș National Theatre - The International Theatre Festival Kisvárdá, Hungary, 2001;
- *Erzsébet Fülöp*, best actress for the role of Moll Flanders at the Festival of Experimental Theater, Budapest, 2001;
- *Zsolt Zayzon*, *Klára Tompa*, *Erzsébet Fülöp*, roles in the performance The Tragedy of Man by I.Madách, in cooperation with Millenium Theatre Budapest, at the Budapest Spring Festival 2001;
- *Boldizsár Csiky*, Choral Works, Budapest 2002;
- *Levente Kovács*, stage direction of "Old-Fashioned Comedy" by Magda Szabó, at the Oradea State Theatre, tours in Slovenia and Hungary 2002-;
- *Ildikó Selyem*, choreography of the performance "La Reine de Naiges" ("The Snow Queen") based on the story by H.C.Andersen, Târgu-Mureș National Theatre, tour at Strasbourg, Franta, 2003;
- *Klára Tompa* - best interpretation for her role in "Két nő között" ("Between Two Women") based on a play by Marivaux, at the International Festival of Hungarian Theatres Abroad, Kisvárdá -Hungary, 2003;
- *Levente Kovács*, direction of "T.T.T." based on Shakespeare and Csányi, "Spring Festival" Budapest-Hungary, 2002;
- *Boldizsár Csiky* - Suite in Old-Style, Japan, 2004.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	30	50017
2003	264	20.176
2002	-	17.105
2001	-	6.830
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-

64



37



on



Rector

Prof. Costică Voicu, PhD

Historical Overview of the University

"A.I. Cuza" Police Academy was set up in February 25th 1991 by the Romanian Government Decision no. 137. When setting up this institution, the positive aspects of the former education system within the Ministry of Inter-



or were taken into account, as tradition is one of the main characteristics of this institution. The Police Academy is the first higher education institution in the country awarded by the president with National Honours to the rank of KNIGHT.

Faculties and Departments

- 3 Faculties
 - The Faculty of Law
 - The Faculty of Fire-fighters
 - The Faculty of Archives

Master and Doctoral Programs

MASTER - 9 programs carried out in the three faculties: Prevention and Combatting Illegal Drug Trafficking; Public Order and National Security Management; Combatting Organised Crime; International Relations; Border Safety Management; Criminal Sciences; Thermic and Hydraulic Shapings in Fires and Extinguishing Processes; Historical Information Sources and Instruments

Doctoral Programs - 2 fields: Legal Studies; Public Order and National Safety

Patrimony

9 lecture halls, 89 seminar rooms, 46 laboratories, 3 libraries, one shooting range, one test drive field, one field for fire tests, 3 sporting lots with grounds for various sports and a swimming pool, 5 indoor sport ground (one large and 4 small-sized grounds), boarding for 1638 people, one mess hall with 4 rooms and 2 mess halls with with one room respectively.

Fields in which human resources are trained

1. Legal Studies - Law;
2. Engineering Studies - Civil Engineering and Plumbing;
3. Humanistic Studies - History and Archives

Presentation of research activity chart

Scientific research is carried out individually on in extra-curriculum workshops (made of teaching staff, auxiliary personnel, technical support, students and visiting professors). Police Academy Regulation on scientific research will be set up in the nearest future.

Structures

Research Institutes	0
Research Centers	2
Research Laboratories	3
Multi-user Research Centers	2

Top Priority Research Directions

The research aims at building new scientific and specialized knowledge and fostering its use according to the needs and tasks set by the Ministry of the Administration and Interior. The main targets include: national legislation development triggered by Romania's efforts to access the EU; impact of extinguishing substances on the environment; design and build state of the art devices for emergency situations; trace and publish archive documents; old languages development and its implications on documents paleography.

Outstanding Research Infrastructure

National Training Centre for Emergency Management; National Centre for Fire Safety and Civil Protection; Internationally linked computer networks (the Internet), CCTV (Closed-Circuit Television).

Human Resources

Professors	15
Senior Lecturers	25
Lecturers	60
Assistant Lecturers	41
Teaching Assistant	27
Research Fellows	0
Administrative staff	401
Students	2637
of which:	
Undergraduate	1986
Master	355
PhD - full attendance	0
PhD - attendance not required	196



Excellence Centers

CNCSIS, Romanian Academy, National Programs.

International Cooperation

ENSOSP - Firefighters Higher Education Institution (France); Firefighters Higher Education Institution (Poland); Training and specialized studies for doctoral programs: cooperation with France-Amiens (Higher Education for Technical and Electronic Engineers), ENSOP, Faculty of fundamental and applied sciences Niort- Poitiers University, Mulhouse Technical Studies Faculty, Haute- Alsace University; "Leonardo da Vinci" European Training Program, RO 89037/2002, entitled "Rescuer Trainers Training for Firefighting Services"

International Scientific Activities

(the 10 most important ones)

- International Forensics Symposium;
- SIGPROT (2000-2004, 5 editions) - hosted by the Firefighters Faculty: "Buildings, Plumbing and Users' Safety and Fire Protection";
- CTIF - Brasov 2004 - "Firefighters International Technical Meeting" organised in cooperation with Emergency General Inspectorate.

Products created/homologated/capitalized/Inventions/Patents

(maximum 10 significant products)

5

- Vulcaneanu S. - "Procedure for electrical changing of electroinsulating particles and their discharge on various platforms" - Invention pattern no. 111828;
- Burlacu L., Antonescu I., Cavaropol D., Darie E. - "Sprinkling nozzle" - OSIM, no.4421/2004;
- Teoreanu N., Cioccea N., Vasiliu D., Candea S., Naumescu V., Chebutiu S., Sofron Gh. - "Procedure for preparing some sintering devices" - Invention pattern no.87603, OSIM 1985;
- Cioccea N., Bertalan V., Popescu M., Mihalache F. - "Procedure to obtain refractile mixtures with a using temperature of above 200°C" - Invention pattern no.113034, OSIM 1999;

The number of papers published in ISI-quoted journals

61

(the most cited 10 papers)

- C. Păun - *The Criminal Justice System Facing the Challenge of Organised Crime*;
- T. Sireteanu, N. Stoica - *Dumping optimization of passive and semi-active vehicle suspension by numerical simulation*;
- S. Vulcaneanu - *Trajectory findings for epoxy powder particles in electrostatic dyeing works*;
- E. Anton - *A Bala-Mare silver - maker in London*;
- C-tin Burac - *Considerations on Dragoș' Field*;
- A. Boroș - *Harmonizing Romanian Criminal Legislation on Corruption with the European One*;
- C. Paun - *Romanian Criminal Law and Organised Crime*;
- B. Vlad - *Contesting appeal in the field of work conflicts*;
- I. Flucus, D. Cavaropol - *American Federal Administration of Emergency Situations*;
- I. Flucus, M. Șerban - *The issue of firefighters operations within the current legislation*;
- I. Zgavarocea - *Impact of open doors on fire spreading*;
- I. Flucus, G. Popescu, S. Popescu, F. Aragoș - *Risks generated by electric wires on the environment*.

The number of papers published in journals from the main stream of publications

908

(the most cited 10 papers)

- A. Boroș - *Levelling the Romanian Criminal Law with the European One from the point of view of corruption*;
- C. Păun - *The Romanian Criminal Law and Organised Crime*;

- B. Vlad - *Some Aspects concerning the legal contest of the appeal in the case of work conflicts*;
- I. Flucus, D. Cavaropol - *Aspects concerning the USA crisis management*;
- G. Popescu, I. Flucus, M. Șerban - *Aspects concerning the intricacy of firefighters' actions in the light of the current legislation*;
- I. Zgavarocea - *The effects of door-opening in the spread of the fire*;
- I. Flucus, G. Popescu, S. Popescu, F. Aragoș - *The Risks Generated By the Electrical Equipment Upon the Environment*;
- M. Bazgan - *The Organisation of the Romanian Counties by the middle of the 18th century*;
- A.F. Diaconu - *The County Seals at the end of the 19th century and the beginning of the 20th century*;
- P. M. Florea - *A Rare Type of Documents - Travel Documents*.

The number of papers published in volumes of international scientific conferences with reviewers

614

(10 papers presented at the most prestigious events)

- Flucus I., Parlog R.C., Popescu G., Șerban M. - *The application of Quality Function Deployment Method (QFD) to meet the demands of construction fire safety*, International Conferences, Research Agency for Military Technics and Technologies, 2002;
- Parlog R.C., Flucus I., Popescu G., Șerban M. - *Fireman Interventions for Environment Protection*, International Conferences, Research Agency for Military Technics and Technologies, 2002;

(Continued on page 285)

- Cioccea N., Bertalan V., Mihalache F., Baru S. - "Refractile mixtures for walling up furnace launders", Invention pattern no. 113037, OSIM 1999 - tested at SC Real SA Pleasa Ploiesti (manufacturing) and SC Sidex Galati (user).



International Cooperation

"Al. I. Cuza" Police Academy has signed several cooperation agreements with similar institutions in Europe, among which the following partners can be mentioned:

- The Police Academy, Brandenburg, Germany;
- The Police Academy, Munster, Germany;
- The Police Academy, Budapest, Hungary;
- The Academy of Internal Affairs Ministry, Belarus;
- The Academy of Internal Affairs Ministry, Ukraine;
- The Intelligence Academy, Wien, Austria.

The professors of the Academy participated in special training programs organised in Germany, Sweden, France, Slovenia, Hungary, Holland, Ukraine, The Russian Federation, The Republic of Moldova, Great Britain, Scotland, the USA, Bulgaria. Some members of the personnel also attended the seminars held by the European Association of Police Colleges where many topics were tackled, such as: "The confrontation with extreme phenomena", "Money Laundering", "The theft of art works", "The international trafficking in human beings", "Combating crimes", "The control of emigration waves", "The rights of refugees" and so on.



Criminalistics Laboratory



Informatics Laboratory



Frontier Police Laboratory



Firemen Testing Polygon

Location: BUCHAREST, 1A Al. Privighetilor, 1st sector
Phone number: 021-2304833; Fax: 021-2303717

E-mail: secretar@academiadepolitiei.ro
www.academiadepolitiei.ro

(Continued from page 284)

- Darie E. - *Characteristics of Synchronous/Permanent Magnet Hybrid AC Machine*, International Symposium on Advanced Topics in Electrical Engineering ATEE 2004;
- Darie E., Flucus I., Civaropol D. - *The Strategic University Management Applied to the Specialisation of Construction Installations - Firefighters*, Educational Management - Challenges of the 21st century, The Military Technical Academy, 2004;
- Vulcaneanu S. - *Campometer*, International Conferences on improving electric and electronic equipment, Technical University Brasov, 2002;
- Trache S. - *Stability analysis for a manual fire extinguisher*, SIGPROT 2004;
- Zgavarocea I., Zgavarocea M. - *Equipment against smoke*, SIGPROT 2004;

- Mociu A.I., Flucus I. - *Civil Protection Organisation and Training in Romania*, the 9th International Conference of the Head Masters from Civil Protection Schools, Warsaw, Poland, 2004;
- Tcacenco V., Dima C. - *A Method of Carrying Out a Comfortable Microclimate with a low level noise installation*, SIGPROT 2004;
- Stoica N. - *The Solution to the equation of heat spreading via Garlekin method*, SIGPROT 2004.

The number of scientific books published by publishing houses acknowledged abroad 1
(maximum 10 significant books)

- Boroi A. - *Infant homicide and manslaughter within the Romanian Criminal Law*, Propeller Verlag Publishing House, Berlin, 2000

ting crimes", "The control of emigration waves", "The rights of refugees" and so on.

The managing board of the Police Academy has constantly shown interest in broadening the international cooperation in compliance with the provisions of the University Charter, The strategic Plan for Institutional Development, The Norms of the Ministry of Education and Research, as well as The National Program for the Implementation of Community Aquis. Therefore, the professors and students of the Academy attended lectures delivered by similar institutions from Sweden, Germany, France, Spain, USA, etc. Some professors from Great Britain, Scotland, Germany and delegations of students from Slovenia, Belarus, Germany have visited the Police Academy in Bucharest.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	194	5250
2003	22,5	5250
2002	92,5	5200
2001	49,5	0
2000	90,1	0
1999	11,6	0
1998	11,6	0
1997	91	0
1996	53,6	0
1995	0	0



Rector

Prof. Eng. Aurel Șerb, PhD



Historical Overview of the University

The training of the Navy and Merchant Marine Officers started on the 17th of Nov. 1872 when the Flotilla School was established, in Galati, according to the decision no 15 of the Ministry of War. On the 29th Oct. 1909 the institution was moved to Constanta,



changing its name for several times until 1990 when it became the Naval Academy "Mircea cel Batran", which is an accredited higher education technical institution.

Faculties and Departments

- The Merchant Marine Faculty
- The Navy Faculty
- The Foreign Languages Department
- The Part Time Education Department

Master and Doctoral Programs

MASTER - Master Studies: Management, Marketing and Transports, Ports, Free Zones and Stock Markets; Naval Economics and Logistics; The Optimization of Naval Power Installations; The Optimization of Naval Transport

Patrimony

61 laboratories, offices; 2 aulæ, 6 lecture halls, 78 seminar classrooms; a group of training ships (8700 tdw cargo, 2850t escort ship, the Mircea brig, submarine, cutters, launches); IT centre; seamanship and water sports centre; sports facilities (sports ground, swimming pool, 5 sports halls); hostels which can accommodate 1200 students; students mess hall with 1440 seats.

Fields in which human resources are trained

1. Naval Engineering and Navigation
2. Electrical engineering
3. Engineering and Management

Presentation of research activity chart

In February 2003 the Scientific Research Regulations were adopted, according to which the scientific research is carried out in departments, scientific centres and it is led by a scientific board supervised by the Naval Academy Senate. The operative leadership is ensured by the Scientific Secretary of the Senate.

Structures	
Research Institutes	0
Research Centers	2
Research Laboratories	6
Multi-user Research Centers	0

Top Priority Research Directions

1. The optimization of the naval systems functioning;
2. The study of the ship physical fields;
3. Life at sea protection;
4. Marine environment protection.



Aula Magna of Naval Academy "Mircea cel Batran"

Human Resources

Professors	9
Senior Lecturers	22
Lecturers	31
Assistant Lecturers	25
Teaching Assistant	3
Research Fellows	0
Administrative staff	85
Students	1576
of which:	
Undergraduate	1502
Master	74
PhD - full attendance	0
PhD - attendance not required	0

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Rector

Gen. Prof. Mircea Mureşan, PhD

Historical Overview of the University

The High Royal Order no.2073/August,8 1889, stated the establishment of the Superior War School, which was to form staff officers. The name of our institution changed several times: Military Academy(1948-1957); The General Military Academy (1957-1969); the Military Academy (1969-1991); The Academy for Higher Military Studies (1991-2003).The Decree of the Romanian Government stated that the name was to become the National Defence University. The university trains commanders, staff officers and experts, military and



civil personnel selected for leading and expertise positions in national defence and security. It organizes and elaborates scientific studies and scientific research activities needed by the structures that are responsible in these domains.

Faculties and Departments

- Staff and Command Faculty;
- War College; National Defence College; Educational and Defence Resources Management College;
- Foreign Languages Department;
- NATO/PIP Regional Training Centre; Centre for Defence and Security Strategic Studies.

Master and Doctoral Programs

MASTER - Joint Command Army; Joint Command Air Forces; Joint Command Navy; Logistic Command; Economic and Financial Management; Human Resources Management; Military Educational Management; Crisis and Multinational Operations management; Security and Defence.

Patrimony

97 classrooms with 890 seats; 13 specialized laboratories, with 210 seats; 1 lecture hall, 476 seats; 6 amphitheatres, 440 seats; 1 University Library with a surface of 1290sm; 1 Simulation Training Centre, 110 working places.

Accommodation Facilities: 2 hostels with 758 beds;

Sport Facilities: 1 sports hall (volleyball and basketball), 1 gymnasium, 1 body-building hall, 1 sauna, 2 lawn tennis courts, 1 volleyball and basketball ground;

1 officers' mess-restaurant; 3 halls with 173 seats.

Fields in which human resources are trained

- Military Sciences (Command for military units and large operative units, strategic command, multinational operations, JOINT operations);
- Political and Military Sciences;
- Educational and Defence Resources Management;
- Learning (refreshing) foreign languages.

Presentation of research activity chart

There are 3 centers for scientific research. The Centre for Strategic Studies in Defence and Security is accredited by CNC SIS as a type B centre. The Senate of the university has decided the founding of two more centers, that are about to be accredited.;

The student-officers and the students work in scientific research groups.

Top Priority Research Directions

- Military art for military actions at tactical, operative and strategic level;
- Security and National Defence;
- Educational and Defence Resources Management.

Structures

Research Institutes	-
Research Centers	3
Research laboratories	-
Multi-user Research Centers	-

Human Resources

Professors	25
Senior Lecturers	21
Lecturers	33
Assistant Lecturers	23
Teaching Assistant	3
Research Fellows	8

Administrative staff	416
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Students	1562
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of which:

Undergraduate	452
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Master	7-
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PhD - full attendance	-
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PhD - attendance not required	225
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Financial resources obtained for research

	National millions RON	Internat. EURO
2004	200	-
2003	38	-
2002	21	-
2001	-	-
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Outstanding Research Infrastructure

3 IT laboratories; 1 University Library with 180 000 volumes; 1 documentary office; 1 office for reference materials and translation; Internet; Local intranet.

International Cooperation

The Euro-Atlantic Security working group belonging to the Partnership for Peace Consortium.

International Scientific Activities (the 10 most important ones)

1. International Seminar- 14.05.2003- on "The role played by the countries invited to join NATO in the Fight against Terrorism"; the seminar was realized in collaboration with the "G.C.Marshall-Romania" Association; Dr. Roger George the representative of the U.S. National War College- took part at the seminar;
2. International Seminar - 03.04.06.2003- on "Romania, a member of the North Atlantic Alliance."; the seminar was realized in collaboration with the Research agency for Military Technique and Technology; The Italian ambassador, military attaches, the representatives of some foreign firms from the military domain took part at the seminar.
3. The Round Table -28.09.2004-on "The Role and Place of Small and Medium States in Accomplishing the Regional Security." - it was realized together with The Institute for Strategic Studies from Defence University, Brno, Czech Republic.

Products created/homologated/ capitalized/Inventions/Patents (maximum 10 significant products) 11

- IT Systems for Tactical and Operative Applications (SIATO -1) - 1997;
- Operative and Integrated Application of Commanding Map Centre Analysis Command Education Point - seismic Wave- 2004;
- Fundamental elements for designing the Army Device in Military Action- 2001;
- Educational Soft: "Turbo generator for Docimology Testing" -1999;
- Strategic Application A - 2000;
- Study on The Laws of Armed Fight and the Logistics of the Troops-1998;

The number of papers published in journals from the main stream of publications 252 (the most cited 10 papers)

- *A possible Configuration of the Cybernetic War*, Colonel, professor Gheorghe Boaru, PhD, Lt. Col. Eng. Vasile Paun (In the National Defence University Bulletin no.1/2004, NDU Publishing Department, Bucharest-2004, p.55) ISSN 1435-4967;
- *Crisis Anticipation*, Lt. colonel , University lecturer, Danut Manta, PhD, (In the National Defence University Bulletin no.2/2004, NDU Publishing Department, Bucharest-2004, p.112) ISSN 1435-4967;
- *Terrorism and Romania's Security*, lt. col. University lecturer, Mircea-Danut Chiriac, PhD, (In the National Defence University Bulletin no.3/2004, NDU Publishing Department, Bucharest-2004, p.63) ISSN 1435-4967;
- *Opinions on Asymmetrical Actions and Net Centric Warfare*, Captain Commodore, University lecturer, Gabriel-Florin Moisesescu, PhD, (in the National Defence University Bulletin no.4/2004, NDU Publishing Department, Bucharest-2004, p.406) ISSN 1435-4967;
- *Organisational Reform at international level. UN and the 21st century Challenges*, Alexandra Sarcinschi (Strategic Impact Magazine no.2/2004, the National Defence University Publishing

Department - 2004, p.73) ISSN 1453-4967;

- *The Correlation between the NATO and EU strategies in Post-Conflict Actions*, Col.(reservist) Grigore Alexandrescu (Strategic Impact Magazine no.2/2004, the National Defence University Publishing Department- 2004, p.73) ISSN 1453-4967;
- *Mass Media, Public Opinion and Terrorism*, Petre Dutu, PhD, (Strategic Impact Magazine no.2/2004, the National Defence University Publishing Department - 2004, p.124) ISSN 1453-4967;
- *The Effective Warfare, the Effectiveness of Warfare*, General, University Lecturer, Mircea Muresan, PhD, (Strategic Impact Magazine no.3/2004, the National Defence University Publishing Department - 2004, p.22) ISSN 1453-4967;
- *Some Considerations on The Instruments for Strategic Forecast*, Lt. Commodore, University Lecturer, Penica Puscasu, PhD, (Strategic Impact Magazine no.2/2004, the National Defence University Publishing Department - 2004, p.85) ISSN 1453-4967;
- *Terrorism - Counter Terrorism*, Dr. Nicolae Dolhin (Strategic Impact Magazine no.2/2004, the National Defence University Publishing Department - 2004, p.123) ISSN 1453-4967.

(Continued on page 293)

- Study on the Logistic Management of the Present Day Military Structures - 2004;
- The Methodology to Organize and Develop the Public Relations- 2004;
- Radio Location Network and Data Transfer in the National Defence University-1998;
- Communication Network in the National Defence University -1988.



(Continued from page 292)

The number of papers published in volumes of international scientific conferences with reviewers

1256

(10 papers presented at the most prestigious events)

- *European Security Strategy in the Black Sea Zone*, General, University Lecturer, Mircea Muresan, PhD, (in Instability Sources at Global and Regional Level - Implications for Romania, the National Defence University Publishing Department, 2004,p.42) ISBN 973-663-132-x;
- *IT Society - Risks and Implications Associated with Home Security*, Lt. col, Professor Ion Roceanu, PhD, (in Instability Sources at Global and Regional Level - Implications for Romania, the National Defence University Publishing Department, 2004,p.190) ISBN 973-663-132-x;
- *Terrorism, a Instability Source on Global, Regional, Sub-Regional and National Scale*, General Major, University lecturer, Mihail Orzeata, PhD, Capt. Commodore , University Lecturer, Gabriel Moisescu, PhD, (in Instability Sources at Global and Regional Level - Implications for Romania, the National Defence University Publishing Department, 2004, p.53) ISBN 973-663-132-x;
- *International Underground Economy - A Financial Source for Terrorism*, General Major, PhD Candidate Constantin Nastase, Colonel, Professor, Dumitru Nica, PhD, (in Instability Sources at Global and Regional Level - Implications for Romania, the National Defence University Publishing Department, 2004, p.138) ISBN 973-663-132-x;
- *Considerations on Romania's Profile as a NATO Member state*, Lt. Commo-

dors, University Lecturer, Ion Craciun, PhD, (in Instability Sources at Global and Regional Level - Implications for Romania, the National Defence University Publishing Department, 2004, p.462) ISBN 973-663-132-x;

- *NATO Initiative concerning the Defence Capabilities-Responsibilities and opportunities for the Romanian Military Education*, General, University Lecturer, Mircea Muresan, PhD, (in Romania A NATO member, the National Defence University Publishing Department- 2004,p.44) ISBN 973-663- 095-1;
- *Aspects of the Relationship between National and collective Defence*, Colonel, Professor, Ion Irimia, PhD, (in Romania A NATO member, the National Defence University Publishing Department, 2004, p.44) ISBN 973-663- 095-1;
- *Considerations on the Correlation between Security and Economy*, Traian Anastasiel (in Romania A NATO member, the National Defence University Publishing Department, 2004, p.44) ISBN 973-663- 095-1;
- *The Evolutions of the Scientific management*, Colonel, University lecturer, Vasile Stoica, PhD, Colonel, University Lecturer, Ion Emil, PhD, (in The Basis for National and Multinational Joint Military Actions, The National Defence University Publishing Department, Bucharest, 2003, p.77) ISBN 973-663-014-5;
- *Considerations on the Modalities for Validation of Foreign languages Testing as stated in Stanag- 6001*, University Lecturer Margareta Boaca (in The Romanian Armed Forces at the Beginning of a New Century. Possible Options and Evolutions- Section IX ; Linguistic Matters and teaching Foreign Languages in Military Schools, The National Defence University Publishing Department, Bucharest, 2001, p.65) ISBN 973-9324-76-2.

The number of scientific books published by publishing houses

206

(maximum 10 significant books)

- *The Ontology of Subjectivism*, Ion Deac, 292 pages, Paideia Publishing House, Bucharest, 2003 ;
- *Dissertation on Military Science volumes I, II, III*, Valentin Arsene, 1600 pages, Military Publishing House, Bucharest, 2004;
- *The Acts of Military Authorities*, Ion Dragoman, 488 pages, Lumina Lex Publishing House, Bucharest, 2003;
- *Military IT Systems: Review and design*, Ion Stoian, Corneliu Balta, Gheorghe Toma, Ceres Publishing House, 152 pages, Bucharest, 2000;
- *The Tragedy Of Great Romania*, Ion Giurca, 272 pages, Pro transilvania Publishing House, Bucharest, 2000;
- *The XX Century Europe - History and Geopolitics. Considerations on Theory and Methodology*, Constantin Hihor, 206 pages, RAO Publishing House, Bucharest, 2001;
- *The Marketing of Military Supply*, Gheorghe Minculete, 210 pages, Syllvi Publishing House, Bucharest, 2004;
- *Advanced Military Technology. Structural and Fundamental Approaches to the Scientific Command of Military Actions*, Mircea Muresan, Gheorghe Ilie, Vasile Grad, Alexandru Mihalcea, 272 pages, Military Publishing House, Bucharest 1995;
- *Strategic Explorations: Interviews, Article and studies*, Constantin Onisoru, 134 pages, Polirom Publishing House, Iasi;
- *Public Order Management in the New Milenium. Possible solutions*, Tudor Cerapin, Gheorghe Toma, 272 pages, Biotera Publishing House, Bucharest, 2004.



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Fax number: 021-4102072
E-mail: public@unap.ro, www.unap.ro



The National Defence University is the only higher Education Institution in Romania, which trains personnel for Leadership positions in the national defence and for NATO structures. The university, having many scientific research goals, has elaborated numerous and valuable studies referring to security and defence. It plays a very important role in the development of the fundamental military research.

The National Defence University offers many areas for the research and educational process. We can mention "The University Aula", with its 476 seats. It is equipped with amplifiers and all the logistics needed for the educational process. There are also six lecture rooms, each with 90 seats, where the educational activities and the scientific research take place.



Images from informatics and foreign languages laboratories

researchers work here, elaborating studies on security and defence. These studies are used in the educational process by all the structures from the university.

**Center for Defence and Security
 Strategic Studies of
 The National Defence University**

The National Defence University has two more centers for scientific research. Here, the professors, the university lecturers and the PhD candidates work and make scientific research. "The centre for the scientific research on military actions" and the "Centre for scientific research in education management" are also about to be accredited.

These three centers show that our university is concerned with the development of the



Aspects of scientific events

The university has also three IT laboratories, eight foreign languages laboratories, five specialized laboratories. All of them have the necessary utilities to support the education and research activities

The laboratories as well as the other spaces used for education and research have performing computers, and air-conditioning.

There are also two multi-functional areas, with 250 seats

Centre for Defence and Security Strategic Studies is the representative unit for the scientific research. It is also a part of the National Defence University. Many scientific



*Center for Defence and Security Strategic Studies of
 The National Defence University*

scientific research. The centers also publish their own scientific magazines, which are accredited by CNCSIS.



Rector

Gi. mr. prof. Nicolae Uscoi, PhD

Historical Overview of the University

Nicolae Bălcescu Land Forces Academy keeps alive the traditions of the first Officer Military School, founded in Bucharest, on the 13th of June, at George Bibescu's order. The establishment is moved to Sibiu, in September 1949, and starting with 1952, it receives the name of Nicolae Bălcescu. On the 1st of March 1991, Nicolae Bălcescu Infantry Frontier Guard and Chemistry Military Institute is founded, which is to be transformed into Nicolae Bălcescu Land Troops Academy, on the



13th of June 1995. At present, it is functioning as Nicolae Bălcescu Land Forces Academy, an accredited institution, training commanding officers for the land forces.

Faculties and Departments

- 5 Departments (Management, Public Administration and Social Sciences, Technical Sciences, Military Science, General Military Training);
- 3 Sections (Scientific Research and Acquired Experience, General Military Training, Education).

Patrimony

Auditorium with 320 seats, and a total area of 1,299.80 sqm, 10 lecture rooms, and 44 seminar rooms, 34 laboratories and technical rooms with a total area of 1,989 sqm, 3 firing ranges of 434.74 ha, multifunctional sports center, swimming pool of Olympic size, obstacle track, 5 open air sports bases,

mountain training camp of 8,560 sqm, 3 mess halls of 1,500 seats, publishing house and printing house.

Fields in which human resources are trained

1. Military Sciences (majoring "Management of Organization", "Financial Economic Management").
2. Administrative Sciences (majoring: "Public Administration").

Presentation of research activity chart

The Rector leads the scientific research activity, which is hierarchically accomplished by the Pro-Rector, the Scientific Secretary, the Head of the Scientific Research and Acquired Experience Section and Heads of all the other Departments.

The organization-coordination of the research development activity is accomplished by the Scientific Committee of the Senate, consisting in teaching staff, researchers, students, the Head of the Publishing House and of the Library, at the Academic level, and at the Department level, by their respective offices. The activity of the teaching staff, researchers and students is developed individually or with-in groups, in order to run and develop different projects and research activities.

Structures

Research Institutes	0
Research Centers	0
Research Laboratories	4
Multi-user Research Centers	0

Top Priority Research Directions

- setting the scientific basis of the Higher Military Education process of transformation, according to the Bologna Process Requirements and NATO modern armies' officer.
- researching some phenomena specific to the military organization and identifying the means of leader training and leadership enforcement.
- analyzing the globalization phenomena and its influences on the State, National Security and Military order and Education.
- establishing the means of using the e-learning system in the Higher Military Education.

Human Resources

Professors	7
Senior Lecturers	8
Lecturers	22
Assistant Lecturers	31
Teaching Assistant	3
Instructors	29
Research Fellows	4
Administrative Staff	153
Students	1041
of which:	
Undergraduate	1541
Master	0
PhD - full attendance	0
PhD - attendance not required	0



Outstanding Research Infrastructure

Laboratory used for modelling-simulating the military actions at tactical level, consisting of:

- 9 Pentium IV PCs, video projector;
- 1 laptop;
- Internet access;
- Common actions within Defence Academy Consortium and Security Studies institutes, as part of the Partnership for Peace.

E-learning laboratory (advanced distributed learning) consisting of:

- 1 server;
- 20 operating stations- IBM Pentium IV;
- 20 webcams;
- 1 laptop;
- 1 video projector;
- software: LMS-PfP Consortium and Intui-text-SOFT-WIN.

International Scientific Activities (the 10 most important ones)

- The 9th Scientific Communication Session with International participation, Sibiu 25th - 26th of November 2004;
- Annual International Conference for the Christian Cadets, (with the participation of students from England, Germany, France, Poland, Bulgaria, Moldavia, Norway).

Products created/homologated/ capitalized/inventions/Patents (maximum 10 significant products) 1

Ioan Haş, Aurelian Haş, The technique used for stopping and removing the dampness from the wall. Invention, Patent, no.99-01125/2000.

Key role played in certain fields

The University's main concern is to build up military leaders, educators, multi-skilled war fighters, citizens in the service of the Nation. Therefore, the scientific events organized by the Academy focused on the themes regarding management and leadership.

The Academy established the first ECDL centre in Sibiu and in the Romanian Army, on the 25th of October 2002, a centre equipped with 20 PCs, IBM Pentium IV.

The number of papers published in volumes of international scientific conferences with reviewers 721 (10 papers presented at the most prestigious events)

- Nicolae Uscoi, *Senior Officer Education in the 21st Century*, The Reunion of the Defence College Commanders from NATO countries and PfP, Rome, March 2000;
- Nicolae Uscoi, *The Institutional Framework for the Enforcement of the Armed Conflict Law in the Romanian Army*, Comunicare la reuniunea W.G.C.D., Hamburg, martie 2002;
- Alexandru Babos, *Aspects Regarding the Relation between Soviet Military and the Population and Administration of Sibiu*, "Nicolae Balcescu", Land Forces Academy, 2004;
- Mircea Cosma, *The Euro-Atlantic Dimension of University Military Scientific Research*, International Interdisciplinary Scientific Symposium, Petrosani, 15th-16th October, 2004;
- Constantin Telespan, *The Economic Development and the Role of Education within Contemporary Society*, International Scientific Conference, Lucian Blaga University, Sibiu, 2000;
- Ghita Bărsan, *The Fracture Toughness Parameter in Linear Elastic Fracture Mechanics by Using the Conservation of Energy Principle*, the 30th Internationally Attended Scientific Conference of the Military Technical Academy, 6th-7th November 2003, Bucharest;
- Mircea Popa, *A Pattern of Image Cognitive Processing*, the 29th ARA Congress, Ruhr University, Bochum, Germany, 2004;
- L.Tugulea, Simona Miclaus, A. Ionescu, *Chlorophyll as a Suitable Biomaterial for Monitoring the Electromagnetic Influence at Molecular Level*, Abstract Book of the 22nd BEMS Annual Meeting, pp.161-162, Munich, Germany, 9-

- 16 June 2000;
- Florin Petrut, *Motivation-Factor Influencing the Choice for a Military Career*, Labour/ Organization Psychology National Conference, the 4th Edition, Cluj Napoca, April, 2002;
- Sorin Cristea, *Experimental Results Regarding the Reaction of Armour Plates upon Projectile Impact*, the 9th Scientific Communication Session with International Attendance, Land Forces Academy, Sibiu, 2004.

The number of papers published in journals from the main stream of publications 814 (the most cited 10 papers)

- Nicolae Uscoi, *International War and Public International Law*, Humanitarian Law Romanian Magazine, no.5, 2000;
- Nicolae Uscoi, *New Trends and Orientations in the Strategic Studies Field of the Post Cold War Epoch*, Land Forces Academy Bulletin, no.2(16), 2003;
- Ionel Barbulescu, Alexandru Babos, *The Conflict-War-Armed Combat Relationship*, Land Forces Academy Scientific Bulletin, no.2(12), 2000;
- Viorel Ostropel, *Attrition - Romanian Traditional Fighting Means*, Land Forces Academy Magazine, no.2 (22), 2001;
- Mircea Cosma, *Contradictory Evolutions in the Geopolitical and Geostrategical Management of the Future Informational Technological Field*, Land Forces Academy Magazine, no.4 (19), 2000;
- Mihai Neag, *Weight Center of the Force and the Momentum between Concept and Action in the Main Armed Conflicts of the Modern and Contemporary Epoch*;
- Florin Petrut, *Professional Interest in Choosing the Career*, in Modern Military Spirit, no.1/2000; it received Mj. Alexandru Chiapella award, on 23rd July 2001.



ROOMS AND LABORATORIES

The Assembly Hall is a space open to public and didactical activities and it is situated in the D building.



- capacity: 276 seats with detachable tables;
- 1 laptop Pentium IV-2.4 GHz, HDD 40 GB; a future Intranet network is in the project stage;
- 1 video projector M3;
- 1 projector screen;
- 1 amplifier audio system, 4 microphones and 4 sound systems;
- 1 film projection system equipped with 2 device.

The ammunition laboratory is situated in J2 building and it serves for the ammunition



theoretical training.

- capacity: 27 seats with tables for two;
- 1 laptop Pentium IV GHz, HDD 40GB;
- 1 video projector M3;
- 1 projector screen;
- 8 different types of sectioned weapons;
- 8 panels with sectioned ammunition and their functional connections.

Language laboratories: assembly consisting in 3 language rooms, 2 phonic labs, and 2 reference rooms, one being a self access room.

- capacity: 20 seats for each room;
- 1 PC Pentium IV -1.7 GHz, HDD 40GB, for managing the phonic lab;
- ProLang audio video system with the possibility of doubling the number of supervised seats;
- audio video devices for every room.



INTERNATIONAL COOPERATION

Although it does not have its own international cooperation plan, this activity being coordinated by higher echelons, that is the Land Forces General Staff, the Academy makes its own proposals in this field, every year. Therefore, the international cooperation plan includes some activities, which either continue the previous cooperation or establishes new collaborations. Within the Partnership for Peace, both at the level of the Defence Academies Consortium and of the Security Study Institutes, according to a common collaboration programme, different communication sessions, workshops and other different scientific events are organized,

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	670,9	-
2003	-	-
2002	90,00	-
2001	65,00	-
2000	-	-
1999	-	-
1998	0,600	-
1997	0,200	-
1996	-	-
1995	-	-



where our Institution is also represented.

There is also a common mobility programme by means of which the students from the Academy are selected yearly for NATO member countries' military education institutions, either as freshmen for American and Greek Academies, or as graduates for French Application Schools.

INTERNATIONAL AFFILIATIONS

The Academy is a member of the Defence Academic Consortium and Security Studies Institutes within the Partnership for Peace.

Success Stories

1. The modernization of the Higher Military Education and the training of the officers for the Romanian Army's new missions, not only locally, but also internationally speaking, faced the Academy with a new challenge with profound scientific, methodological and praxiologic aspects: conceiving the most rational options meant to meet the battlefield and stability operation requirements. In this respect, we asked for the support of similar institutions from England, France, Germany and USA, of the military foreign counsellor, as well as of the teaching staff and experts from Lucian Blaga University, Sibiu and from National Defence University, Bucharest, so that we could establish some measures necessary in order to make the Romanian Army compatible with other NATO member states armies.

In order to come to proper conclusions and adequate solutions, we have investigated over 620 young officers, as well as other officers with a sound experience in theatres of operations. We have also analysed the candidate selection process, thus investigating the data of over 3,464 candidates for Land Forces Academy.

This complex research activity is part of the activities developed within the research grant on *the fundamentals of the education and training system transformation in building up officers for the Land Forces so as to meet the 21st spectrum of conflict requirements and NATO standards*.

Specific goals are:

- identifying the aspects of current and future military actions;
- building up the 21st century officer model;
- analyzing the education process and establishing the new requirements for the academic curricula;
- setting performance standards for the three dimensions of the educational process: academic training, military training and physical training.

The involvement of some of the most important teaching staff members, scientific researchers and students from the Academy, and not only, suggests the scope and complexity of this project considered to be unique in the Romanian Army.

2. A group of specialists has been created by the teaching staff from the Academy and other education and research institutions all over the country, to investigate the issue of improving the part played by the leaders in the organization. Being conceived and developed on the procedural-organic concept of social processing, whose founder is represented by a member of the teaching staff within the Academy, this study aims at acquiring information about the leader and at building the scientific principles, in order to create a centre of excellence, in the field of leader and leadership. Important data on the developed studies can already be accessed on www.leader.go.ro.



The Assembly Hall



The Ammunition laboratory



Language laboratory



Rector

G.I.a. Prof. Eng. Jan Gavrilă, PhD

Historical Overview of the University

The Military Technical Academy was founded on 15 September 1949 in conformity with Decree no. 371 of 14 September 1949, aiming at "training engineer officers to comply with the technical characteristics of the various services..." Between 1960 and 1990 the military technical higher education was carried out in the Military Technical Academy. The Military Technical Academy was acknowledged by the Romanian Government Decision no. 612/1992, having the status of independent military polytechnic higher



education institution. Famous personalities in the field of higher education and research, in our country taught in this academy. The following are just a few examples: Grigore Moisil, Elie Carafooli, Luca Teodoru, Gh. Sabac, Mihai Ghermanescu, Victor Sahini, Vasile Bianu, Andrei Tugulea.

Faculties and Departments

- The Faculty of Integrated Armament Systems
- The Faculty of Military Electronic and Information Systems

Master and Doctoral Programs

MASTER - military electronic and information systems engineering; integrated armament and ammunition systems engineering; military armoured and wheeled vehicles systems engineering; aircraft systems engineering

Doctoral programs - automatics; aerospace engineering; civil engineering; electrical engineering; electronics and communications engineering; mechanical engineering; industrial engineering; computer sciences.

Patrimony

1 educational pavilion, 4 auditoriums, 102 laboratories, 2 gyms, 1 hostel, 1 medical office, 1 pavilion for practical training, microproduction and prototypes, Chancellor's office, 1 library, 1 aula magna, 1 canteen, 2 meeting halls

Fields in which human resources are trained

- Armament, Missiles and Ammunition Engineering
- Computers and Information Technology
- Engineering
- Geodetics
- Airspace Engineering
- Chemical Engineering
- Civil Engineering
- Electronic Engineering and Telecommunications
- Mechanical Engineering

Presentation of research activity chart

In conformity with the Scientific Research Regulation, scientific research is carried out by professors and researchers organized into interdisciplinary teams within departments, faculties and Centers of Excellence.

The scientific research activity is coordinated by a Scientific Council. Operational management is carried out by the Vice-Chancellor for Education through the project supervisors/managers and through the Education and Scientific Research Division.

Structures

Research Institutes	-
Research Centers	-
Research Laboratories	102
Multi-user Research Centers	-

Top Priority Research Directions

- NATO compatible artillery and infantry armament and ammunitions design.

Human Resources

Professors	29
Senior Lecturers	26
Lecturers	29
Assistant Lecturers	23
Teaching Assistant	2
Research Fellows	4
Administrative Staff	229
Students	750
of which:	
Undergraduate	350
Master	10
PhD - full attendance	0
PhD - attendance not required	390

- Armoured vehicles upgrading
- Military equipment modelling, simulation and testing
- Information security and information warfare
- Unmanned aircraft design and production
- Software design for the aeroelastic calculus in the aeronautic field
- Microwaves technique research
- Security of Internet networks
- Teledetection
- Complex automation of flight control processes
- Non-conventional technologies
- Complex modelling by finite element method
- Modelling and simulation of military actions and logistic activities
- Information technology
- Environment and technologies, micro and nano-technologies
- Technologies for new materials production
- Information protection in communication networks
- Voice and data information security
- Military communication networks management and survey
- New solutions for military equipment preservation

Excellence Centers

- Excellence Center - explosives and ammunition laboratory-CE*LEM*ATM.
- Excellence Center - Modelling simulation and testing of military mechanical equipment MOSITEST.

International Cooperation

- Elaboration of guidelines for ADL architectures desing and implementation, cooperation with the Defence Ministry of The Kingdom of Netherlands
- SOCRATES Program, course Cryptographie et securite informatique, IT Department, INP Toulouse
- SOCRATES Program, course Securite informatique dans e-business, IT Department, ENSIETA Brest
- Research Contract STW-DEL4663/DET5637, Advanced Relocatable Multi-sensor System for Buried Landmine Detection, Delft University of Technology, The Netherlands, Delft, 2001-2003



The number of papers published in ISI-quoted journals

5

(the most cited 10 papers)

- *Effect of Low-Level Laser Radiation on some Rheological Factors in Human Blood: An in Vitro Study*, Sipsean Dan, Adalbert Lucaks, Clinical Journal of Laser Medicine & Surgery, Volume 18, Number 4, pp. 185-196 New York, 2000;
- *Relative Variation to Received Dose of Some Erythrocytic and Leukocytic Indices of Human Blood as a Result of Low-Level Laser Radiation; An in Vitro Study*, Sipsean Dan, Adalbert Lucaks, Clinical Journal of Laser Medicine & Surgery, Volume 19, Number 2, pp. 89-103, New York, 2001;
- *Adaptive Interference Cancellation*, Andrei Gheorghe, Vedinas Ioan, published by IEEE 2001, pp. 73-76, ISBN 86-80135-43-7;
- *An Iterative Way to Determine the Shear Modulus for Unidirectional Long Fibre Reinforced Plates*, Fuiorea Ion, Tiu W., Journal of Composite Materials;
- *A Point of View Regarding the Dynamic Analysis of an Aircraft Structure*, Fuiorea Ion, Stoicescu Mihail, Proceedings of 22nd International Congress of Aero-space Sciences.

The number of papers published in journals from the main streams of publications

183

(the most cited 10 papers)

- *A Layred Approach for the Optical Networks*, Balan Constantin, Romanian Journal of Optoelectronics, vol. 10, Issue 1, June 2002;
- *The Efficiency Analysis of the Methods for Fast Determination of the Periodic Steady State in Nonlinear Dynamic Circuits*,

- Enache Florin, Gavrilă Gheorghe, Constantinescu F., The Bulletin of the Polytechnic Institute, Iasi, 2004, Volume L(LIV), Fasc. 5B, pp. 545-550, ISSN 1223-8139;
- *A Practical Secure Certified E-Mail Scheme*, Patriciu Victor, Transactions on Automatic Control and Computer Science Series, Vol. 49, 2004, The Polytechnic University of Timisoara;
- *Using the Frequency Domain Data to Reconstruct from Projections the Sphere Image*, Anton Lucian, Sbornik Review, Vojenske Akademie v Brno, no. 1/2001, Brno, The Czech Republic, pp. 39-46;
- *The Present Development of the Therapeutic Applications Using Low-Level Laser Radiation*, Sipsean Dan, Romanian Journal of Optoelectronics, ISSN 1453-0600, vol.12, nr. 3, pp.37-43, December 2004;
- *Technical Systems for Research at Mining*, Alecu Lucian, Olaru Gheorghe, Lupoaie Marin, Military Technique Review no. 4/2000;
- *Some Considerations Concerning Pyrotechnic Compositions for Tracers with Infrared and Delayed Trace*, Goga Doru, Rotariu Traian, Ureche Florin, Military Technique Review no. 4/2002;
- *Method for Redundant Links Determination*, Lazar Ionel, Tempea Ion, Mechanisms and Manipulators Review no. 2, 2003;
- *Some Aspects Regarding the Transversal and the Longitudinal Self-Generated Torques within a Special 4wd Military Vehicle*, Marinescu Marin, BJKMF Review no. 3/2000, Bolyai Szemle, Budapest, Hungary, pp. 140-147;
- *The Influence of the Cooperation of the Engine with the Hydroconverter on the Start Up Performances of the TR-85 M1 Tank*, Ciobotaru Ticusor, Automobiles Engineers Review no. 1-2/2000.

(Continued on page 301)

- Stepped Frequency Continuous Wave Radar- research stage -2002-2003
- FP5 Program, Technology Development for Aeroelastic Simulations on Unstructured Grids, cooperation with EADS Germany

In the education and research process the Military Technical Academy cooperates with polytechnic universities, enterprises and scientific research institutes in Romania. There are also established cooperation relations in scientific research, student training and professional training development of professors with famous universities and institutions of 11 countries.

International Scientific Activities (the 10 most important one)

- Internationally Attended Scientific Conference: Modern Technologies in the XXI century, November 2001, November 2003;
- Internationally Attended Scientific Conference: Communications, October 2000, October 2002, June 2004;
- Internationally Attended Students' Scientific Conference: CERC, May 2001, May, 2002, May, 2003, May 2004;
- Internationally Attended Scientific Symposium: Management and Education, Challenges of the XXI century, October 2004.

Products created/homologated/ capitalized / Inventions/Patents (maximum 10 significant products) 32

- Control and command system of commanded ammunition (RELANSIN 2000, prototype);
- Romanian codification system for defense endowment items (SICOR), concept study, in The Sectorial Plan, NATO partnership objective;
- Multilayered Radioabsorbing Material with Electrical and Magnetical Losses, Patent no. 00118154/2003;
- Explosive grenade round, caliber 40x46mm, NATO compatible;
- 9x19mm Parabellum bullet;
- Diazonyfenol initiation explosive (DDNP);
- Welding method for thin metallic plates;
- Manufacturing procedure of diatchil-aminoetilmercaptans;

(Continued from page 300)

The number of papers published in volumes of international scientific conferences with reviewers 1042

(10 papers presented at the most prestigious events)

- *Selected Pseudo-noise Sequences for Spread-Spectrum Communications Systems*, Serbanescu Alexandru, IEEE ICT 2001, 4-7 June 2001, Bucharest;
- *Choosing the Number of Models of the Reference Model Using Multiple Models Adaptive Control System*, Bica Marin, Patriciu V., Podaru V., Proceedings of 3-rd International Carpathian Control Conference ICC'2002, Ostrava, Czech Republic, May 27-30, 2002, pp. 137-142, ISBN 80-248-0089-6;
- *Calibration Procedures of a Stepped Frequency Continuous Wave Radar for Landmines Detection*, Nicolaescu Ioan, Piet van Genderen, Keith Palmer, International Conference on Radar 2003, Australia, pp. 412-417, Radar 2003 Conference Proceedings, ISBN-0-7803-7871-7;
- *Range Resolution and Calibration of an Ultra Wideband Stepped Frequency Continuous Wave Ground Penetrating Radar*, Nicolaescu Ioan, Piet van Genderen, Joost van Heijenoort, International Radar Symposium 2003, Germany, Conference Proceedings, pp. 301-306;
- *Experimental Study of Thinned Array Antennas by Eans of Synthetic Aperture Radar Measurements*, Coman C. I., Nicolaescu Ioan, Lager I. E., Lighthart L. P., European Microwave Week - European Radar Conference - 2004, Amsterdam 2004, Proceedings, pp. 165-168, ISBN 1-58053-994-7;
- *The Optimisation of Reinforced Concrete Demolition*, Lupoaie Marin, Orban Octavian, International Conference: Machine



Building and Technosphere of the XXI Century, Ukraine, Sevastopol 2004;

- *Theoretical and Practical Considerations Concerning the Determination of Infantry Armament Shooting Accuracy*, Nutu Vasile, Postolea Dan, Somolag Pamfil, 11rd International Symposium on Defence Technology, Bolyai Janos Military Technical College, Faculty of Zrinyi Miklos National Defence University, 19-20 April 2004, Budapest, Hungary, CD, ISSN 1416-1443;
- *Some Aspects about the Application of Micro UAV Concept*, Stanciu Virgil, Nechifor Razvan, Boscolianu Mircea, The 3-rd International Conference on Military Techniques of Myklos Zmy Military University, Budapest, Hungary, 2004;
- *Theoretical and Experimental Study Regarding the Diagnosis of the Diesel Engines*, Lespezeanu Ion, Vilau Radu, The 11rd International Symposium on Defence Technology, september 16-17, 2002, Budapest, vol. 2, pp. 130-135, ISSN 1416-1443;
- *Aspects Regarding a Total Quality Management Approach Modeling and the Quality Evaluation Problem in a Military Automobile Manufacturing Enterprise*, Mitrea Minu, International Scientific Conference: The Challenges in the Field of Military Sciences, National Defence University, Budapest, Hungary, 28-29.10.2003

The number of scientific books published by publishing houses acknowledged abroad 2

(maximum 10 significant books)

- *Le traitement du signal sous Matlab. Pratique et applications*, Serbanescu Alexandru, Ed. Hermes, France, 2000, ISBN 2-7462-0105-4;

(Continued on page 302)

Presentation of Laboratories International Cooperations International Affiliations of the University



- Bioptic sighting device;
- Synchronization and reshaping of gum in worn out tires;
- Micro-aircraft with vertical take off based on "Cumulus" start accelerator;
- "Nimbus" Polyvalent mini-aircraft with autonomous flight ;
- ZIMBRU M1 armoured amphibious transporter prototype.

(Continued from page 301)

- *Explosives and Detonations*, Orban Octavian, Dumitrascu Liviu, Ed. Tehnico-Info, Kishinev, 2002, ISBN 9975-63-131-2.

Membership in International Associations

- Members of the Academy of Scientists of Romania
- Members of the Romanian Association for Quality
- Members of the General Association of Engineers in Romania (A.G.I.R)
- Members of the Society of Automobiles Engineers of Romania S.I.A.R.
- Member of the working group on Information Technologies and National Security
- Members of the Romanian Association of Tensometry
- Members of the European Societies of Acoustics
- Members of the American Society of Optoelectronics
- Member of the Science Academy of New York, since 2001
- Member of the Association for Computing Machinery ACM, SUA, since 1997
- Member of the Special Interest Group on Artificial Intelligence SIGART, since 2003
- Member of the "George Marshall" European Center for Security Studies of the US Department of Defense
- Members of the Society of Automobiles Engineers of U.S.A. (SAE International)
- Members of the International Association of Machines Constructors in Ukraine
- Member of the Defense Universities Consortium within the PIP

International Cooperation

- Millersville University, Pennsylvania, USA, July 2000
- Harvard University, Boston, USA, January 2003
- Penn State University, Philadelphia, USA, August 2004

- Royal Military College of Science, Shrivenham, Great Britain, 6 months, 2000
- Technological University of Delft, The Netherlands, research stage, 2002-2003, 2004

"LACEBAT" LABORATORY PRESENTATION

- -Experimental research in the testing evaluation and modernization plan of the Romanian tank TR85 M1;
 - -The new upgradation variant of the Romanian tank imposed carrying out a new set of experiments included in the testing-evaluation plan of this tank;
 - - A complex experiment set including dynamics, mobility, consumption tests has been carried out
- LACEBAT can carry out the following experimental types of research:*





- Dynamics tests for motor vehicles
- Tests to determine fuel consumption, spontaneous consumption included
- Payloads and dimensions measurements
- Engine tests stand
- Noise measurement
- Tensions and tension states measurement
- Measurement of longitudinal forces in the range 0-20 tf
- Moments of torsion measurement
- Angular speeds measurement
- Linear and angular moves measurement
- Acceleration and vibration measurement
- Environment factors measurement (temperature, humidity, atmospheric pressure, wind speed, etc)

Research team: Armoured and Military Vehicles Department,
e-mail: minus.mitrea@mta.ro; [tp://www.mta.ro](http://www.mta.ro)

"POWDERS, EXPLOSIVES AND PYROTECHNIC COMPOSITIONS TESTING" LABORATORY PRESENTATION

The "Powders, explosives and pyrotechnic compositions testing" laboratory is destined for the analysis, evaluation and determination of the physical, chemical, energetic, thermodynamic characteristics, of the safety characteristics (i.e. sensitivity, stability, behaviour at various strains) and performance (i.e. detonation speed, high explosive, working capacity, etc), for explosive materials (powders, propergols, prime explosives or high explosives) being manufactured, in various types of ammunition or ammunition elements, or which are under research development.

The "Powders, explosives and pyrotechnic compositions testing" laboratory is also destined to the manufacturing, testing and evaluation of illuminating pyrotechnic compositions, tracers, signalling with coloured fire, coloured smoke signalling or camouflaging, priming or special pyrotechnic compositions fumigenes.

The laboratory is destined to training activities for practical laboratory activities in the respective specialised technical subjects aiming at studying explosive materials.

The laboratory is destined for practical activities in the following subjects:

- Explosives and Pyrotechnics
- Detonations and Terminal Ballistics

- Practical work: Manufacturing technology and reception of powders, explosives and priming means
- Ballistic Systems
- Munitions and Combat Somponents
- Rocket Propulsion Systems
- Experimentation and Evaluation of Armament, Ammunition and Rocket Systems
- Analysis and Identification of Explosive Materials
- Detonation
- Experimental Methods in the Study of Explosive Systems
- Special Pyrotechnic Systems
- Analysis and Identification Methods of Explosive Materials
- Safe Work Principles for Explosive Materials and Explosive Systems
- Experimental Techniques and Methods used in the Study of explosives and explosive phenomena
- Manufacturing technologies for explosive materials

The laboratory is also destined for carrying out scientific research activities to solve various research themes or projects within:

- the national and international programs of scientific research, based on contracts and cooperation with enterprises outside the Ministry of National Defense or with units in the Ministry of National Defense;
- the scientific research sectorial plan of the Ministry of National Defense;
- the scientific research plan of the Military Technical Academy.



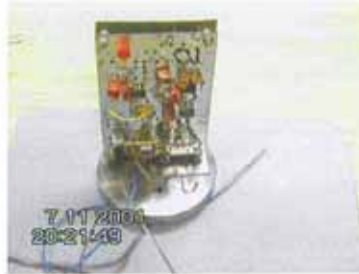
Very wide band Archimede's spiral antenna for warning stations

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	14719,016	31100
2003	14855,781	39000
2002	3969,466	-
2001	4155,190	-
2000	799,038	-
1999	162,177	-
1998	233,200	-
1997	172,173	-
1996	83,900	-
1995	11,080	-



*Magnetic programmer for proximity
and high explosive fuses*



Processing plate for aircraft bomb fuse



Time fuse for 120mm reactive projectile

Programmer and time fuse

The head electronic high explosive fuse with total lock is destined for the equipment of the 122 mm reactive artillery ammunition fuse with combat components with cargo type submunitions. The fuse provides a high precision of the blocking time on the trajectory, temporization being achieved by a quartz guided circuit. In addition guiding is magnetically made without ohmic contact, which gives the final product more exploitation safety and cuts down additional expenses due to tightening, in case the programming is mechanic or by wire.

In spite of the fact that this has not yet been expressed as an urgent request, the fuse programmer was designed under the stipulations of STANAG-4369, which regulates the magnetic programming protocol of the NATO fuses.

Signal processing plate for radio proximity fuse for aircraft bombs

The electronic module provides selection of the signals provided by the radio sensor both in Doppler frequency as well as taking into consideration their increase of speed and duration, ensuring the independence of the actuation distance of the K parameter, which determines the bigger margins of this distance in the case of the classical radio Doppler fuses.



THE NATIONAL INTELLIGENCE ACADEMY OF BUCHAREST



Rector



Senior Lect.
Traian Liteanu, PhD

Historical Overview of the University

The National Intelligence Academy is a university education military institution subordinated to the Romanian Intelligence Service; it functions under the provisions of the Romanian Constitution, of Art. no.31 of Law 14/1992 regarding the organisation and functioning of the R. I. S., of Government Decision no. 952/2000 as well as of the Education Law. According to the provisions of

investments, the material resources of the Academy are permanently adjusted to the latest methodological trends. The academy campus is comprised of 6 buildings with a total area of 10.000 sqm including 3 hostels (500 beds); library; publishing and printing house; entertainment hall; canteen - restaurant; tennis court; gym; football field;

Fields in which human resources are trained

Military studies and intelligence.

Presentation of research activity chart

The scientific research at the National Intelligence Academy is organised according to the provisions of its own Scientific Research Regulations, approved by the Senate. They require that the scientific research be organised in chairs, departments, research laboratories and coordinated by the Education and scientific coordination unit, subordinated to the Senate.



these acts, the organisation of the N.I.A. is specific to higher military education and is based on the principles of autonomy.

Faculties and Departments

- Faculty of the Intelligence;
- Intelligence Department;
- Foreign Languages Department.

Master and Doctoral Programs

MASTER:

- One Master program in international security -organised by the faculty - „Management of the Intelligence for National Security“;
- Two postgraduate studies: The Superior College for National Security; National Security Management.

Patrimony

The patrimony of the N.I.A. corresponds to the specific standards of modern education. As performance requires major

Structures

Research Institutes	0
Research Centers	0
Research Laboratories	3
Multi-user Research Centers	0

Top Priority Research Directions

The two main strategic goals are:
1. promoting excellence in scientific research on fundamental issues of the security culture in Romania; 2. continuing and developing relationships with the civil society and civic academic research areas by implementing a programme for the promotion of security culture and by producing a series of research papers on the related topic.

Human Resources

Professors	10
Senior Lecturers	10
Lecturers	14
Assistant Lecturers	4
Teaching Assistant	2
Research Fellows	2
Administrative Staff	125
Students	490
of which:	
Undergraduate	130
Master	360
PhD - full attendance	0
PhD - attendance not required	0

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Rector

G. Mr. dr. Constantin Zaharia, PhD

Historical Overview of the University

On April 1st 1912, the Military Flight School was founded at Cotroceni.

In the summer of 1918, the Military Flight School was moved to Tecuci and renamed the 4th Aeronautics Training Group. At the end of 1940, the 4th Aeronautics Training Group was transferred to Zilistea-Boboc and unified with the Air Force Training School from Buzau.



In 1953, the "Aurel Vlaicu" Air Force Officer School was created to Tecuci. In June 1958 the school was relocated on the Boboc-Buzau airfield, and on December 31st 1961 it was renamed as the "Aurel Vlaicu" Higher Military School for Air Force Officers, thus becoming a higher education military institution of 4 years of study.

In 1991 the "Aurel Vlaicu" Air Force Military School was transformed into the "Aurel Vlaicu" Military Air Force Institute.

Simultaneously, in 1939 the Military School for Active Antiaircraft Artillery Officers was created to Bucharest. On September 1st 1948 the school was moved to Brasov.

In 1952, the Military School for Radar Officers was created to Sibiu. In May 1953 the school was transferred to Brasov and incorporated by the Antiaircraft Defense Military School. In 1995, of the three specialities above mentioned, and with their own structures, the Air Force and Antiaircraft Defense Academy was formed. The new institution assumed the role of training officers of three specialities: air force, artillery and antiaircraft missiles, and radar. In accordance with the 294/16.06.1997 Governmental Decision issued by the Minister of Education and Research, the academy was authorized to function temporarily.

On August 3rd 2000 the institution's name was changed to the "Henri Coanda" Air Force Academy. In accordance with the 410/2002 Governmental Decision, the "Henri Coanda" Air Force Academy received academic accreditation for the "Management of Organization" speciality.

Patrimony

- Appropriate space for learning and studying (classrooms for courses and seminars, lecture rooms) with a total surface of 1899,25 sm, and a total capacity of 1697 seats;
- Laboratories, speciality rooms and offices with a total surface of 2837,25 sm;
- Fire ranges, gymnasium, sports field with a total surface of 6190 sm.;
- A university library.



Fields in which human resources are trained

- section: Military Science;
- speciality: Organization Management.

Presentation of research activity chart

The scientific research activity is organized on two levels: the Academy level (on the basis of the annual scientific research planning approved by the Senate) and the department level (on the basis of the scientific research planning specific to each department).

Top Priority Research Directions

The scientific research is based upon the development of the logistics, as well as the studies and research activities in the field of air space and military techniques management.

Human Resources

Professors	3
Senior Lecturers	5
Lecturers	8
Assistant Lecturers	3
Teaching Assistant	-
Instructors	20
Research Fellows	-
Administrative Staff	127
Students	253
of which:	
Undergraduate	-
Master	-
PhD - full attendance	-
PhD attendance not required	18



The number of papers published in journals from the main stream of publications

24

(the most cited 10 papers)

- *Challenges regarding the Reorganization of the Higher Military Educational System*, Maj. General. Professor PhD Constantin Zaharia;
- *The Geopolity of the International Contemporary Order*, col. assist. prof. PhD Vasile Marin;
- *Determining the Graduate's Personality at the "Henri Coandă" Air Force Academy. The Air Force Teacher's Communicative Ability and its Role in the Educational Process of the Future Officer*, col. assist. prof. PhD Vasile Marin;
- *Organisational Systems of Production in highly developed countries*, col. PhD assist. prof. dipl. engineer Stelian Pânzaru;
- *A Necessary Change: from the Strategic to the Operational Management of Production*, col. assist. prof. PhD, dipl. engineer Stelian Pânzaru;
- *Superconducting Materials: Results and Properties*, prof. PhD, dipl. engineer Ion Dinescu;
- *Specific Technologies of Superconducting Materials*, prof. PhD, dipl. engineer Ion Dinescu;

- *Improving the Methods and Instruments for the Individual Performance Evaluation of the Employees Working in the Army*, assist. prof. PhD Daniela Belu;
- *Analysing the Managerial Creativity Devoted to the Modern and European Development of Brasov*, assist. prof. PhD Daniela Belu;
- *A Strong Typology in a Convex Local Space*, lecturer Gheorghe Amurantei;

The number of papers published in volumes of international scientific conferences with reviewers

15

(10 papers presented at the most prestigious events)

- *Some Considerations Concerning the Management of the Internal Crises*, Maj. General. Professor. PhD Constantin Zaharia;
- *Crisis as a Geopolitical phenomenon. The Implications of the Image in the Background of the Geopolitical Crisis*, col. assist. prof. PhD Vasile Marin;
- *Terrorism as a Major Threat for the International Security*, col. assist. prof. PhD Vasile Marin;
- *A Study Concerning Modern Technologies Utilized in Aeronautics*, col. PhD assist. prof. dipl. engineer Stelian Pânzaru;

- *Some aspects about the Influence of the Lubricant on the Friction in the Bearings obtained from the Powders*, prof. PhD, dipl. engineer Ion Dinescu;
- *The Instrument of Measuring the Emotional Intelligence in the Communication with the Students, a Mere Necessity in Completing the Assessment Record for the University Teaching Staff*, assist. prof. PhD Daniela Belu;
- *The Reform of the Romanian Armed Forces and the Integration Politics in View of the Theory of the Fire Circles or the Enemy as a System*, assist. prof. PhD Daniela Belu;
- *Numerical Method to Determine the Pressures in a Hidro-Dinamic Bearing*, prof. PhD Stefan Nedelcu, assist. Prof. PhD engineer Marian Pearsica;
- *The Perfection of the Blowfish Algorithm Utilized in the Cryptic Images*, assist. Prof. PhD engineer Marian Pearsica, C. Racuciu;
- *The Calculation of the Performances of a Wind Turbine which Functions on the Bearing Principle of an Aerodynamic Profile*, prof. PhD Stefan Nedelcu, lecturer Mihaela Opreacu.





Private Universities





Rector

Prof. Aurelian Bondrea, PhD

Historical Overview of the University

The founding act of the Spiru Haret University was drawn up on January 19, 1991, within the Tomorrow's Romania Foundation (set up according to Law 21/1924) and validated by Civil Sentence No 109 of 12.02.1994 (Bucharest Sector 1 Court of Justice). The University was accredited by Law No 443 of 5 July 2002 on the founding of the Bucharest Spiru Haret University, published in the Official Monitor of Romania No 491 of 9 July 2002, as a private higher education institution



with legal status. The University is composed of 28 faculties with 39 specialisations, of which 14 are accredited. Starting with 2003, it also organises master education in 12 faculties, with 30 programs.

Faculties and Departments

- Faculties = 28 with 39 specialisations:
 - Law (Law);
 - Financial Accounting Management (Accounting and Management Informatics);
 - Marketing and Foreign Trade (Marketing);
 - Finance and Banks (Finance and Banks)
 - Sociology-Psychology (Sociology-Psychology);
 - Foreign Languages and Literatures (Foreign language A - foreign language B);
 - Romanian Language and Literature (Romanian language and literature - foreign language and literature);
 - Philosophy and Journalism (Philosophy and Journalism);
 - Physical Training and Sport (Physical Training and Sport, Physical Training and Sport Management, Kinetotherapy);

- Veterinary Medicine (Veterinary Medicine);
 - International Relations and European Studies (International Relations and European Studies);
 - Geography (Geography);
 - History (History);
 - Mathematics-Informatics (Mathematics-Informatics, Informatics);
 - Architecture (Architecture);
 - Music (Music Pedagogy);
 - Theatre (Theatre Spectacle Arts);
 - Law - Constanta (Law, Public Administration);
 - Accounting and Finance - Constanta (Accounting and Management Informatics, Finance and Banks, Management);
 - Management - Brasov (Management, Accounting and Management Informatics);
 - Legal and Administrative Sciences - Brasov (Public Administration, Law);
 - Psychology-Pedagogy - Brasov (Psychology-Pedagogy);
 - Accounting and Finance - Craiova (Accounting and Management Informatics, Finance and Banks);
 - Law - Craiova (Law);
 - Accounting and Finance - Râmnicu Vâlcea (Accounting and Management Informatics, Finance and Banks);
 - Law - Râmnicu Vâlcea (Law);
 - Accounting and Finance - Câmpulung (Accounting and Management Informatics, Finance and Banks);
 - Finance and Banks - Blaj (Finance and Banks);
- Departments = 3:
 - Department for Teaching Staff Training;
 - Department for Distance Learning;
 - Department of Scientific Research.

Master and Doctoral Programs

MASTER

- Faculty of Law: Community law; Material Community law; Penal sciences; Criminal trial probation; Tax law in Community context.
- Sociology-Psychology: Organisational and human resources management; Analysis and management of conflicts in changing societies; Judicial psychology and victimology; Family and society; Inter-ethnic relations, ethnicity and nationalism; Social and cultural change.
- Foreign Languages and Literatures: Comparative linguistics and contrastive analysis; Specialised translation and terminological documentation technique; Modernity in European literature and culture; North American and Hispanic American literatures;

Human Resources

Professors	181
Senior Lecturers	159
Lecturers	273
Assistant Lecturers	278
Teaching Assistant	58
Research Fellows	13
Administrative Staff	481
Students	55308
of which:	
Undergraduate	54616
Master	692
PhD - full attendance	0
PhD - attendance not required	0



- *Financial Accounting Management*: Computer - based calculation of costs; Harmonised accounting; Financial services, products and tools in the context of European integration;

- *Marketing and Foreign Trade*: Marketing in the context of European integration;

- *Physical Training and Sport*: Management of sport activities;

- *Philosophy and Journalism*: Mass-media and communication; Fundamental issues of contemporary philosophy;

- *Music*: Musical art;

- *Geography*: Geography of tourism, tourism and regional integration; Geographic risks and territorial planning;

- *Veterinary Medicine*: Pathology of pet animals; Hygiene and control of food of animal origin;

- *Management* - (Brasov): European dimension of organisational management;

- *Accounting and Finance* (Constanta): Harmonised accounting.

Patrimony

Course rooms (no./total area): 55/ 7545 sq m; Seminar rooms: 177/6163 sq m; Laboratories: 48/ 2153 sq m; Hostels: 3/ 3520 sq m; Libraries: 1117 sq m; Canteen-restaurant - Brasov: 17598 sq m; University club with canteen: 8500 sq m; Sports base: 24732 sq m; Printing house: 1109 sq m; TV station: 1100 sq m.

Fields in which human resources are trained

Mathematics, Informatics, Geography, Philosophy - Journalism, Communication Sciences, History, Sociology, Psychology, Pedagogy, International Relations and European Studies, Administrative Sciences, Law, Finance, Accounting, Management, Marketing, Veterinary Medicine, Architecture, Music, Theatre, Physical Culture and Sport.

Presentation of research activity chart

Activity chart: department, chairs, circles, teams, laboratories, individual activities.

Structures

Research Institutes	4
Research Centres	10
Research Laboratories	40
Multi-user Research Centres	-

The number of papers published in ISI - quoted journals 262

(the most cited 10 papers)

- Constantin Buchet, *Romania between the Totalitarian Blocus and the Democratic Axis, 1944-1947*, in "Totalitarian Archives", 2002;
- Stefan Ștefănescu, "A Time for Asserting the European Conscience of the Romanian People", *Stephen the Great, Brilliant Reference Point in Romanian History*, in "Academica", 2004;
- Gheorghe Răboacă, *Employment in Europe - central and Eastern Europe* in Employment Observatory, 1994-1995;
- Mihai Ciocolu and Luminița Serbulescu, *Tanulmány a technológiai paraméterek változása a rotoros gépeken font fonalak mindségére*, in Magyar Textiltechnika, 1995, Ungaria;
- Claudia Buruliună, "Social Discontent with Political Life in 2003 - the Attitude of the Population Who Will Vote in 2004", in "Journal of Political Sciences and International Relations", 2004;
- Cristian Pantelimon, "Europe between Context and Opportunity", *From Antique to Modern Elite*, in "Journal of Political Sciences and International Relations", 2004;
- Viorina Braga, articles published in the journals: "Company Management and Accounting" and "Economic Tribune";
- Ion Toma, "The Proper Noun between the Linguistic Norm and the Literary Norm", in "Onomastics Studies and Researches", 2002;
- Mihail Andreescu, "European Totalitarian Regimes", in "History Studies and Articles", 2000;
- Doru Bratu, "The Secret Political Police Was Supervising the Romanian Historical Society", in "History Studies and Articles", 2004.

The number of papers published in journals from the main stream of publications 7761

(the most cited 10 papers)

- Cristina Victoria Ochinciu, "The Concept of Sustainable Development in Architecture. Integrated

Design", Ion Mincu University Publishing House, Bucharest, 2002;

- Tudorel Buloi, "University Paper on Judicial Psychology", Phobos Publishing House, Bucharest, 2003;
- Aurel Bondrea, "Romania at the Beginning of the 21st Century; the State of the Nation 2004", 2004, Tomorrow's Romania Foundation Publishing House;
- Corneliu Turianu, "Immunity in Romanian law", *The Juridical Nature and Effects of Revoking the Conditional Pardon of a Penalty with Conditional Suspension of Execution*, in "Law";
- Grigore Posa, *The relief of Romania, as a Theme in Geographical Research* (Geoforum, London);
- A. Cioacă, Mihaela Dinu, *Pliocene-Quaternary Evolution in the contact area between Brașov Depression and the surrounding mountains (Romania)*, Torino, Italia;
- Narcis Zărnescu, *European Integration in "Romanian Academy Journal"*, 2000, Timisoara;
- Sofia Coman, T. Coman, T. Petruț, *Aspects of the evolutive cycle and histological modifications in the experimental infection with Trichinella spiralis*, 2002;
- Ruxandra Dungaiciu, *Neoliberalism in Eastern Europe and EU Integration. A societal security approach*, Conferința ASEN, Londra, 2004; "Process of decentralization in Eastern Europe. The case of Romania", Israel, 2004;
- Virgil Constantinescu, "Cultural Interfaces in a Multi-Ethnic Area", Vienna, 2004.

The number of papers published in volumes of international scientific conferences with reviewers 2379

(10 papers presented at the most prestigious events)

- Fănel Iacobescu, *Quality System and Critical Processes Analysis as Drivers for Change in the Romanian Universities*, Greece, 2003;

(Continued on page 315)



Top Priority Research Directions

General objectives: to support the country's economic and social development; integration into international research, development of human resources for research.

Directions:

- Study of the geographic environment of development regions;
- Assimilation of the Acquis Communautaire in the juridical and economic fields;
- Modelling and programming studies with a view to business optimisation;
- Romanian economy against the background of sustainable development;
- Counties socio-economic development strategy;
- Physical training and sport in the context of EU integration;
- Use of laser in the therapy of some animal diseases;
- Rural development in architecture;
- Mathematic modelling of economic systems by means of the Petri networks;
- Mathematic modelling of computer networks;
- Data warehousing, data mining;
- Geographic study of underprivileged areas in Romania;
- Studies on the cadastre of protected areas in Romania;
- Mountainology in the Carpathians;
- Studies on development gaps between Romanian regions;
- Evaluation of economic strengths and weaknesses in order to outline priorities in fundamental and applicative research;
- Environment studies to support territorial planning at regional, county or commune level;
- Development of courses and papers.

Outstanding Research Infrastructure

Research microscope with programme of morphometers and statistical analysis, valuable at national level and competitive at international level.

International Cooperation

The University is a member of the University Alliance for Democracy, which includes 150 universities, annually participating in its reunions. Spiru Haret University has concluded scientific

(Continued from page 314)

- Nicolae Postolache, "The Value System of Physical Culture", in The Fourth Seminar on the History of Sport and Culture, Italy, 1999;
- Ioan Rojca, *Man as a Basis of Intercultural Communication* in "Value, Culture and Communication", Bucharest, 2004;
- Pamfil Nichitelea, Gh. I. Brătianu, *philosoph of the History*, in "Proceedings, The 25th Congress of the American Romanian Academy of Arts and Sciences, Cleveland, Ohio, USA;
- Mihaela Dinu, A. Cioacă, *Contribution to the Romanian geomorphic study of the environment*, The 5th Conference on Geomorphology, Tokyo, 2001;
- Liliana Guran-Nica, *Current programmes and projects. Related to the Development of Rural Infra-structure* in the volume "Sustainable Development for Rural Romania. Workshop Proceedings", Leicester University, 2004;
- Mircea Negru, *An introduction to the study of wheel-made native pottery from Roman Dacia*, Abingdon, 2000;
- Domnița Tomescu, *Les suffixes anthroponymiques Roumains*, Niemeyer, 2001; "Contributions de l'anthroponymie a l'etymologie des formes lexicales roumaines", Santiago de Compostela, 2002;
- Mihai Stroe, *Man's image and God's image in the Works of Meyrink, Kubin, Novalis, Blake*, International Conference, Vienna, 2001;
- Gheorghe Răboacă, *National Report for the World Conference on Women*, 1995; "Report on social development in Romania - prepared for world conference on social development", Copenhagen, 1995.

The number of scientific books published by publishing houses acknowledged abroad

2189

(maximum 10 significant books)

- Ion Popescu, A. Aurelian, Mădălina Constantinescu, "Globalisation - Myth and Reality", "Sustainable Development from the Romanian Perspective", "The Community of European States, an Alternative to the Challenges of the 21st Century", Economic Publishing House, Bucharest, 2004;
- Pamfil Nichitelea, "Gh. I. Brătianu, Philosopher of History", Litera International Publishing House, Chisinau, 2003;
- Grigore Posea, N. Popescu, M. Ielenicz, "The Relief of Romania", Scientific Publishing House, awarded the Romanian Academy Award;
- Ion Zăvoianu, "The Morphometry of Hydrographic Basins", Academy Publishing House, given the Romanian Academy Award;
- Stefan Ștefănescu, Ioan Scurtu, Gheorghe Zbucnea, "The History of the Romanian People", vol. III, VIII, VII, Romanian Academy, 2001, 2003;
- Ion Scurtu, "The History of the Romanian People during the Four Kings", Bucharest, Encyclopedic Publishing House, 2004;
- Ion Toma, Domnița Tomescu, Elena Silvestru, "Toponymic Dictionary of Romania. Oltena", Craiova, 1998-2001;
- Eugenia Zamfira Mihail, "Romanian Language Documents Published in Bessarabia 1812-1830", Romanian Academy Publishing House, 1994;
- George Guțu, Karl Kurt Klein, *Leben-Werk-Wirkung*, Munchen, 2001;
- I. Popescu, A. Bondrea, A. Constantinescu, "Globalisation - Myth and Reality", Economic Publishing House, 2004.

and cultural collaboration partnerships with similar institutions from USA, Greece, Japan, France, Israel. It attended the World Education Fair (Lisbon, 2003) and the Middle East Education Fair (Beirut, 2004). In 2004, the title of Doctor Honoris Causa was awarded to His Sanctity Pope John Paul the Second.



International Scientific Activities
(the 10 most important ones)

- Symposium of Romanian-Polish History: "Romania and Poland in the Summer of 1944, Parallel Destinies", Bucharest, Nov. 2004;
- The International Conference "Results of Recent Archaeological Researches on the History of the Roman Empire", Bucharest, October 2004;
- The International Session of Scientific Communications "Theoretical and Practical Issues of the Transition towards a Market Economy", Râmnicu Vâlcea, 2001;
- Romanian-French Symposium on the Reform of European Higher Education;
- "Theoretical and Practical Issues of the Implementation of Community Law in Romania", Constanta, 2003;
- "Juridical and Practical Issues of the Current European Union Accession", Constanta, 2004;
- "Romania's Economic Development with a view to EU Accession", Constanta, 2004.

**Products created/homologated/
capitalized/Inventions/Patents**
(maximum 10 significant products) **100**

- Constantin CIOTEI, Cristina CIOBANU, Carmen ȘTEFANESCU, "The Business Climate at Territorial Level", study published in the journal "Economic Issues", 2004;
- Constantin CIOTEI, "Public Finance in Romania", Expert Publishing House, 2003;
- Iosefina MOROȘAN, "Economic - Financial Analysis. Techniques and Methods", Tomorrow's Romania Foundation Publishing House, 2003;
- Petru STOIANOV, "Knots and Signs, Concert Music for Instrumental Ensemble";
- Petru STOIANOV, "Heteroplasmia", awarded at the APAR (Association for the Peace of Religions) International Sacred Creation Contest;
- Maia CIOBANU, "Concert for Violin and Orchestra"; "Invisible String", "Diary '99";
- Sorin LERESCU, "Moments for String Orchestra", 2001; "Austral for Solo Clarinet", 2001; "Fourth Symphony with Organ", 2002.

Presentation of Laboratories

Environment Laboratory
(Centre of Environment Studies and
Researches - Geography)

The laboratory was created within the Geography Faculty by combining the scientific research activity of the teaching staff with that of the students. It is a complex laboratory made up of a number of laboratories focused on each element of the geographic environment: the Central Environment Laboratory (equipped with 5 high-performing computers, a scanner, GPS and an adjacent printer), the Geology Laboratory (equipped with a petrographic sampling kit, 3 polarising microscopes, Palmy and binocular, geological field magnifying glasses and compasses), the Geomorphology Laboratory (separator with granulometric sieves, paper set and geomorphological profiles of the main relief levels and units), the Pedology Laboratory (soil samples and profiles for comparisons), the Climate (a meteorological box, termographs, higo-meters, a limnigraph) and Biogeography Laboratory (sheets and sets of maps and of landscapes within the country and from different geographic regions of the world), the Population and Settlement Geography Laboratory (it carries out studies on the social and economic issues of the population and especially on the settlements, mainly the rural and touristic ones). The studies are related to local and regional environ-

ment analyses, hazard phenomena, natural reservations, especially national parks etc.

Morphology Research Laboratory
(Veterinary Medicine)

The laboratory carries out scientific research activities foreseen in the research department's plan - the "Brotech" Programme".

It has addressed topics concerning "The Use of Small-Power Radiations in Diseases of Soft and Hard Animal Tissues", issues on the morphology and morphopathology of the effects of laser radiations foreseen in the Research Contract 3275/1.10.2003 signed between MEC (Ministry of Education and Research) and the Spiru Haret University, with a value of 2.153 million ROL. In the same laboratory, studies of normal morphology, comparative morphology and embryology are carried out.



Key Role Played in Certain Fields

Success Stories

International Affiliations of the University



The laboratory is equipped with the logistics necessary for research in morphological fields: research microscope with morphometry programme, computer image capturing and mathematical processing of histological structures; research microscope which enables observation under optic light and under ultraviolet rays for fluorescence; specific laboratory equipment for histological pieces; high performance research microtomes for histological sections; high-performing computers for computer editing, scanner, Xerox machine etc

Key role played in certain fields

Univ. Prof. Dr. Eng. Mircea JEFLEA - founder and editor of the scientific magazine ROMANIAN JOURNAL OF ENGINEERING (ISSN 1454 - 0142)

Prof. Dr. A. CIOACA - was invited as a professor to the Sophia Antipolis University of Nice, France, in order to give the course *Natural Hazards and Geographic Risks* to the students and candidates to a master's and Ph.D degree of the Science and Culture Faculty, the Geography Department.



International Affiliations of the University

Success Stories

Gr. POSEA, N. POPESCU, M. IELENICZ (1974), *The Relief of Romania*, 483 pages, Scientific Publishing House, vast paper, coordinated by Prof. Dr. Grigore Posea and awarded by the Romanian Academy (1974). It receives international recognition (France, Canada, Belgium) as it is for the first time that Romania's relief development is dealt with from a global perspective. This paper, which the

- Univ. Prof. Dr. Eng. Mircea JEFLEA - member of the *Academy of Sciences in New York - USA*;
- Univ. Prof. Dr. Eng. Mircea JEFLEA - member of the *International Association for Conservation of Natural Resources and Energy - New York, USA*;
- Univ. Prof. Dr. Ion IORDAN - member of the *Commission for Administrative-Territorial Units within UIG (International Geographic Union)*;
- Univ. Prof. Dr. Ion ZAVOIANU - member of the *International Association for Landscape Studies (AISL)*, with its headquarters in Canada;
- Univ. Prof. Dr. Adrian CIOACA - member of the *International Association of Geomorphologists (AIG)*, with its headquarters in Italy;
- Lecturer Dr. Iulica VADUVA - member of the *International Association of Climatologists (AIC)*, with its headquarters in France;
- Univ. Prof. Dr. Ion TOMA and Univ. Prof. Dr. Domnica TOMESCU - members of the *International Onomastics Association - PatRom (Patronymica Romanica)*;
- Univ. Prof. Dr. Mihail ZAMFIRA - Romania's representative in the Scientific Council, *Association Internationale d'Etnographie et Folklore*;
- Univ. Reader Dr. Daniela Elena STEFANESCU - member of the *Association of Balkan Statisticians*;
- Univ. Prof. Dr. Rodica LOCUSTEANU - member of the *Societa Linguistica Italiana (SLI)*;
- Univ. Lect. Dr. Mihai STROE and Univ. Lect. Dr. Sorin TOMA - members of the *Romanian Society of Germanists and of the European Society for the Study of English*;
- Univ. Lect. Dr. George VOLCEANOV and Univ. Lect. Dr. Oana GODEANU - members of the *European Society for the Study of English*;
- Univ. Prof. Dr. Marin POPA - member of the *IEEE (Institute of Electrical and Electronic Engineers) Computer Society* and of the journal *"Association for Computing Machinery (ACM)"*;
- Univ. Prof. Dr. HC Victor GIULEANU - Doctor HC of the *International University Federation - Missouri (USA)*;
- Univ. Reader Dr. Maia CIOBANU - member of the *International Association of Women Musicians and of the International Association of Computer Music*.

author had considered necessary from the very beginnings of his career, immediately supports the idea that the Carpatho-Danubiano-Pontic relief is a unitary system. Similarly, starting from this system, The Map of Romania's Relief Units (1984, in collaboration with L. Badea) managed to rank by unitary criteria over 1000 territorial units and sub-units, which represent the basis of a system for storing the different phenomena that have an impact on agricultural, forestry, construction works etc.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	3113.83	-
2003	2820.6	-
2002	582.4	-
2001	591	-
2000	2469.44	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Rector fondator

Prof. Momolo Luburici, PhD

Historical Overview of the University

"Dimitrie Cantemir" Christian University was founded by the "Dimitrie Cantemir" Cultural Association, according to Law No. 21/1924. The Founding and running of the "Dimitrie Cantemir" Christian University is legally based on the provisions of the Constitution, the Civil Sentence No. 172/1991 of the

of the law market economy; 10. Penal and criminal law.

Doctoral Programs - "Dimitrie Cantemir" Christian University professors coordinate PhD activities in various state universities.

Patrimony

10 main buildings covering 32753 sqm, 171 classrooms, two indoor gyms, an assembly hall - 500 seats, 2 hostels / 220 places, 2 copy centres, 6 libraries with reading-room.

Fields in which human resources are trained

1. Economic Sciences;
2. Law;
3. Humanities;
4. Natural Sciences;
5. Social and Political Sciences.



1st District Law Court of Bucharest, Law No. 88/1993 and the HGR No. 568/1995. "Dimitrie Cantemir" Christian University was founded by the Law No. 238/April 23 2002 as a non-profit higher education legal entity institution and it is part of the educational system.

Presentation of research activity chart

The Research Work Centre of the "Dimitrie Cantemir" Christian University was founded and approved by the The University Senate in April 1997, with the aim of running the entire activity of the research work of the 14 faculties from Bhucarest, Cluj-Napoca, Timisoara, Sibiu, Brasov and Constanta. The Research Work Centre is run by the Research Board, reporting to the University Senate. The actual management is ensured by the vice-President responsible for the research work activity - the head of the research department.

Faculties and Departments

- 14 faculties: 7 faculties in Bucharest, 2 faculties in Cluj-Napoca, 2 faculties in Brasov, one faculty in Sibiu and one in Timisoara (Tourist and Commercial Management, International Economic Relationships, Foreign Languages and Literatures, History, Political Sciences, Law and Administration).

Structures

Research Institutes	0
Research Centers	6
Research Laboratories	20
Multi-user Research Centers	0

Master and Doctoral Programs

MASTER - 1. European Integration; 2. International and Community law; 3. Business management in tourism; 4. Marketing and business negotiation; 5. Romanian political parties - foundation, development and activity; 6. Agro-tourism and eco-tourism; 7. Sustainable regional tourism organization and development; 8. Applied hydrology and the quality of environment; 9. Legal mechanisms

Top Priority Research Directions

The strategic objective of the research work activity is representend by the promotion of performance in the research work process, to convey and use the results to increase quality in the educational process.

Human Resources

Professors	54
Senior Lecturers	35
Lecturers	117
Assistant Lecturers	76
Teaching Assistant	43
Research Fellows	35
Administrative Staff	222
Students	16999
of which:	
Undergraduate	16143
Master	856
PhD - full attendance	0
PhD - attendance not required	0



Outstanding Research Infrastructure

The metropolitan network is made up of 440 computers, of which 9 servers, located in 6 buildings of Bucharest, Constanta, Timisoara, Brasov, Sibiu and Cluj-Napoca, having optical fibre and ADSL with a speed of transmission of 8 Mb/s. The guaranteed international connection (internet) is of 512 kb/s.

International Cooperation

- Convention of cooperation between CCIA Timisoara and the "Dimitrie Cantemir" Christian University and "L'ecole superieure de gestion et de Management", GIOP France, October 29, 2002
- The Scientific, Educational and Cultural Agreement concluded on the 13th of July 1999 between the University of Trieste and the "Dimitrie Cantemir" Christian University of Bucharest.

International Scientific Activities (the 10 most important ones)

- The International Scientific Session "Dimitrie Cantemir", an outstanding personality of European Culture - 330 years of his birth anniversary, Bucharest, 2003;
- The commemorative International Scientific Session "Stephan, the Great and Saint Prince - 500 years commemoration", Bucharest, 2004;
- The International Scientific Session "The European Constitution - a landmark for the future of Europe", Bucharest, 2003;
- The 4th Italian-Romanian debate on: "Comparative geographical approaches Friuli-Venezia and Carpato-Danubiano-Pontica", University of Trieste, June 2000;
- The 5th Italian-Romanian debate on economic geography: "Comparative geographical approaches: The Danube Delta and The Romanian Black Sea Coast & Pad Delta and Northern Adriatic Sea Coast", Sibiu, Tulcea, Constanta, Romania, June 26, July 3, 2001;
- The 6th Italian-Romanian debate on human and economic geography: "Friuli-Venice-Giulia as a region of transit and settlement

The number of papers published in ISI - quoted journals 5

(the most cited 10 papers)

- "Analysis of forged signatures on paintings and drawings", Lucian Ionescu, Forensic Science International, vol. 136, 2003;
- "Problematyka dowodu z ekspertyzy dokumentow", Lucian Ionescu, Wroclaw, 2002;
- "Analysis of variable signature with special sequence on medicated people's handwriting", Lucian Ionescu, Documents various specification, Wroclaw, nr. 1/2000;
- "The legal bail in the Romanian law system (I)", Florin Ciutacu, The Private Law Review, Kishinev;
- "The legal bail in the Romanian law system (II)", Florin Ciutacu, The Private Law Review, Kishinev.

The number of papers published in journals from the main stream of publications 1278

(the most cited 10 papers)

- "Older and new challenges concerning higher education", Aurel Negocioloiu, The Economist, 2004;
- "Considerations concerning globalisation and the European integration", Dumitru Mazilu, Romanian Review of Community Law, no. 3/2004;
- "The influence of agriculture on the economic growth", Mircea Coșea, The Financial Market, July-August 2003;
- "The influence of the euro-dollar rate of exchange", Financial Market, June 2003;

- "Managerial creativity - science and intuition", Manoela Popescu, Commerce Review, No. 2 (50), Year V, February, 2004;
- "International Trade - evaluation and prognoses", Liviu Olaru, Constanta Chitjba, Tribuna Economica, No. 40, 2003;
- "Strategic marketing and tactical marketing", Virgil Adăscălițel, AROMAR, Marketing-Management Review, No. 5, 2002;
- "Statistical analysis of the territorial distribution of the commercial companies with foreign participation in their equity in Romania", Elena Biji (co-author), The Statistics Review No. 4, 2002;
- "The monitoring of the manufacturing process with control slips CUSUM and EWMA", N. Bărsan-Pipu (co-author), Studies and Research of Economic Calculation and Economic Cybernetics Review, tome XXXIV, No. 1, 2001;
- "The future of the service industry within the worldwide globalized economy", Daniela Morariu, The Marketing-Management Review, No.1/2, 2000.

The number of papers published in volumes of international scientific conferences with reviewers 55

(10 papers presented at the most prestigious events)

- "The prospects of implementing the TQM principles in education", Ion Stancu, the 3rd International Seminar "The Quality Management in higher education", Iasi, 2004;

(Continued on page 321)

- for Romanian immigrants", Trieste, Italy, March 13-16, 2002;
- The 7th Italian-Romanian debate on human and economic geography: "Sustainable development of the mountain areas", Sibiu, Romania, September 19-21, 2003;
- The 8th Italian-Romanian debate on human and economic geography: "Friuli-Venice-Giulia after the enlargement of the European Union. Changes and perspectives", Gorizia, Italy, January 13-15, 2005.



Presentation of the University

We present the space arranged for public teaching and research activities with the following location:

Hall 130, 2nd floor Conference room

- Capacity: 80 seats with individual small folding tables;
- Pentium IV, 1 Laptop, connected to the internet, to the video projector and to the audio amplifier system from the hall;
- Sanyo video projector, permanently installed in the hall;

- Foldable screen for projection, setting free the blackboard;
- Complete audiovisual system and sound equipment, made up of:

- Preamplifier - mixer SoundCast;
- Amplifier 2*50 W (4 pieces);
- Eurotek Boxe on the ceiling (4 pcs);
- Video-projector;
- Multiple Compact Disc Player.



(Continued from page 320)

- "On some Risk Assessment Methods in Quality and Reliability", N. Bărsan-Pipu (co-author), Proceedings of The IX International Conference on Theory and Machines and Mechanisms, August 31 - September 2, Liberec, Czech Republic, 2004;
- "Les implications de la culture organisationnelle sur le management des firmes roumaines", Gheorghita Clorărescu, "Round table" Conference Valahia University, Targoviste, 2003;
- "Cost and benefits in the Agricultural Systems of Sustaines Production", Gabriela Ghic, The Symposium of Sustainable Development of Rural Regions in Eastern Europe, Romanian Academy and Albert Ludwigs Universität Freiburg, 2003;
- "Employment in Central and Eastern European Countries", M. Vană, The 13th International Symposium "Alternative Economic Strategies", ERA Publishing House, Bucharest, 2003;
- "On a modified chord method in Frechet spaces MicroCAD", S. Groze, G. Pavel, Z. Szarka, International Scientific Conference, Ungaria, 2004;
- "The specialized terminology belonging to the concept of tourismology", Ștefan Ștefan, The International Symposium concerning the staff training in the field of tourist management organized by AMFORTH, Marrakech, Morocco, 2002;
- "The theoretical scheme of the comparative advantage in the barter exchange - a completion", Vasile Dogaru, The International Conference "The role of science and economic education in the establishment of the economic forms in the Republic of Moldova", tome II, Editorial Departament - Poligraphic of ASEM, Chisinau, 2003;
- "Theory of Practice in Transport Economics", V. Puscaciu, The European Conference on transportation problems, Thesaloniki, Greece, 2000.

The number of scientific books published by publishing houses acknowledged abroad

19

(maximum 10 significant books)

- "Visa pour la Roumanie", part "Gestion des ressources humaines", Andrei Popescu and others, 70 pages, Centre d'Information sur le travail international, Paris, 1994;
- "La privatization de la protection sociale: renouveau ou decline", Andrei Popescu, 100 pages, Ed. Conseil de l'Europe and IPSE, Paris, 1994;
- "Les dimensions ethniques et spirituelles du progress social", Andrei Popescu and others, 100 pages, New-York, 1994;
- "Le travail et les homes", Ștefan Olteanu (co-author), 415 pages, Paris, 2002;
- "Diploma of Law" Bucharest, M.L.S., Columbia University, L.L.M., New York University, Florin Ciutacu (co-author), 250 pages, Publishing House Sigma, Bucharest, 2001;
- "Die Ungarn in der rumanischen chronistik (17-18 Jh)" in the tome Tausends Jahre Zusammenleben, Ileana Cazan, 400 pages, Vienna, 2000;
- "Romania - A Partener for Developing Countries", Liviu Olaru, Constanta Chitjiba, 113 pages, Publishing House International Trade Center UNCTAD/Wto Geneva, 1998;
- "At the Crossroads of Interlocking Subregional Arrangements: Romania's Pivotal Role in Est Central Europe", Adrian Pop, 1106 pages, NDC Security Studies, NATO Defense College, Rome, Fall, 1999;
- "The Philosophy of Interpretation", Chapter 10 "Historical Knowledge as Perspectival and Rational", Cecilia Tohăneanu, (co-author), Blackwell Publishers, 2000;
- "Optimal Control and Applications", Aurel Ștefan (co-author with T.L. Anderson and F.T. Johnson), Publishing House Limesick, Miami, 1994.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	1188	0
2003	1986	0
2002	1091	0
2001	1073	0
2000	375	0
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Hall 106, 2nd floor - Informatics laboratory

- Capacity: 30 seats;
- Pentium IV, 30 PC, HDD 40GB, monitors 17", connection to the internet;
- The Software installed is supposed to convey information to the user; access to the written information, audio or video, communication with other persons etc. To this end, the computers are provided, mainly, with the following:



- Windows XP;
- I.E. 6 sp1;
- MS Office XP;
- Antivirus - Norton AntiVirus;
- MSN Messenger;
- Yahoo Messenger;
- Irfan View;
- Adobe Acrobat Reader 6;
- Winamp 5.

Law Court Hall, 1st floor

It was established to support the students from the Faculty of Constitutional and Administrative Law in putting into practice the theoretical knowledge acquired along each semester, by simulating penal, civil and commercial trials. As it can be seen from the picture, it has in view to make students sample lifelike trials.



Magna Aula, 2nd floor



With a capacity of 450 seats, Magna Aula houses the most important scientific and cultural events which the Christian University "Dimitrie Cantemir" organizes for its students. To this end, it has been equipped with:

- Video projector; Protection screen; Sound equipment; Video camera; Air conditioning; Pentium IV, 1 Laptop, connected to the internet, to the video projector and to the audio amplifier system of the hall; Pentium IV computer connected to the internet, to the video projector and to the audio amplifier system of the hall; Video recorder; DVD Player; CD Player; Deck.

International Cooperation

- Thammasat "University of Bangkok", Thailand;
- New York University - U.S.A.;
- Jackson State University - Mississippi - U.S.A.;
- Ottawa University - Canada;
- Calgary University - Canada;
- Columbus University - Ohio - U.S.A.;
- Hoover Institute - Stanford University - San Francisco - U.S.A.;
- Gutenberg University - Mainz - Germany;
- International Christian University - Tokyo - Japan;
- Valencia University and Universidad Cardinal Herrera - Spain;
- International European Training Center and the International Higher Studies from Nice - France;
- Libera Università Maria Assunta - Rome - Italy;
- Modern University - Lisbon - Portugal;
- College of the Ozarks - Missouri - U.S.A.;
- North Dutch University - Holland;
- CHN Tourism and Leisure Time Institute - Leeuwarden - Holland.



Rector

Prof. Aurel Ardelean, PhD

Historical Overview of the University

“Vasile Goldiș” West University of Arad was founded in the 1990-1991 academic year. At the beginning, in 1990, two universities were founded, then seven other universities and five colleges were founded too. In 2002 the university was accredited by Law No. 240/2002 for six faculties, all others having the function authorization to function. There are 43 specialisms and during the 15 years of operation all the efforts were done to meet the main laws concerning the academic studies, i.e. Law no. 84/1995 and Law no. 88/1993. At



the moment in our university all the activities are carried out by professors, either belonging to the university or associated, all of them well known as scientific personalities.

Faculties and Departments

- 9 faculties: Law Science Faculty, Economics Science Faculty, General Medicine Faculty, Stomatology Medical Faculty, Nature Science Faculty, Informatics Faculty, Humanistic Science Faculty, Physical Education and Sport Faculty and Engineering Faculty;
- 5 university colleges: Stomatology University College, Medical University College, Agronomic University College, Forestry University College and Pedagogic University College;
- 5 branches: Satu Mare, Baia Mare, Zalău, Sebis, Bistrița;
- 43 specialisms.

Master and Doctoral Programs

MASTER - 27 programs associated to the five accredited faculties (Law Science Faculty -5, Economics Science Faculty -8, General

Medicine Faculty-3, Stomatology Medical Faculty-1, Humanistic Science Faculty -7, Physical Education and Sport Faculty-3)

Doctoral Programs: Vasile Goldiș West University was accredited for doctoral studies in 2005.

Patrimony

Properties: 9 buildings (18387), 6 flats (681), 1 complex building (university library, auditorium, informational centre, refectory (2735), 1 experimental centre (10260), chalet and Macea Pavilion (326), 2 garages (90); memorial museum and memorial house (987), 24 laboratories (986), 2 sports grounds, 2 sports halls (500) Total: 37886 sqm.);

Rented buildings: 10 buildings in Arad and branches (24812), 28 aula (21120), 7 training centres (offices, libraries) (21765). Total: 67697 sqm.

Fields in which human resources are trained

Medicine; Natural Science; Economic; Socio-humanistic; Law; teachers and professional degrees.

Presentation of research activity chart

The first assessment for the Rules concerning the Organizing and Financing of the Research in our university was done on 18th December 2003. Since the beginning of 1st January 2004 the scientific research in our university follows two principal directions: first one - fundamental and applicative research without external financing (mainly in our laboratories and directed to fundamental scientific interest and goals) and a second one, financed by external entities, carried out in fourteen research centers but without jurisdictional confirmation. A Council of Research, subordinated to the University Senate, coordinates the scientific research. The operative management is constantly ensured by the Vice-Rector with the scientific research.

Structures

Research Institutes	0
Research Centers	14
Research Laboratories	32
Multi-user research centers	0

Human Resources

Professors	107
Senior Lecturers	99
Lecturers	170
Assistant Lecturers	82
Teaching Assistant	48
Research Fellows	0
Administrative Staff	331
Students	12614
of which:	
Undergraduate	9731
Master	2883
PhD - full attendance	0
PhD - attendance not required	0



Top Priority Research Directions

The scientific research carried out by our specialized personnel (e.g. all categories of teaching personnel, beginning with the associated researchers and ending with international well known PhD professors) was directed in some very specific directions: biology, medicine, law, economics, informatics, pedagogy and other natural sciences. In the future one or two main research centers will be the most representative for our interests, depending on the main EU. The most important achievement was the Biological Molecular Centre, which as a strategic objective developing excellence for promoting the university within the CDI Program, in the western part of the country, where our university can be elected as leader for a Regional Agency, and as a result, a new Technological Park can be implemented in our region as well as a new business incubator.

Outstanding Research Infrastructure

The Cellular Biological Centre is one of most representative for international competition, as can be done some very important experiments can be done, such as investigations on DNA (D-Code Universal Mutation Detect. Sits; Termocycler-Corbet Research, electrophoresis system); biological cellular specific utilities (electronic microscope, Olympus microscopes, ultramicrotome, etc.); Inverse microscope for specific karyotype determinations; biochemistry specific determinations, visual and specific colligate devices.

International Cooperation

PHARE project (48800+40280 Euro), SECAL project (28000 Euro), transbordering collaborations (Ungaria, Slovacia, Serbia); IPA project; PIN-MATRA project; 3 IAD projects; IRCYL project; TACIS project; participation in JEAN MONET Program; collaborations with 46 universities around the world; 18 researches with international collaborations (Laboratoire European de Psychologie sociale-Paris, Ecole Pratique de Haute Etudes Paris; Swiss Federal Institute for Environmental Science and Technology; Balaton Limnological Institute-Hungary; Plant Biochemistry and Animal Physiological Ecology-Tuebingen, Germany; Internationale Arbeitsgemeinschaft Donauforschung-Swiss etc).

The number of papers published in journals from the main stream of publications

1657
(the most cited 10 papers)

- Schneider F., Munteanu I., Medrea P.D., Paunescu V., Hnbaru N., Immunological disorders in pregnancy induced hypertension. In: "Pathophysiology of pregnancy", Cc. Ed. Internationali, Roma, 1996, pp. 81-84.
- Terness P., Kirschlink M., Navolan D., Moroder L., Siedler F., Drugarin D., Schneider F., Duffer Ch., Kohl I., Welschof M., Opelz G., Roelcke D., Inverse correlation between IgG-antihinge region and anterythrocyte autoantibody in chronic benign and malignant cold agglutination, J. Clinical Immunology, 1997, 17, pp. 220-227.
- Tatu C.A., Paunescu V., Stanescu D.I., Schneider F., P-glycoprotein mediated multidrug resistance assessment by flow cytometry in malignant hemopathies. Anticancer Res., 1997, 17, pp. 2583-2586.
- Tatu C.A., Drugarin D., Paunescu V., Stanescu D. I., Schneider F., Baikan endemic nephropathy, the hematopoietic system and the environmental connection. Food Chem. Toxicol. 1998, 36, pp. 245-247.
- Dumescu F., Covic M., Arad megze temesyvetedelmi teruletei. Crisicum, 2000, 2, pp. 24-36.
- Pop V., Oros V., Pop V., Ecological management in the Baia Mare Industrial Area. Gep, 2002, 1, pp. 17-22.
- Haiduc Cr., A roman valalkozoknak kulfoldi partnerekkel alkotott agyuttmukodes iranti erdeklodes. Kitekintes (Bekescsaba), 2003, 7, pp. 121-132.
- Mos L., Plesa A., The aspects of Immature Nonspecific and CD19-Cell changes in Alcoholic Liver Disease with or without chronic Hepatitis C Virus Infection. Rom. J. Gastroenterology and Hepatology, 2003, 12, pp. 267- 272.
- Biris R.T., Die syntaktischen Besonderheiten der Arader Deutschen Umgangssprache. Ann. Univ. Apulensis, Ser. Physiologica, 2003, 12, pp. 162-169.
- Stan Gh., Pheromon-Forschungen in Siebenburgen. Stapfia, 1996, 45, pp. 221-258.

The number of papers published in ISI - quoted journals

9
(the most cited 10 papers)

- Francois O., Zaharie D., Markovian, Perturbations or Discrete Interactions. Lyapunov Functions Global Minimization and Associative Memory. Mathemat. Computer Modelling, 1999, 29: 81-94
- Cristea V., Dalla Vecchia F., Craiciu C., La Rocca N.: Ultrastructural aspects of photoautotrophic chrysantherum culture. Photosynthesis, 1999, 5, pp. 4175-4178
- Jompan A., Traditional nutrition and cardiovascular risk. Central European J. Occupational and Environmental Medicine, 2000, 6, pp.161-165.
- Marina P. D., The quality of life in panic disorder. J. Assoc. European Psychiatrists, 2000, 15, pp. 349-350.
- Klein L., Lupea A.X., Ilisie M., Matiuti M., Protein Separation from Wastewater, a method to reduce pollution and use secondary resources. Rev. Roumaine Chemie, 2004, 49(5), pp. 425-429.
- Riga, D., Riga, S., Schneider, F., Regenerative medicine: Antagonistic-Stress (R) therapy in distress and aging - I. Prednirical synthesis - 2003. Strategies For Engineered Negligible Senescence: Why Genuine Control Of Aging May Be Foreseeable. Annals of the New York Academy of Sciences, 2004, 1019, pp. 396-400
- Riga, S., Riga, D., Schneider, F., Prolongevity medicine: Antagonistic-Stress (R) drug in distress, geriatrics, and related diseases - II. Clinical review - 2003. Strategies For Engineered Negligible Senescence: Why Genuine Control Of Aging May Be Foreseeable. Annals of the New York Academy of Sciences, 2004, 1019, pp. 401-405
- Balacau-Viasu I., Atyim P., Croitoru O., Tigae C., Popescu A., Ardelean G., Mathematical relationship for the assessment of radioactive contamination in a major nuclear accident, Journal of Environment Protection and Ecology, 2004, 5, pp.698-702.

(Continued on page 325)



(Continued from page 324)

- Craciun C., Barbu-Tudoran L., *Some new aspects of Porosome morphology*. Biophysical Journal, 2004, (in press)
- Craciun C.: Elucidation of cell secretion: Pancreas led the way. Pancreatology, 2004, 4, pp. 487-489

The number of papers published in volumes of international scientific conferences with reviewers

1250

(10 papers presented at the most prestigious events)

- Podea Della M., *Life events and panic disorder abstract book*. International thematic conference "Diagnostic in psychiatry: integrating the sciences", Vienna (Austria), 2003, June 19-22, pp. 36.
- Zonia C., *Frontiers and Mobility*. In: Annuale Conference AMSE, Lille - France 8 Sept. 2002 (published in AMSE Newsletter, 2003, 26, 16-26).
- Bîndiu C, Donita N., Ardelean A., *The situation of the nature conservation in Romania*. 6th International Congress of Ecology, Budapest, 1995, 112-221.
- Craciun C, Soran V., Ardelean A., *Plastids ultrastructural from inner tepals of snowdrop (Galantus nivalis L.)*. European Congress for Molecular and Cell Biology, Brighton, England, 1997, 87-96.
- Hermenean A., Ardelean A., Cotoraci C., Ionita H., *Echinacea - a group of medicinal plant with real immunostimulation features*. European Congress of Cell Biology- ECBO

- 97, Brighton, England, 1997, 117-128.
- Dumescu F., *The Balance Sheet of the Flow for the Alluvial Cone of Mures River*. International Hydrology Conference, Subotica, Yugoslavia, 2000, 34-42.
- Pop V., *Mathematical Models used for Didactical Purposes*. Conf. "micro CAD-2002", Miskolc, 2002, 56-62.
- Ioiart I., *Radical cystectomy in women followed by orthotropic bladder substitution*. 2nd Central European Meeting, Bratislava, 2002, 68-72.
- Fagarasan S., Sasca C.I., Radulescu A., Borza T., Ionescu M., *Plasmid profile analysis and antibiotic resistance of pediatric salmonella strains from clinical isolates in Cluj-Napoca, Romania*. 8th International Congress on Infectious Diseases, Boston, USA 1998, 15 - 18 May, 86-88.
- Casavela V., *PWM Software, PID and Command Transmission implemented in C++, for induction Machine*. International Conference on Automation, Quality and Testing, Univ. III. Baleares, Spain, 2002, 96-102. Univ. III. Baleares, Spain, 96-102.

The number of scientific books published by publishing houses acknowledged abroad

1

(maximum 10 significant books)

- Delahaye J.P., Milon H., Loire R., Pop C., *Etiology and natural history of acquired valvular heart disease*. Cap. III, vol. I, 98-139. In: Textbook of Acquired Heart Valve Disease. ICR Publ., London., 1995

International Scientific Activities (the 10 most important one)

"The 10th Orthopedics and Traumatology Congress"-Arad,

"The 7th Congress of the Mediterranean Medical Antanta"-2003;
Symposium on Oncohematology - Arad, 2004;

"E-Learning International Seminar - LINUX and virtual media teaching" - Arad, 2004;

"The 7th and the 8th International Conference of Complementary Therapies from Romania - ANATECOR" - Arad, 2003 and 2004,

"Diabetology International Congress" - Arad, 2004;

Clinical Imagistic Multidisciplinary Symposium -ARMEDICA"-Arad, 2004;

"Water, Environment and Health-EASA Conference"-Arad, 2002;

Les risques et les enjeux des OGM Importance de la biodiversité - Arad, 2005

Products created/homologated/ capitalized/Inventions/Patents (maximum 10 significant products)

2

Author: Conf.univ.dr. Casavela V.

1. D. C tiristors power supply for rotors of synchronous power motors.University from Petrosani-1995.

2. D. C tiristors supply for steam rollers UMIROM-SA. University from Petrosani,1995.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	565,25	89080
2003	310,60	28000
2002	423,10	14000
2001	185,00	20000
2000	150,00	-
1999	75,46	-
1998	50,04	-
1997	50,00	-
1996	35,70	-
1995	-	-

The scientific research - assertion factor for the national academia space

- Since 1st January 2004 our university has fourteen research centers which have as main research interests studies and research concerned with *medicine, biology, institutional marketing and management, politic sciences and informatics*.
- A Technologic Park, *BIO-A* and a *Business Incubator* are just to be opened.
- The building of a new *Oncology Institute*, with international collaboration, was started and represents an important gain, both for medical scientific staff from Arad and for the patients.
- The modern devices, especially PC-computers linked to the Intranet and Internet, which offer easy access to the most recent scientific data (books, journals, databases - like LEGIS, SPRINGERLINK), favor the research. There are two special multimedia laboratories open to all professors, researchers and students.
- Our research results represent considerable contributions to the national scientific patrimony (e.g. in 2004 there were 16 financed projects and 248 studies and projects done by the professors, researchers and students, alone or by different cooperation links). During 2000 - 2004, 1136 scientific articles were published. Our publishing house published 255 scientific books over the 1995-2004 period.
- We are also involved in the CDI Program for the western part of Romania and we are making efforts for our university to become a regional Implementation Agency. For that purpose, 8 scientific research objectives were initiated (research concerned with cellular and molecular biological, ecology and ecological restorations, biotechnologies, and health).
- Our university has all the infrastructural tools and assets for ensuring a modern educational process for the students (i.e. well fitted out halls, laboratories, libraries, sports ground, chalets for students practice). Our students are involved in scientific research along with their professors.
- For specific biomedical research, are specific and modern devices are in almost all the rooms and laboratories.

The most representative is the biology - medicine research undertaken in *Experimental*



Pictures from the Experimental Biology Research Centre

Biology Research Centre, as it involved modern, topical and perspective studies (Molecular DNA investigations, cellular and molecular biology research, biochemical investigations, plant, animal and human karyotyping investigations, etc.).

Experimental Biology Research Centre will assure the assertion as an excellence centre in the west of Romania. Among the researchers, there are some remarkable scientific personalities either from Romania or from other European countries (Prof. H. Kohler, PhD; Prof. K. Wegmann, PhD - h.c. Germany).

International Cooperation and Collaborations

- Our university has direct relations with 46 universities around the world (Europe, South America, USA, and Australia). These associations imply different forms of relationships (such as conventions, bilateral projects, partnerships, fellowships, student and teacher mobilities, etc.);



Research rooms





Rector

Prof. Alexandru Puiu, PhD

Historical Overview of the University

"Constantin Brâncoveanu" University from Pitesti was founded in 1991 having as a mission staff training through a long term higher education, master's degree, Ph.D. degree, fundamental and applied scientific research activity. The University is accredited by the Law no. 242/23 April 2002. The University is recognized as a legal person of private law and of public utility being part of the national education system and has faculties in the towns Pitesti, Braila and Râmnicu Vâlcea.



Patrimony

The university has 7 private property buildings in Pitesti, Braila and Râmnicu Valcea. They are modern and functional buildings, extended on 28,000 square meters and have all the necessary logistics for the unfolding of the teaching, learning and research activities. In the university centre of Pitesti an Assembly Hall that meets the European standards a multipurpose hall, amphitheatres, auditoria and conference rooms were constructed. All the faculties have lecture rooms, seminar rooms, libraries, technical laboratories designed for the study of commodities science, computer rooms and two multimedia laboratories. Recently, a students' hostel with double bed rooms with high standards of comfort was constructed. A new building housing a modern library, lecture rooms and seminar rooms is being raised.

Fields in which human resources are trained

1. Economic;
2. Socio - human.

Presentation of research activity chart

The scientific research is led by seven Departments, in faculties and in 3 specialised research centres. (The Consultancy Centre in the Domestic and International Management of the Economic Affairs, The Regional and International Centre and the Centre for Research in Agricultural Management). The research activity is conducted by the Scientific Research Committee which is subordinated to the Senate of the University. The operational leadership is provided by the Vice-Chancellor who has a long experience in the field of the scientific research. Yearly, research is conducted through 10-12 research projects supported from University funds or sponsored by way of various contracts.

Structures

Research Institutes	0
Research Centers	3
Research Laboratories	0
Multi-user Research Centers	0

Faculties and Departments

- The University has seven faculties:
- Management and Marketing in Economic Affairs - Pitesti;
 - Management and Marketing in Economic Affairs - Braila;
 - Management and Marketing in Economic Affairs - Râmnicu Vâlcea;
 - Communication and Administrative Sciences - Pitesti;
 - Communication and Administrative Sciences - Braila;
 - Finance - Banking - Pitesti.

Master and Doctoral Programs

MASTER - The University organizes Master courses in two fields: Management and Marketing with 5 specializations: Business Management, Management in administration and public services, Finance - Bank Management, Marketing in the service field, Industrial, Agricultural and Food Marketing.

Human Resources

Professors	12
Senior Lecturers	29
Lecturers	43
Assistant Lecturers	41
Teaching Assistant	14
Research Fellows	0
Administrative Staff	90
Students	7482
of which:	
Undergraduate	6279
Master	1203
PhD - full attendance	-
PhD - attendance not required	-



Top Priority Research Directions

The strategic objective is represented by the promotion of excellence in scientific research. The priority fields are focused on the research of the fundamental issues concerning the Romanian economy; on Romania's preparation for the accession to the European Union in as favourable terms as possible, the development of the economic fields for which there exists a good human and material potential, the increase in performances and competitiveness in agriculture.

Outstanding Research Infrastructure

The university has computer rooms with 250 computers, 200 of which are connected to 3 networks and Internet, as well as 7 servers located in 4 buildings in the cities of Pitesti, Braila and Ramnicu Valcea. The Uni-

versity has 2 such multimedia laboratories provided by high standard equipment and a demonstrational display lot showing the results of the agricultural research.

International Cooperation

The University is involved in the carrying out of 2 research projects financed with PHARE funds, a project with funds from the World Bank and a project within GRASP programme.

International Scientific Activities (the 10 most important ones)

The International Conference "Romania and the Republic of Moldova - Competitive potential of the national economies. Revaluation possibilities on the Domestic, European and World market" - Pitesti, 23-25 October 2005.

The number of papers published in journals from the main stream of publications

370

(the most cited 10 papers)

- Diaconu Mihaela - *Competitive profile at macroeconomic level*, Tribuna Economica no. 32/2003;
- Elena Enache - *Marketing in support of public administration*, Revista Marketing - Management, AROMAR, year XIV, vol. V (83), 2004;
- Asandei Mihaela - *Cora on the Romanian market*, Revista de Comerț, no. 1/2004;
- Burtescu Claudia - *Improvement operation accounting for goods*, Revista Gestiunea și contabilitatea firmei, no. 6/2004;
- Hanciu Nina - *Services contribution to improve life quality*, Revista de Marketing - Management, no. 5/2004;
- Luță Dorina - *The accounting of the technical assistance on service activities abroad*, Revista Gestiunea și contabilitatea firmei, , september 2004;
- Manole Sorin - *The European operation estimate using Crank - Nicolson method*, Revista Română de Informatică și Automatică, vol. 14, no. 1/2004;
- Sârbu Alexandrina - *Genetic changed food - technic, economic and ethic aspects*, Revista Inventică și economie, București, 2004;
- I. Scurtu - *Scientific research in veg-*

etable growing and its role in the introduction of the technical progress, HORTINFORM, Revistă de Horticultură, year X, no. 12, 2001;

- Săvoiu Gheorghe - *A short history of indices and the evolution of Interpret indices*, Revista română de statistică, no. 4/2002; *The system of statistico - financial indicators available for the beneficiaries*, Revista română de statistică, no. 3-4/2003.

The number of papers published in volumes of international scientific conferences with reviewers

246

(10 papers presented at the most prestigious events)

- Puiu Alexandru, Isaic - Maniu Alexandru - *Aspects about Romania's economic state*, in the volume "Romania and the Republic of Moldova - Competitive potential of the national economies. Revaluation possibilities on the Domestic, European and World market", Romanian Academy, The Center for Economic Documentation, Bucharest, 2004;
- Mureșanu Doina - *Human Resources Training - factor of competitiveness progress*, in the volume "Romania and the Republic of Moldova - Competitive potential of the national

economies. Revaluation possibilities on the Domestic, European and World market", Romanian Academy, The Center for Economic Documentation, Bucharest, 2004;

- Burtescu Emil - *Risk analysis in the economic informatic systems*, in the volume "Romania and the Republic of Moldova - Competitive potential of the national economies. Revaluation possibilities on the Domestic, European and World market", Romanian Academy, The Center for Economic Documentation, Bucharest, 2004;
- Hanciu Nina - *Agricultural exploitations management reform from the point of view of European accession and of long term development*, in the volume "Romania and the Republic of Moldova - Competitive potential of the national economies. Revaluation possibilities on the Domestic, European and World market", Romanian Academy, The Center for Economic Documentation, Bucharest, 2004;
- Scurtu Ion - *The present and the perspectives of the Romanian vegetable growing*, in the volume "Romania and the Republic of Moldova - Competitive potential of the national economies. Revaluation possibilities on the Domestic, European and World market", Romanian Academy, The Center for Economic Documentation, Bucharest, 2004;

(Continued on page 329)



Presentation of University

"Constantin Brancoveanu" University distinguishes itself among other Romanian universities by some distinctive features:

- modern and functional buildings, harmoniously integrated in the general architecture of the cities where the faculties of the university are situated: Pitesti, Braila and Ramnicu Valcea



(Continued from page 328)

- Enache Sorin, Enache Elena *The law in the insurance field in Romania in the frame of our country accession to the European Union*, in the volume "European accession and economic competitiveness", Publishing house ASEM, Kishinev, 2004.
- Ciochină Iuliana *The notion of services in the modern economy*, in the volume "Demands in the development process in the accession perspective in 2007", Sibiu, 2004;
- Sârbu Alexandrina *The structure of Romanian diet and food quality related to prices during the transition period of Romania*, in the volume "9th European Nutrition Conference, Roma, Italy, 2004;
- Burada Corneliu *The limited effect of information reported by the financial records over the economic strategy substantiation*, in the volume "Romania and the Republic of Moldova - Competitive potential of the national economies. Revaluation possibilities on the Domestic, European and World market", Romanian Academy, The Center for Economic Documentation, Bucharest, 2004;
- Grigorescu Remus *European Option Evaluation through Numerical Methods*, in the volume "Demands in the development process in the accession perspective in 2007", Sibiu, 2004.

- the grand Auditorium meeting the international standards which is part of Pitesti Brancoveanu University complex. The hall has 450 seats organised on two stalls. It has exceptional accoustics ("Bose" US), full-time air-conditioning, integrated overhead projecting and video projecting system, simultaneous translation system. In the Assembly Hall different festivities and scientific, cultural or social activities are organised.



Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	3227	29.000
2003	2623	34.000
2002	1826	19.000
2001	-	-
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



- professionalism and stability ensured by the appointment of the teaching staff by way of strict examination only;

- the libraries are installed in large rooms with over 500 seats;

- a special library hall will be constructed to enlarge the already existing facilities;



- university book stands for the students;



- the publishing of a weekly review "Brâncoveanu Students Dialogue", in 15.000 copies;



- a wide range of handbooks, lectures and valuable applied works, published under the aegis of "Constantin Brâncoveanu" University, for students' use (over 170 titles), published by the "Economic Independence" Publishing House;

- book exhibitions of national relevance, concluded with numerous diplomas and prizes;

- the organization of symposiums and conferences, mostly on the realities and perspectives of the Romanian economy but also for themes connected to art, culture and education;

- the involvement in research activities of national importance or in projects with international finance.

UTM

"TITU MAIORESCU" UNIVERSITY OF BUCHAREST



Rector



Prof. Avram Filipaş, PhD



Historical Overview of the University

Titu Maiorescu University is a private higher education institution accredited by the Ministry of Education and Research through the Decision no. 59/01.25.1991 of Sector 1 Judicature Bucharest. The University has



been accredited by Law no.239/04.30.2002, being part of the national education system.

Faculties and Departments

Titu Maiorescu University is the only private university in Romania with all its faculties accredited by law:

- Faculty of Law, Specialization: Law, full time, part time, distance learning;
- Faculty of Economic Sciences, Specialization: Finances and Banks and Accountability and Management Computer Science, full time, part time and distance learning;
- Faculty of Psychology, Specialization: Psychology, full time;
- Faculty of Medicine, Specialization: General Medicine, full time;
- Faculty of Dental Medicine, Specialization: Dental Medicine, full time;

The following faculty and college are legally authorized to function:

- Faculty of Information Science and Technology, Specialization: Computer Science, full time, distance learning;
- Dental Technique College, full time;

Titu Maiorescu University include the following departments:

- Department of Scientific Research,
- Department for Teaching Staff Training,
- Department for Postgraduate Education,
- Department for Distance Learning;

Master and Doctoral Programs

MASTER:

- *Faculty of Law:* Business Law, International Business Law, Community Law, Public International Law and International Organizations, Criminal Sciences, Jurisprudence of the European Court of Human Rights, Public Administration;
- *Faculty of Psychology:* Cognitive-Behavioural Psychotherapies, Communication and Psychosocial Influence Techniques, Human Resources Psychology;
- *Faculty of Economic Sciences:* Financial - Accounting Standings and Their Control, Financial - Accounting and Juridical Management of Trading Companies, Capital Markets, Banks and Insurances, Trading Company Financing and Management, Business Financing and Management, Financing and Management in the Frame of European Integration, Computer Technologies in Financing - banking Activity.

Doctoral Programs: Dental Medicine field: Oral Implantology, Dental Prosthetics, Endodontia.

Patrimony

The teaching and researching activity take place in our own premises: Rectorate - 70, Dionisie Lupu str, code 010458; 187 Calea Vacaresti, code 040056; 279, Pictor Gheorghe Petrascu str, code 031593; Clinical Hospitals (CFR 1 Witting, CFR2, Malaxa, Victor Babes).

Fields in which human resources are trained

Juridical Sciences, Economic Sciences, Exact Sciences, Social and Political Sciences, Medicine, Dental Medicine.

Outstanding Research Infrastructure

The Scientific Research Department holds a coordinating role for each faculty scientific research centre. It comprises 2 research centers and 10 research groups organized in all the 6 faculties.

Human Resources

Professors	39
Senior Lecturers	21
Lecturers	36
Assistant Lecturers	69
Teaching Assistant	38
Research Fellows	-
Administrative Staff	68
Students	5652
of which:	
Undergraduate	4806
Master	846
PhD - full attendance	-
PhD - attendance not required	15

Location: BUCHAREST, 70 Dionisie Lupu St.
Phone number: 021-2129143;

Fax number: 021-3112297
E-mail: rectorat@utm.ro; www.utm.ro

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We also have signed the Scientific Co-operation Agreement with Northwood University (USA).

The research department has developed a co-operation with the Hong-Kong Chinese University Psychology Department in "International Project on Social Axioms".

The Faculty of Information Science and Technology developed an important scientific cooperation with the University of Electro-communications from Tokyo, Post-graduate School of Computer Systems, in GIS realm (Geographical Computer Systems).

Our University has signed a scientific cooperation with Vrije University Brussels, financed by the Ministry of Education and Research and the Ministry of Flemish Community in Belgium, in digital dental x-ray realm.

We also established contacts with Universities from Italy, Israel and Germany in the research realm, within which we will present the latest scientific achievements, we will develop new research and co-operation subjects.



International Affiliations

Titu Maiorescu University is affiliated to the European Universities Association (EUA), a high academic forum that plays an important part in carrying out the European policies in higher education and university scientific research.

Presentation Laboratories

Clinical Immunology Laboratory



The laboratory equipment allows the development of complex multidisciplinary research in immunology.



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Experimental Psychology and Psycho - Diagnosis Laboratory

Equipment:

- electronic equipment for psychological examination (complex reactions equipment, manual skills equipment, testing equipment for reactions under stress, decision abilities testing equipment, psycho - motor balance testing equipment);



- tests data base comprising the examination methodology;
- computer network, psychological examination and complex statistics - mathematics calculus software;
- focus - group equipped with invisible mirror system;
- consultation and therapy offices.

The laboratory equipment allows the development of complex multidisciplinary research.

Maternal - fetal and Cytological Screening Medical Laboratory

The laboratory within the Obstetrics and Gynecology Clinic promotes multidisciplinary



research in maternal-fetal and cytological screening medicine, prenatal assistance, extra-hospital specialty assistance system.



Financial resources obtained for research

	National millions RON	Internat. EURO
2004	4000	59000
2003	800	-
2002	46	-
2001	-	-
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Rector

Prof. Mircea Duju, PhD

Historical Overview of the University

Ecological University of Bucharest was established in 1990, being the first ecological higher education institution in Romania.

The faculties were granted temporary functioning authorization in conformity with Law no.88/1993, modified by Law no.144/1999, through Decisions of the Government of Romania. In 2003, by passing Law no.282/2003, Ecological University of Bucharest was



accredited a higher education institution, a judicial person of private law and public utility, part of the national system of higher education.

Faculties and Departments

- Accredited Faculties: Faculty of Law, Natural Sciences and Ecology, Managerial Engineering, Management, Physical Education and Sport;
- Authorized Faculties: Sciences of Communication, Psychology and Cognitive Sciences;
- Authorized Departments: Post-university Studies, Teacher Staff Training, Reduced Frequency and Distance Learning.

Master and Doctoral Programs

MASTER - Ecological University, due to its 5 accredited faculties, organizes 8 master programs:

- a. Internal and International Law of Environment;
- b. Romanian and European Social Law;
- c. Information and Private Security Law;
- d. Management of Natural Resources;
- e. Management and Engineering Production Systems;
- f. Eco-tourism and Environmental Protection;
- g. Financial Management

Patrimony

The first building of about 5400 mp is located in Grozavesti area having 24 halls for courses and seminars, 4 aula, 6 labs, gym, library and administrative halls. The building, completed in 2004 is the property of University.

The second building of 3500 mp is located in the city area, having 2000 mp for the chancellor office, halls for study, library and administrative halls.

Fields in which human resources are trained

Professional of law, banks and finances, industrial and economic engineering, ecology and environmental protection, physical education and sport, psychology, social communication and public relations.

University graduates are future professionals in general education, high schools and universities, in research and development, central and local administration and private capital companies.

Presentation of research activity chart

A vice-chancellor, the Head of Scientific Research Committee in University Senate coordinates the scientific research activity.

At the Faculty of Ecology and Faculty of Managerial Engineering there are chairs of scientific research whose annual plan of activity is supervised by their Deans.

Concerning future development these chairs have recently been organized as research centers in conformity with the decision of the Senate and their research files have been forwarded to CNCIS for accreditation.

Top Priority Research Directions

There can be listed the following research areas:

- The Law of Environment focusing on adjusting Romanian and European to International Environmental Legislation;
- Socio - psychological and psychosomatics investigations to target groups;
- Investigations in Environmental Economics and Management focusing on promoting sustainable development indicators specific to our country;

Human Resources

Professors	22
Senior Lecturers	22
Lecturers	13
Assistant Lecturers	32
Teaching Assistant	11
Research Fellows	15
Administrative Staff	64
Students	5430
of which:	
Undergraduate	5200
Master	230
PhD - full attendance	0
PhD attendance not required	0



Structures	
Research Institutes	0
Research Centers	2
Research Laboratories	6
Multi-user Research Centers	1

- Ecological investigations in impact recovery areas;
- Investigations in environmental engineering and protection

Outstanding Research Infrastructure

Informatics lab facilities within the Leonardo Grant.

International Cooperation

"Computational Intelligence for Biopattern analysis in Support of eHealthcare" within FP6 (Sixth Framework Programme) priority 2-Information Society Technologies (IST). Contract supervisor BIGAN C.

The Faculty of Management participates in the partnership project "NEW FORMS OF LEARNING & BASIC SKILLS FOR ADVANCED, INCLUDING LIFELONG, eVET in INTERNET GENERATED OCCUPATIONS", Acronym: eEmployment. The project is part of: The Community Action Program in Professional Training - Leonardo da Vinci

International Scientific Activities (the 10 most important one)

- Sustainable management and usage of waters - New aspects in international, national and compared law - The Francophone University Agency - The environmental law network, Ecological University and Francophone University Agency, Jean Moulin-Lyon3;
- "Ecological Education, Present and Future", May 12-13 2004.

Products created/homologated/capitalized/Inventions/Patents (maximum 10 significant products)

16

- Dr. ing. Vladimir Rojanschi, ing. Georgescu Luminita, ing. Blasescu Victor "Filtru cartus pentru tratarea apei", Certificat de inventator nr.91410/1986;

The number of papers published in ISI - quoted journals (the most cited 10 papers)

4

- Bigan C., Woolfson M. - *Decomposition and analysis of nonstationary EEG epochs*, Biomedizinische Technik Journal, Band 45 Ergänzungsband 2, 2000 ISSN 0939-4990, pp.2115-222, 2000
- Bigan C., Strungaru R. - *Computer based optical plot recognition of paper recorded biomedical signals*, Biomedizinische Technik Journal, Band 45 Ergänzungsband 2, 2000 ISSN 0939-4990, pp 164-167, 2000
- Bigan C., Woolfson M. - *Time frequency analysis of short segments of biomedical data*, IEE Proceedings Journal Sci. Meas. T

The number of papers published in journals from the main streams of publications (the most cited 10 papers)

75

- M. Dutu - rev. "Dreptul", nr 12/2004, "Penal-procedural significations of the right to remain silent".
- V. Rojanschi, Adriana Pienaru, F. Grigore - Revista ROMAQUA - anul VIII, nr. 1/2002 "The evaluation of environmental risks in the case of centralized systems which supply drinking water".
- V. Rojanschi - Revista ROMAQUA - anul VIII, nr. 3/2002, "Implications of the EU directive regarding the operators in the field of hydromunicipal services"

The number of papers published in volumes of international scientific conferences with reviewers (10 papers presented at the most prestigious events)

46

- M. Dutu "Evolution du droit de l'environnement en Roumanie depuis 1992.Tendances et perspectives".
- V. Rojanschi, F. Grigore "Evaluation du cycle de vie dans le choix des alternatives de developpement du secteur energetique".
- V. Rojanschi, F. Grigore "Experiment regarding establishing the household waste structure in a town" V. Rojanschi - Requirements on Water Supply Systems in Romania, NATO Advanced Research Workshop.
- Gratian C., Mihailescu D., Duduman S., *The diesel locomotive with vectorial command system for asynchrony traction.*

The number of scientific books published by publishing houses acknowledged abroad (maximum 10 significant books)

2

- *Labour Law in Romania* - S. Ghimpu, A. Ticlea, 178p, Kluwer Law International, The Hague, London, Boston.
- *Law Low in Romania* - S. Ghimpu, A. Ticlea, 180 p, Kluwer Law International, The Hague, London, Boston.

- Chim Meghea Aurelia, dr. ing. Vladimir Rojanschi, ing. Holban Vasilica "Metoda de determinare a continutului de substante organice din apele de alimentare", Hotarare OSIM nr.50/06.02.1984;
- Dr. ing. Vladimir Rojanschi, ing. Cornea Nicolae, chim. Iordache Cecilia, ing. Mocanu Marian, ing. Faina Serban, chim. Iordache Liliana, ind.Dumitrescu Stefan, "Procedeu de recuperarea apei tehnologice".

Research activity of the Ecological University

A vice-president of the University, the Head of Scientific Research Committee in University Senate coordinates the scientific research activity.

At the Faculty of Ecology and the Faculty of Managerial Engineering there are chairs of scientific research with an annual plan of activity supervised by their Deans.

Concerning future development, these chairs have recently been organized as two research centers with six laboratories according to the decision of the Senate and their research files have been forward to CNCISIS for accreditation.

There can be listed the following research areas:

- The Law of Environment focusing on adjusting Romanian and European to International Environmental Legislation;
- Socio - psychological and psychosomatics investigations to target groups;
- Investigations in Environmental Economics and Management focusing on promoting sustainable development indicators specific to our country;
- Ecological investigations in impact recovery areas;
- Investigations in environmental engineering and protection.



The collaboration with domestic and foreign institution

Ever since it was founded, the Ecological University of Bucharest has collaborated with domestic and foreign institutions at didactic

and scientific level. So far the university has had the following goals:

- to develop and promote the image of the institution in the national and also, in the international educational system;
- to efficiently run and organize the educational process, according to modern standards;
- to provide access to information and documentation sources for all the students and teaching staff, in the domains that represent a priority;
- to integrate the teaching staff, as well as the outstanding students in the process of scientific research and other forms of collaboration at international level.

The main activities of international collaboration

In 1996 the 10th Jubilee Congress of Cybernetics and Systems - initiated by the World Organization of Systems and Cybernetics - took place under the aegis of the Ecological University

- The Ecological University of Bucharest has collaborated with Austrian and Hungarian professors and researchers to elaborate and publish articles and studies on management, marketing, international trade policies, Romania's role within the world economy and the international economic system, and environmental engineering in specialized press (in Norway, Canada and the U.S.A.);

- The "Romanian Environmental Law Association" was set up in January, 1st 2002. This is a professional, non-profit and public interest association whose main goals and targets are the following ones:

- to promote scientific research and teaching in the field of environmental sciences in general, and particularly in the field of environmental law
- to make public opinion aware of the current environmental issues and to provide proper conditions for ensuring the fundamental right to a safe and healthy environment
- to organize scientific and educational meetings, seminars, debates, colloquia etc. on environmental issues
- to elaborate research studies, programs and projects on Environmental Law and Management.

The Association publishes the **Romanian Environmental Law Journal**.





EDITORIAL ACTIVITY

Last year the Ecological University of Bucharest developed an intensive editorial activity.

The academic staff of this university has a key position (as Editor-in Chief and/or the Chief of the Techno-Scientific-Committee) in editing the following journals:

- The Journal of Environmental Legislation
- ROMAQUA (The Journal of Romanian Water Association)
- Salubrity (The Journal of Romanian Waste Association)

The University has also agreed upon collaborating with a publishing house to print its own textbooks, courses and guides for students. The Ecological University staff is the one that conceives all these works.

Ten books have already been printed so far, and this has been accomplished in less than one academic year (2004).

Since January 1st 2004 the Ecological University of Bucharest - Managerial Engineering Faculty, has been part of the "Biopattern" Research Project, awarded at a European competition in 2003. The full name of the project - which will be developed over a period of four years - is "**Computational Intelligence for Biopattern Analysis in the Support of Healthcare**".

Biopattern joins researchers from 31 institutions, belonging to 12 European Union member countries, and the **candidate country, Romania, represented by the Ecological University of Bucharest**. The project brings together leading researchers in medical information and bio-information technology to offer Europe the benefit of the most updated healthcare innovations.

The Faculty of Management participates in the partnership project "NEW FORMS OF LEARNING & BASIC SKILLS FOR ADVANCED, INCLUDING LIFELONG, eVET in INTERNET GENERATED OCCUPATIONS", Acronym: eEmployment. The project is part of: The Community. Action Program in Professional Training - Leonardo da Vinci

Every year the Ecological University of Bucharest organizes conferences and seminars with international participation, to debate important and up-to-date topics. The last was: "Sustainable management and usage of waters - New aspects in international, national and compared law" - The Francophone University Agency - The environmental law network, Ecological University of Bucharest, The Francophone University Agency, Jean Moulin-Lyon 3, 4-6 november 2004.



Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	1100	8450
2003	200	-
2002	300	-
2001	200	-
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Rector



Prof. av. Neculai Pătrăşcu, PhD

Historical Overview of the University

Following the initiative of a group of University Professors from Braşov, the private University "George Baritiu" was founded in 1990. In 1996 the temporary licence was obtained through H.G. no.1371/11.12.1996. The accreditation files for faculties and specializations were successively approved, as follows: in 1998 for the Faculty of Law, in 1999 for the specialization Tourism, in 2000 for the specialization Informatics and Accounting as part of the Economic Sciences Faculty, in 2000 for the Faculty of Physical Education



and Sports. In 2002 the Romanian Parliament adopted the Law no.483/11.07.2002 regarding the accreditation of "George Baritiu" University, with 3 faculties and 4 specializations.

Faculties and Departments

- 3 faculties (Law, Economic Sciences and Physical Education and Sports);
- 2 Departments (Extramural Education, Training of the Teaching Personnel).

Master and Doctoral Programs

MASTER - 4 Master Programs: - *within the Faculty of Law*, the program "Community Law and Integration Politics"
- *within the Faculty of Economic Sciences*, the programs: "The Accounting and Financial Management of Public Administration", "Accounting and Audit", "Business Administration in Tourism"

Patrimony

- Educational places/classrooms: 40;
- Laboratories: 9;
- Libraries: 3;
- Stacks: 3;
- Students' Hostels: 1;
- Chapel: 3.

Fields in which human resources are trained

1. Economic;
2. Socio-human;
3. Physical Education and Sports.

Presentation of research activity chart

The scientific research activity is carried on within the departments and faculties. The scientific research plans are structured according to faculties. The operative management is ensured by the scientific secretary of the University.

Top Priority Research Directions

The promotion of the activities with a high potential in processing, transmitting and using knowledge and that of the research activities concerning the fundamental problems of the Romanian economy and society are the main strategical objectives of the scientific research.

International Cooperation

Phare Program Ro 9703-01 (Statistics) "George Baritiu" University cooperates with well-known universities from other countries among which: The University from Torino - Italy, The University from Göteborg - Sweden, Knauff Institute - Germany etc.



Amphitheatre Hall

Human Resources

Professors	18
Senior Lecturers	17
Lecturers	34
Assistant Lecturers	18
Teaching Assistant	9
Research Fellows	-
Administrative Staff	21
Students	5114
of which:	
Undergraduate	4914
Master	200
PhD - full attendance	-
PhD - attendance not required	-

financial resources

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- 1 Laptop Compaq HDD 40 GB, CD-RW, Floppy;
 - Windows XP Professional 2002;
 - MS Office XP 2002, with all updates;
 - Norton Antivirus 2003 with automatic update;
 - Adobe Reader 7;
- 2 Projectors;
- 2 Projection screens 180/200, folding screens;
- 1 Videoprojector Sanyo;
- Complete audio-video system, containing:
 - amplifier;
 - preamplifier-mixer;
 - 4 boxes;
- 2 projectors;
- 2 projection screens 180/200, folding screens;
- 1 TV set + video recorder.

The Informatics Laboratory Building C

- Capacity: 30 seats at individual tables;
- 30 PC Intel Celeron/AMD, HDD 20 GB, monitor 15"; 8 pieces linked in a network and connected to Internet;
- the installed software allows the user to access the written, audio, video information as well as the communication with other persons:
 - Windows 98/XP Professional 2002;
 - MS Office 98/XP 2002 with all updates;



- Visual Fox Pro 6.0;
- Visual Basic 5.0;
- Adobe Reader 7;
- Norton Antivirus 2003 with automatic update;
- MSN Messenger;
- Yahoo Messenger

The Laboratory is open Monday through Friday, from 9 to 22, and on Saturday and Sunday from 9 to 15.



The Computer Science Laboratory Building B

- Capacity: 42 seats at tables for 2 persons;
- 21 PC AMD, HDD 20 GB, monitor 15", 14 pieces linked in a network and connected to Internet;
- the installed software allows the user to access the written, audio, video information and to communicate with other persons:
 - Windows 98/2000;
 - MS Office 97, 2000 with all updates;
 - Visual Fox Pro 2002;
 - Visual Basic 2002;
 - Antivirus AVG 7.1 and Norton Antivirus 2003 with automatic update;
 - Adobe Reader 7;
 - MSN Messenger;
 - Yahoo Messenger.

The Laboratory is open Monday through Friday, from 9 to 22, and on Saturday and Sunday from 9 to 15.



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Rector

Historical Overview of the University

Hyperion University was set up in 1990 at the same time with Hyperion Academic Foundation, by the Decree no.2064 from Sept. 14, 1990. The university is a non-profit organization, autonomous and apolitical, having the headquarters in Bucharest, 169 Calea Calarasilor Str. After the accreditation process, Hyperion University was approved



by the Law 275/May 15, 2002, as a part of the national educational system. The university comprises 10 faculties, with 23 speciality domains and 14 master degree programs

Faculties and Departments

- Faculties: Physics, Mathematics - Informatics, Electronics and Computers, Philology, Journalism, Psychology, Sociology and Political Sciences, Law, History - Geography, Arts, Economics;
- Departments: The studies department for the didactic personnel; Applied psychology Department.

Master and Doctoral Programs

MASTER - Materials physics and applications; Criminal law of business; The history of the Romanian literature in the context of the universal literature; Mass-media and social communication; European Integration; Social problems; Psycho-analytical therapies; Geopolitics and the international relations of Romania during the modern and contemporary era; The muzeology in the contemporary society; Financial Audit and counseling; Financial analysis and evaluation; Accounting IT system; Cost, quality, competitiveness; Investments management.

Patrimony

The university buildings are: Building A (7 lecture rooms, 10 course halls, 17 seminar rooms and laboratories, dean's offices, conference hall); building B (23 course halls, 3 lecture rooms, 1 conference hall, 1 laboratory), Dimitrie Pompei Complex (13 course halls), M3 Complex (9 lecture rooms, 19 seminar halls, TV, Radio, Foto studios, 5 laboratories for Psychology and Journalism, 1 Central Library, 1 sports hall, hostel - 320 places.

Fields in which human resources are trained

Mathematics, Physics, Informatics, Geography, Romanian language and literature, Foreign language and literature (English, French, Japanese), History, Law, Psychology, Sociology and social assistance, Political Sciences, Administration Sciences, Communication Sciences, Finance, Accounting, Economy and International Business, Management, Theatre, Cinema and Media, Computers and Information Technology, Electronic Engineering and telecommunications, Industrial Engineering and Management.

Presentation of research activity chart

Research activity is organized in each university/faculty as a component of didactic and research activity:

Prof. Ion Spânulescu, PhD

Human Resources

Professors	91
Senior Lecturers	68
Lecturers	78

Assistant Lecturers	60
Teaching Assistant	19

Research Fellows -

Administrative Staff	121
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Students	4900
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of which:

Undergraduate	4200
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Master	700
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PhD - full attendance	-
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PhD - attendance not required	-
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Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	1250	-
2003	100	-
2002	100	-
2001	450	112000
2000	-	7000
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Structures

Research Institutes	1
Research Centers	1
Research Laboratories	10
Multi-user Research Centers	1

- Hyperion Research and Development Institute;
- Annual scientific communication conferences of the faculties.

Top Priority Research Directions

- Fundamental research in Mathematics, Physics;
- Applied research: Electronics, Computers, Informatics, Psychology, Sociology, Economic Sciences, Journalism, Law, Arts.

Outstanding Research Infrastructure

Domain: Econophysics - Infrastructure contains software and hardware equipment.

Excellence Centers

Programs: RELANSIN, MENER, CERES, MATNANTECH.

International Cooperation

FP5, FP6, PHARE, Socrates, Erasmus, 14-RC8002 Japan Foundation, Max Plank Institute - Germany, POLECER, LEONARDO, Automatic translation roumanian-english as a cooperation with the University from Kishinev; R.Moldova. Computational linguistics; Polar Electroceramics (POLECER) in the framework 7 "Competitive and Sustainable Growth", under contract no.G5RT-CT; COST 525 - Advanced Electroceramics: grain boundary engineering.

The number of papers published in ISI - quoted journals

62
(the most cited 10 papers)

- S. Turbatu, H. M. Srivastava, *Some boundary-layer growth problem associated with a flat plate with suction or injection*, Applied Mathematic and Computation 122, 365-371, 2001;
- C. Miclea ș.a., *Influence of B1 and Y Additions on the Electromechanical Anisotropy of Lead Titanate Ceramics*, Kluwer Academic Publishers, C.Galassi et. al., *Piezoelectric Materials: Advances in Science, Technology and Applications*, 59-66 (2000);
- E. M. Pavelescu, A. Gheorghiu, M. Dumitrescu, T. Jouhti, T. Hakkarainen, N. Tkachenko, V. D. S. Dhaka, H. Lemmetyinen and M. Pessa, *Electron Irradiation - promoted Enhancement in Photoluminescence from GaInNAs/ GaAs Quantum Wells subjected to Thermal Annealing*, Applied Phys. Lett., 85, pp.6158-6160 (2004);
- C. Miclea ș.a., *Piezoelectric Properties of Tungsten Doped PZT Type Materials*, Ferroelectrics, 241, 207-213 (2003);
- C. Miclea, A. Gheorghiu, L. Amarande, C. Tănăsioiu, C. F. Miclea, *Effect of Yttrium substitution on the Structure and Piezoelectric Properties of Lead Titanate Ceramics*, IEEE Electron Device, 2, pp.411-414 (2004);
- R. Kudrawiec, E. M. Pavelescu, J. Andrzejewski, J. Misiewicz, A. Gheorghiu, T. Jouhti and M. Pessa, *The Energy - Fine Structure of GaInNAs/GaAs Multiple Quantum Wells Grown at Different Temperatures and Post-Grown Annealed*, J. of Appl. Phys, 96, pp.2209-2913 (2004);
- C. Miclea, C. Tănăsioiu, A. Gheorghiu and C. F. Miclea, *Mechanical and Electromechanical Nonlinearities of a Piezoelectric Trimorph Type Actuator*, IEEE Electron Device, 1, pp. 71-74 (2002);

- C. Miclea, C. Tănăsioiu, A. Gheorghiu and C. F. Miclea, *Ultrasonic Composite Transducer for Non-destructive Testing of Concrete*, J. of Electrochem. Soc., 19, pp. 187-190 (2001);
- E. M. Pavelescu, A. Gheorghiu, N. Bălățeanu, T. Jouhti, V. Cimpoia and M. Pessa, *Effects of electron irradiation on photoluminescence from GaInNAs/ GaAs quantum wells subject to thermal annealing*, Proceedings of CAS 2004;
- C. Miclea, C. Tănăsioiu, A. Gheorghiu and C. F. Miclea, *Sintering Behaviour of Piezoceramic Powders Prepared by Conventional Ceramics and Mechanical Activation Process*, IEEE Electron Device, 2, 297-300 (2001).

The number of papers published in journals from the main stream of publications

225
(the most cited 10 papers)

- E. M. Pavelescu, M. Dumitrescu, T. Jouhti, A. Gheorghiu, N. Bălățeanu, M. Pessa, *Effects of electron irradiation on photoluminescence from GaInNAs/ GaAs multi-quantum wells subject to thermal annealing*, IEEE Proc. Optoelectron, 2004;
- C. Miclea, C. Tănăsioiu, A. Gheorghiu, C. F. Miclea, V. Tănăsioiu, *Advanced Electroceramic Materials for Electrotechnical Applications*, J. Optoelectron. Adv. Mat., 4, pp. 51-58 (2002);
- Mihaela Ghelmez, Andreea Rodica Sterian, Anca Gheorghiu, Răzvan Ioan Trașcu, *Study of some biological membrane mechanisms by means of nonlinear optical methods*, Romanian Journal of Optoelectronics, no.3, 2004;
- A. Gheorghiu, I. Spănulescu, *Preparation and The Electrophysical Properties of Amorphous - Hydrogenated Silicon Thin Films*, The Hyperion Scientific Journal, 4(1), pp.16-20 (2004);

(Continued on page 347)

International Scientific Activities
(the 10 most important ones)

- The international seminary of Romanian - Japanese folklor;
- The European Japanese Conference for the educational system;
- The flowers festival (a cooperation with Japanese Embassy and JICA);
- The international competition of Japanese language;
- The international cinema symposium;
- The international theatre symposium;
- Tendences in the European film;
- The personality and personalities of the Latino-American film;
- The international theatre festival.

**Products created/homologated/
capitalized/Inventions/Patents**
(maximum 10 significant products)

5

- Patent no. 119569: Method for obtaining an image quality indicator;
- Patent no. 116677: Thermocomuting device with thermomagnetic sensor and permanent magnet;
- Patent no. 116583: Piezoelectric bell with active elements type PZT;
- Patent no. A06542: Ultrasonic device for preventing debris in petrochemical installations;
- Ultrasonic Grinding Spindle. Golden Medal at the International Inventions Convention, Geneva.

(Continued from page 346)

- A. Iuga, C. Miclea, C. Tănăsioiu, R. Iorgulescu, A. Gheorghiu, C. F. Miclea, *Ultrasonic Transducer for Testing the Concrete Structures*, Rom. J. Phys., 46 (9-10) pp.582-587 (2002);
- A. Gheorghiu, I. Spănulescu, *Preparation Methods and the Crystalline Structure Investigations of CdHg1-xTe Thin Films*, The Hyperion Scientific Journal, 2 (2), pp. 113-118 (2001);
- A. Gheorghiu, S. I. Spănulescu, *The Crystalline Structure of ZnTe and CdTe Thin Films*, The Hyperion Scientific Journal, 1 (2), pp. 149-155, (2000);
- C. Miclea, V. Tănăsioiu, A. Gheorghiu, C. F. Miclea and S. Moroianu, *A new and versatile sandwich type ultrasonic transducer for NDT of different materials*, Nondestructive Testing in Civil Engineering, p. 48-55 (2003);
- V. Tănăsioiu, C. Miclea, V. Tănăsioiu, *Nondestructive testing Techniques and Piezoelectric Ultrasonic Transducers for Wood and Built in Wooden Structure*, Optoelectr. and Adv. Mater., 4 (4) 949-957 (2002);
- C. Miclea, C. D. Comeaga, C. Tănăsioiu, A. Gheorghiu, C. F. Miclea, L. Amarande, M. Cioangher, *Moiré Deflectometry Measuring Method for Nonlinear Deformation Measurement of Piezoelectric Bimorph Type Transducers*, Proc. International Conference "Material, Technology and Design of Integrated Piezoelectric Devices, Courmayeur, Italy, February 1-4, (2004).

**The number of papers
published in volumes of
international scientific
conferences with reviewers 38**
(10 papers presented at the most
prestigious events)

- C. Miclea, C. D. Comeaga, C. F. Miclea, A. Gheorghiu, L. Amarande, *Moiré Deflectometry Measuring Method for Nonlinear Deformation Measurement of Piezoelectric Bimorph Type Transducers*, Proc. International Conference "Material, Technology and Design of Integrated Piezoelectric Devices, Courmayeur, Italy, February, (2004);
- C. Miclea, A. Gheorghiu, C. F. Miclea, *A new Type of Active Piezoceramic Transducer for Nondestructive Testing*, Proc. of the 4th International Conference on Advanced Materials (ROCAM), Constanța, 15-18 septembrie, pp. 266 (2003);
- E.-M. Pavelescu, M. Pessa, A. Gheorghiu, *Effect of electron irradiation on annealing behavior of 1.3- μ m GaInNAs/GaNAs/GaAs laser-like quantum wells*, CLEO/Europe-EQEC (2003)- Munich 2003, Codul: CC-11479;
- N. Bălățeanu, A. Gheorghiu, *The Use of Linear Electron Accelerators in the Study of Semiconductor and Optoelectronic Device Behaviour Due to Irradiation*, Proc. of EPAC 2002, Paris, pp. 2783-2785;

- I. Spănulescu, A. Gheorghiu, *The Preparation and Study of GaAs Thin Films*, "PV in Europe from PV Technology to Energy Solutions", Rome, 7-11 October 2002, pp.456-459;
- C. Miclea, C. Tănăsioiu, A. Gheorghiu, C.F.Miclea, *Structural and Piezoelectric Properties of Sintered PZT Ceramics Prepared by Nonconventional Mechanical Activation Process*, Proc. of CIMTEC-2002, Florence, July 13-19, (2002);
- A. Gheorghiu, N. Bălățeanu, I. Spănulescu, I. Drăghici, G. Stoianescu, *Fast Electron Radiation Effects on the Digital Integrated Circuits*, "20th General Physics International Conference of the Turkish Physical Society", Alagna (2001);
- C. Miclea, C. Tănăsioiu, A. Gheorghiu, C. F. Miclea, *Effect of Nickel Addition on the Properties of a Soft PZT Type Material*, Proc. of International Congress "Piezoceramic Material for the End Users" Interlaken, Switzerland, 24-27 February, (2002);
- C. Miclea, C. Tănăsioiu, A. Gheorghiu, C. F. Miclea, *Sintering Behaviour of Piezoceramic Powders Prepared by Conventional Ceramic and Mechanical Activation Process*, International Semiconductor Conference, Sinaia, România, 9-15 oct., (2001);
- C. Miclea, C. Tănăsioiu, A. Gheorghiu and C. F. Miclea, *Ultrasonic Composite Transducer for Nondestructive Testing of Concrete*, Proc. International Congress of Acoustic, Roma, Italy, vol.2, pp.52-55, 1-8 sept., (2001).



Rector

Prof. Nicolae Niculescu, PhD

Historical Overview of the University

1990 - 1991 "Petre Andrei" University (PAU) was founded having as components the faculties of Law, Economics and later, Psychology and Social Care, Political Sciences.



Accredited by the Law no. 408/20 June, 2002 as a private institution of with public utility. Following the merger with "Appolonia" University, the Faculty of Dental Medicine, the College of Dental Technique and Dental Care, the Faculty of Communication Sciences are part of PAU.

Faculties and Departments

- Faculty of Law; Faculty of Economics; Faculty of Psychology and Social Care; Faculty of Political Sciences; Faculty of Communication Sciences; Faculty of Dental Medicine;
- Departments (didactic activity; scientific research; foreign relations, for students, juridical)

Master and Doctoral Programs

MASTER - European Economic-Financial Management; European Law; Screening Oral Microbiosis in Dental Practice.

Patrimony

Five buildings with 11000 sqm. useful for education purposes.

Fields in which human resources are trained

Finance; Economics; Law; Dental Medicine; Communication Sciences; Sociology; Social Care.

Presentation of research activity chart

Inner; Grants.

Structures

Research Institutes	-
Research Centers	2
Research Laboratories	1
Multi-user Research Centers	-

Top Priority Research Directions

1. Transition management;
2. The new economics in Romania: structures, conducts, performances;
3. Improvement of financial structures of Romanian economy;
4. The evolution and the perspective of the European juridical order in the context of adoption of the EU Constitution;
5. The turnover of the private right institutions between novelty and adaptability;
6. Interpersonal public relations and communication;
7. Interpersonal culture and communication;
8. Oral sanogenesis;
9. Control release of the active principles of drugs - "intelligent" nanoparticles.

International Cooperation

- LT/04/Ex/ 1/ 0693;
- Training of entrepreneurial skills in higher educational institutions (Program Leonardo Da Vinci);
- 116919 - CP - 1 - 1 - 2004 - 1 - DK;
- European Studies, Intercultural Communication;
- Minerva (Socrates) grant.

Human Resources

Professors	19
Senior Lecturers	18
Lecturers	48
Assistant Lecturers	39
Teaching Assistant	33
Research Fellows	2
Administrative Staff	79
Students	4529
of which:	
Undergraduate	-
Master	274
PhD - full attendance	-
PhD - attendance not required	-



International Scientific Activities (the 10 most important ones)

- First International Congress Developed Under the Aegis of the European Society of Dental Pharmacology and Dental Materials: "Drugs, Biomaterials, Equipment and Techniques", Iași 27.02-01.03.2002;
- Les Journées Roumaines - Belges d'Odonto-Stomatologie, Iași 05-08.11.2003

International Affiliations

- "Petre Andrei" University is a member of:
- International Society for Interchanging New Ideas (ISINI);
 - International Association of Universities (IAU);
 - SPACE (European Network for Language and Business Studies);

- The American Society of Prevention;
- Center of WHO collaboration;
- I.A.S.P. (International Association of the Study of Pain) - USA.

International Cooperation

- Our University collaborates with:
- L'Institut de Professions des Affaires et du Commerce of Annecy, France;
 - Paris 5 University, France;
 - Academy of Implantology, Lausanne, Switzerland;
 - Hokkaido Tokai University Japan;
 - University of Perugia, Italy;
 - Vilnius College, Latvia;
 - Moldavia's Academy of Sciences;
 - The Chemistry Institute of Moldavia's Academy;
 - The Institute of Applied Physics.

The number of papers published in journals from the main stream of publications 635 (the most cited 10 papers)

- Adumitrăcesei I., Niculescu N. "A decade And a Half of Post-socialist Transition" *Economistul* no. 1741/2004;
- Andronic B. "The Development of the Market System on Romania. A Neo-Institutional Approach" *Economistul*, 22.11.2004;
- Dumitrașcu V., Dumitrașcu R., Bostan I. "Structural and Institutional Problems of Post-socialist Transition in Romania" *Economistul*, 01.11.2004;
- Filip Gh., Badea Cristina "Considerații asupra noțiunii de ordine interioară" *Revista română de dreptul muncii* no. 1/2002;
- Apetrei I. "Filiation within Medical Assistance for Child Conceiving", *Revista Dreptul* no. 9/2001;
- Mihai Mihaela "Physical Assault. The Subjective Side" *Revista de drept penal* no. 2/2003.

The number of papers published in volumes of international scientific conferences with reviewers 130 (10 papers presented at the most prestigious events)

- Niculescu Nicolae, *State Involvement in the Mechanism of Transition Economy*, The Maastricht ISINI-Papers, vol I,

Shaker Publishing BV, The Netherlands, 2000, pp 429-435;

- Andronic B, Sabău V, Shimada H., *New Lifts of Sasaki Type of the Generalized Lagrange Matrix*, Proceedings, Hokkaido-Tokai University Science and Engineering no.12 Sapporo, Japan, pp. 9-14;
- Andronic B, Dumitrașcu V., *Within the Economic Transition in Romania is an Economic Model Possible?*, Economic Issues and Globalization: Theory and Evidence (Part I), Universidad Nacional Autónoma de Mexico, 1999, pp. 252-6;
- Druguș L., *Enviro-ethics, Business Ethics and the Ecological Principle in Economic Education*, The Maastricht ISINI-Papers, vol I, Shaker Publisher BV, The Netherlands, 2000, pp. 139-147;
- Niculescu N.G., Adumitrăcesei I.D., *The Socialist Transition in Our Contemporary Epoch*, Economic Issues and Globalization: Theory and Evidence (Part 1), Universidad Nacional Autónoma de Mexico, 1999, pp. 230-241
- Druguș L., *Towards a Global Equilibrium. Is Equilibrium Only a Problem of Macroeconomics?* Economic Issues and Globalization: Theory and Evidence (Part 1), Universidad Nacional Autónoma de Mexico, 1999, pp. 20-28;
- Andronic B., *Cybernetic Elements of the Market and Production System*, The Maastricht ISINI Papers (Vol 1.) Shaker Publishing BV, The Netherlands, 2000, pp. 7-16;
- Andronic B., Bostan I., *Quality Aspects regarding the Evaluation of Company Efficiency and Value*, Vol. 5 of the International Conference of Scientific Communication with the theme "Modern

Technologies, Quality, Restructuring", Kishinev, 2001, pp. 46-50;

- Sandu Irina Crina, *The Monument- Its Tradition and its Future*, The VIth International Seminar Organized by Forum UNESCO, Valencia, September 2001;
- Ionescu Dunarea, Patras Xenia, *A Study on the Effect of the Association of Paracetamol with Antihypertensives*, The Pharmacology Congress, Prague, 2002;
- Mares M., Patras Xenia, *The Antifungus Activity of a New Propiconazol Derivate*, The XIIth Pan Clinical Congress of Pharmacy, Athens, May, 14-16, 2005
- Mares M., Patras Xenia, *Testing the Antimicrobial Activity of The Almagyn Ovules*, Fifth International Meeting of Biopharmaceutical and Technology, Nuremberg , 15-19.03.2004;
- Mares M., Patras Xenia, *Fungemias produced by Rare Species of Candida*, The Tenth Congress of the European Confederation of Microbiology, Wrocław, 16-20.06.2004.

The number of scientific books published by publishing houses acknowledged abroad 2 (maximum 10 significant books)

- *The Geometry of Higher-Order Hamilton Spaces Applications to Hamiltonian Mechanics* - R. Miron, Kluwer Academic Publishers, FTPH, no.132, 2002;
- *The Geometry of Hamilton and Lagrange Spaces* - Miron R., Hrimiuc D., Shimada H., Sabău V., Kluwer Academic Publishers, FTPH, no. 118, 2000.



Rector

Historical Overview of the University

In 1990, the “Nicolae Titulescu” Law and International Relations Foundation set up this university as a private higher education institution. Based on the Government’s Decision no. 658/1995, the university was granted an authorisation for provisional functioning. It is the first private institution accredited by the National Council for Academic Evaluation and Accreditation to offer specialisation courses in law (Act 241/2002).



Faculties and Departments

- The Faculty of Law;
- The Faculty of Finance and Accounting;
- The Faculty of Social Science and Administration.

Master and Doctoral Programs

MASTER:

- The Law Faculty: Business Law- International and Community Law- Penal Science;
- The Faculty of Finance and Accounting: Financial, Banking and Stock-Exchange Management.

Doctoral Programs: The Faculty of Law.

Patrimony

Gymnasium and sports field. Student’s Hostel: 410 beds, 3 lecture halls, 1 reading room. The University: 6 lecture halls, 34 seminar rooms, 5 informatics laboratories, 1 criminology laboratory, library, reading room.

Fields in which human resources are trained

Law, Sociology, Social Assistance, International Relations and European Studies, Administrative Sciences, Finance, Accounting.

Presentation of research activity chart

At the department’s level.

Top Priority Research Directions

1. Rethinking scientific research from the point of view of the research areas and turning them to the best possible usage.
2. Expanding our scientific collaboration with other universities and research institutes from our country and abroad. Organising scientific conferences.
3. Editing scientific publications autonomously or in collaboration.
4. Encouraging and supporting the young teaching staff and the contract - based research.



Library

Prof. Ion Neagu, PhD

Human Resources

Professors 33

Senior Lecturers 18

Lecturers 17

Assistant Lecturers 20

Teaching Assistant 8

Research Fellows -

Administrative Staff 35

Students 3681

of which:

Undergraduate 3140

Master 515

PhD - full attendance -

PhD - attendance not required 26

Financial resources obtained for research

	National millions RON	Internat. EURO
2004	150	-
2003	-	-
2002	-	-
2001	-	-
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Rector

Prof. Benone Puşcă, PhD

Historical Overview of the University

"Danubius" University Galati was founded in 1992 and the Faculty of Law authorised by Government Decision 1371/96. The Faculty of Economics was authorised by Government Decision 294/97. The Law Faculty was accredited by Law 409/2002 and the Faculty of Economics also by the Government Decision 940/2004. The Faculty of Communication Sciences was authorised by Government Decision 693/2003. The Faculty of International Relationships and European Studies is under the authorisation process.



Faculties and Departments

- 3 (three) Faculties (of Law, Economics and Communication Sciences);
- 1 (one) Department (Scientific Research).

Master and Doctoral Programs

MASTER - 3 (three) programmes (Community Law; European Public Administration Law; Financial and Public Administration Management).

Patrimony

2 (two) buildings, with a total surface of 6080 square m. used for the academic purposes.

Fields in which human resources are trained

Law, Finances, Accounting, Communication Sciences.

Presentation of research activity chart

The scientific research activity at "Danubius" University Galati is performed within each Chair, in the Research Department as well as in the Juridical, Economic and Applied Informatics Research Centre. The operative management is ensured by the Chair Leaders and by the Heads of the Research Centre and the Research Department.

Structures

Research Institutes	0
Research Centers	2
Research Laboratories	1
Multi-user Research Centers	0

Top Priority Research Directions

The strategic objective is to promote scientific research in juridical, economic, applied computer science and EU integration issues. The research is oriented to values of democracy in terms of law state principles, the economic reform along the transition period; education based on computer and web; qualification in information and communicating technologies; I.T. instruments and AI studies in diagnosis of technical and economical domains.

Outstanding Research Infrastructure

Campus network made up of 52 computers and structured on fields of activity, four servers placed in two separate buildings, capable of generating a 1 Gb/s local connection speed and a minimum 256 kb/s internet connection speed through optic fibres. Multimedia laboratory. Photo laboratory, radio broadcasting station.

Human Resources

Professors	7
Senior Lecturers	12
Lecturers	26
Assistant Lecturers	16
Teaching Assistant	6
Research Fellows	1
Administrative staff	18
Students	3044
of which:	
Undergraduate	2568
Master	476
PhD - full attendance	0
PhD - attendance not required	0

International Cooperation

- Leonardo da Vinci Trans-national Project, EUR 56,000: EUQuaSIT (European Qualification Strategies in Information and Communication Technologies), Leonardo da Vinci II - initiated by the University in Flensburg, Germany, in which "Danubius" University Galati is a partner (along with other five partners), 2001 - 2004;
- Socrates Erasmus students' mobility from Turin University (Italy) - started;
- Research co-operation with Flensburg University, Germany (ICT qualifications);
- Research co-operation with Oxford Computing Laboratory, UK (Hybrid Intelligent systems).

International Scientific Activities (the 10 most important ones)

- QTICT '02 - International Conference on Qualification and training in Information and Communication Technologies, under the aegis of EUQuaSIT, funded by the European Commission - 2002;
- "The 4th National Symposium of the Romanian Regional Sciences Association, with International Participation" - 2004;
- Scientific Session with International Participation on "Human Rights as First - Rate Issues in International Relationships", "Romanian Law and the European Integration";
- "The Values of Democracy in Terms of Law State Principles";
- "Development Strategies within the Context of Globalisation".

The number of papers published in ISI-quoted journals

4

(the most cited 10 papers)

- Ariton V., *Deep and shallow knowledge in fault diagnosis*, Lecture Notes in Artificial Intelligence LNAI 2773, Palade V, Howlett R. J., Lakhmi J. (Eds), Springer-Verlag, Berlin, (ISI Master Journal List: ISSN: 0302-9743), pp.748-755, 2003;
- Ariton V., *Handling Qualitative Aspects of Human Knowledge in Diagnosis*, in "Knowledge Based Intelligent Information and Engineering Systems", M.G. Negoita, R.J. Howlett, L. C. Jain (Eds), Lecture Notes in Artificial Intelligence LNAI 3214 Springer-Verlag, Berlin, (ISI Master Journal List: ISSN 0302-9743), pp. 382-390, 2004;
- Ariton V, Palade V, *Human-Like Fault Diagnosis Using a Neural Network Implementation of Plausibility and Relevance*, Neural Computing and Applications Journal, Springer Verlag, 2004 (Online <http://www.springerlink.com/index/10.1007/s00521-004-0449-5>) ISSN: 0941-0643 (Paper) ISSN: 1433-3058 (Online);
- Ariton V., *Handling Qualitative Aspects of Human Knowledge in Diagnosis*, Journal of Intelligent Manufacturing, USA, Kluwer Academic Publishers (in press).

The number of papers published in journals from the main stream of publications

155

(the most cited 10 papers)

- Pușcă Benone, *The Fundamental Rights at the End of the Millenium*, published in Journal of the University in Toronto, Political Science Department, 1991;
- Negruț Vasilica, *Damage Lawsuit in the Administrative Legal Department*, in the "Judicial Courier" Magazine, 1st issue/2003;
- Ionescu Romeo Victor, *Inflation, Output and Aggregated Demand*, Legislation and Economics, Galati, 5/2001;

- Ionescu Romeo Victor, *The Inter-regional Development: Small Firms and the Technical Progress*, Romanian Society of Statistics, Romanian Regional Science Association, Bucharest 1/2001;
- Chebac N., *The Calculation and Registration of Taxes on Micro - Firm Revenues*, in "The Administration and Accounting of Firms" Review, 11th and 12th issues, 2001, Bucharest;
- Trandafir M., *Euro has Successfully Entered the Stage*, Financial Market Magazine, 3rd issue, March 2002, Bucharest;
- Frosin C., the studies *Emil Cioran et ses vrais rapports avec Dieu (Emil Cioran and his real relationships with God) and Cioran n'a rien d'un antisemite (Cioran Nothing of an Anti-Semite)*, published in the "Nouveau Lettre" Journal, Naples, Italy, 11th issue/2002;
- Pripoie R., *Statistical Evaluation and Forecast of Firm Bankruptcy Risk*, published by the subsidiary of the Romanian Academy, October 2002;
- Dragomir G., *The Impact of Risk Factors on Bank Management - Recent Evolutions and Prospects*, the Annals of "Dunarea de Jos" University Galati, 2000;
- Tulbure S., *The Free Circulation of Persons: Economic and Juridical Incidents*, Commercial Law Review, 3rd issue/2005.

The number of papers published in volumes of international scientific conferences with reviewers

83

(10 papers presented at the most prestigious events)

- Pușcă B., *Considerations on Constitutional Regimes* International Science Practical Conference, Kishinev, 2004;
- Ariton V., *The asymmetries of Information Society*, Cambridge Conference on Structural reform and the Transformation of Businesses and Organizations, Homerton College, Cambridge 3rd-5th Sept., 2003;

(Continued on page 355)



Key role played in certain fields

Benone Pusca. For his eminent contribution to the development of Romanian education and promotion of scientific research in Romania, he was conferred the "Praiseworthy Achievements in Education" Order, that ranked him as a "High Officer".

- He is mentioned in international encyclopaedias: "The Contemporary Who's Who 2003", published by the American Biographical Institute, USA

Viorel Arlton - Regular Reviewer for "International Journal of Knowledge - Based Intelligent Engineering Systems" IOS Press.

- Regular Reviewer for "International Journal of Hybrid Intelligent Systems" IOS Press;

- Reviewer for a special issue of "Computational Intelligence in Knowledge Engineering Systems";

- Reviewer for a special issue of "International Journal of Fuzzy Systems".

Frosin C. - Considered as an illustrious Francophile ("Défense de la Langue Française" Review, 214th issue/2004), he was nominated by UCC (United Cultural Convention - USA) for the International Peace Prize, an award granted only to those previously selected for outstanding achievements.

- Laureate of the European Parliament in 1995, C. Frosin was to receive - among other distinctions - "La Médaille du Rayonnement Culturel" (The Medal for Cultural Enlightenment) - subsequent to a decision of a Jury chaired by the President of France;

- Great Prize of the Academy, in 1999, the Gold Medal of the International Academy in Lucece, and in 2000, the rank of Chevalier bestowed by the French National Order of Arts and Letters;

- Paul von Melle, a well known reviewer and also a director of the "Inedit nouveau" magazine in Belgium, declared that all Romanian translations do exist thanks to C. Frosin;

- The 1st French - Romanian Slang dictionary Nemira Pbsb, Bucharest;

- The 1st French - Romanian juridical dictionary (for those working in administration, in view of the passage to the acquis communautaire) "Danubius" Academic Foundation Pbsb., Galati, 2003;

- Due to him, Romania is the only state that has ever been dedicated three issues of the foreign magazine "Le courrier francophone" at first and after a short while

(Continued from page 354)

• Arlton V., Baciu C., *Knowledge Elicitation and Case Tool for Fault Diagnosis in Multifunctional Conductive Flow Systems*, 5th World Multiconference on Systemics, Cybernetics and Informatics (SCI2002), Electronics, Informatics and Control Systems - Invited Session, Organizer: Marin Bica Romania, Volume XXII, Orlando, Florida, USA, July 14-18, 2002 (<http://200.75.139.138:1081/Website2002/Default.htm>);

• Ionescu R.V., *Tender spots in negotiations the integration of Eastern Europe's states within the European Union, Defence, Security and Economic Development in the Balkans and Eastern Mediterranean*, 1st International Conference, TEI, Larissa, Greece, 22-24.06.2001;

• Ionescu R.V., *New regional model of firm location: Study case: Region of Brăila-Romania*, Sixth Annual Conference, CREEB Buckinghamshire, UK, 2000;

• Dragomir G., *Monetary Policies - Economic and Banking Interconnections*, in "The Integrations of Financial and Monetary Policies in Long - Lasting Development Strategies", Pbsb. Junimea, Iasi, 2002, pp. 246 - 257 ISBN 973-37-0714-7, International Finance and Banks Science Conference, "Al. I. Cuza" University, Iasi, 2002;

• Dragomir G., *The Quality of Firm Management - Prospects in Financial Analysis and the Bank Crediting Decision*, "Al.I.Cuza" University, Iasi and "Pierre Mendez" University, Grenoble, France, "Dialogue Culturels et développement économique européens", Iasi 2002;

• Marchis G., *Small and Medium - enterprises development between necessity and possibility - case research the region no. 2 of Romania - South-East*, The 17th European Advanced Studies Institute in Regional Science, Faculty of Economics Split, Croatia, 2004;

• Maftei J., *Consular Functions in Civil Status Problems*, International Science Conference, "Present Constitutional Development of the Moldavian Republic", Kishinev, 2004;

• Chebac N., Marinescu L., *Obtaining the True and Fair View - A Fundamental Objective Aimed at by the European Accounting*, the Proceedings of the 5th Biennial International Symposium SIM-PEC 2004, vol. II, "Transilvania" University, Brasov.

The number of scientific books published by publishing houses acknowledged abroad

46

(maximum 10 significant books)

• Arlton V., *Softcomputing Models in the Fault Diagnosis of Conductive Flow Systems*, in "Computational Intelligence in Fault Diagnosis", Palade V., Jain L. C. (Eds), Springer, London, 2005, 65 pag., (in press);

• Chebac N., *Financial Accounting in the Context of the Accounting Regulations Harmonized with European Directives (O.M.F.P. 306/2002)*, Ed. Didactica si Pedagogica, Bucharest 2003, ISBN 973-30-2406-6, 320 pages;

• Dragomir G., *Banking Activity and Risk in Economy - World and National Co-ordinates*, Monograph published by Ed. Didactica si Pedagogica., Bucharest, 2003, 327 pages, ISBN 973 - 8316 - 58 - 8;

• Frosin C., *La Traduction entre Mythe et Réalité*, 400 p., ed. Le Brontosauire, Paris, 2003; *Du Non Sens au Paradoxe (essais)*, 200 p., ed. Le Brontosauire, Paris, 2002;

• Humă I., *La genese de la conscience morale*, ed. Le Brontosauire, Paris, 2003, 200 pages;

• Ioan C., *Mathematics Applied in Economics*, Ed. Didactica si Pedagogica, Bucharest, 2004, 473 pages;

(Continued on page 356)

Presentation of Laboratories

International Affiliations of the University

International Cooperation



another two issues - an unprecedented case in the whole history of this magazine published by the Francophone Academy.

Ionescu R.V., mentioned in international encyclopaedias: "The Contemporary Who's Who 2003", published by the American Biographical Institute, USA; "The Contemporary Who's Who of Professionals" 2004, published by the same institute, he is also nominated by the International Biographical Centre in Cambridge, U.K. as an "International Educator of the Year 2004".

- He is an evaluating expert at the National Council of Higher Education Scientific Research in Romania and also a Fiman Development Services Expert (2004);
- He is a Laureate of the "Praiseworthy Achievements in Education" Order of Knighthood, in the rank of Chevalier (published in the Official Gazette of Romania no. 1181/ 13.12.2004).

Pripoie R. - A first - rate role in the adapting of the Altman and Conan - Holder Score functions to Romanian realities, her theory being unanimously accepted by the doctoral commission.

Zaharia A. - Laureate of the "Praiseworthy" National Order of Merit as a High Officer, for noteworthy accomplishments in working out jurisprudence factors, justice reforms and a correct enforcement of laws, by Decree no. 527/2000.

Păunescu C. - Member of the Professional Journalists Union in Romania and of the Romanian Writers' Union.

Presentation of Laboratories

1st Laboratory. I.T. Applications in Economy: Products and Tendencies in Business Intelligence, Marketing and Financial Diagnosis;
2nd Laboratory. Forensic Medicine.

Members of International Associations

- **Puşcă Benone** - Member of the Romanian Scientists Academy and of the Science Academy in New York;
- **Ariton Viorel**, Member of the Romanian Automatics and Technical Computer Science Association;
- **Dragomir Georgeta** - Founding Member of the European Firm Management Institute, Galati Subsidiary, "Dunarea de Jos" University;
- **Frosin C-tin.** - Association des Écrivains de Langue Française (Association of French - Writing Authors) since 1991;

(Continued from page 355)

- **Ionescu R.V.**, *Treatise of Macroeconomics*, Ed. Economica Psh., Bucharest, 2003, 366 pages;
- **Mattei J.**, *Lawful Regime of Consular Activity (Monograph)*, USM Polygr. Ed. Centre, Kishinev,

2004, 168 pages, ISBN 9975-70-464-6 (co - author);

- **Pripoie R.**, *Treatise of Statistics*, EDP, Bucharest, 2004, 358 pages;
- **Tulbure S.**, *Romanian Commercial Law*, 3 vols. EDP, Bucharest, 2002, 1500 pages.

- **SPAF** - Société des Poètes et Artistes de France, since 1991;
- **SPF** - Société des Poètes de France, since 1998;
- **PEN CLUB INTERNATIONAL**, French and Belgium Sections;
- **Francophile Academy** - since 1991;
- **International Academy in Lutece** - since 1999;
- **European Academy** (corresponding member) - since 2001;

- **Huma Ioan.**, Member of the International Law Philosophy Association;

- **Ionescu R.V.**, Founding Member of the General Associations of Economists in Romania, the Subsidiary in Braila; Member of the Hellene Association in Romania; Member of the Romanian Regional Science Associations, affiliated to the European Union;

- **Ana Calin** - Member of the International Black Sea Club (Galati Subsidiary) activating in LoDES (Long Distance Education Systems) since 2000;

- **L.M. Marinescu** - Member of the International Black Sea Club (Galati Subsidiary) activating in LoDES (Long Distance Education Systems) since 2000

- **Marchis G.**, Member of the Romanian Regional Science Associations.
- Member of **ERSA** (European Regional Science Associations);

International Affiliations of the University

"Danubius" University is a member of **EDEN** - European Distance Education Network, since 2002.

International Cooperation

- **Teaching and Research Cooperation Contract** with the University in Flensburg, Germany, 2003.
- **Cooperation with Oxford Computing Laboratory**, Oxford UK since 2003.



Research center



Conference room

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	30	13568
2003	18	0
2002	15	13568
2001	100	18090
2000	50	0
1999	152	0
1998	0	0
1997	6	0
1996	0	0
1995	0	0



Rector

Prof. Toader Gherasim, PhD

Historical Overview of the University

“George Bacovia” University was set up in 1992 within the framework of the George Bacovia Cultural Scientific Foundation. In 1994, on the already existing academic structure, a group of personalities of the scholarly community made put into practice a real curricular reform aiming at obtaining from the part of the Romanian Government the license to develop a higher education system in the field of Managerial Accounting and Informatics. The years 1998-2001



brought four more licenses: Management, Marketing, Public Administration and Economic Informatics. Throughout its entire education and scientific research activity the “George Bacovia” University proved to gain the recognition of the scientific potential of its own teaching staff, fact demonstrated by the Law 237/2002.

Faculties and Departments

- The Department of Accounting and Business Data Processing
- The Department of Management
- The Department of Business Management
- The Department of Part-Time and Long - distance Education

Master and Doctoral Programs

MASTER - Financial Accounting Management, Business Management, Business Marketing, The Management of Resources in Public Administration.

Patrimony

The value of the patrimony at 31st December 2004 was estimated at 109.416.697.000 ROL. The University has its own area for the educational process and scientific research of 3600 sq.m., as well as other rented rooms. On the whole we have: 4 lecture rooms, 8 laboratories out of which 4 are used for the scientific research; 14 seminar rooms; administrative and management room.

Fields in which human resources are trained

1. Economics
2. Administrative Sciences

Presentation of research activity chart

The activity of scientific research is stipulated within the norms of the teaching staff as well as within the professional obligation of the master students. There are drawn up, within each department, yearly plans for scientific research that include fundamental and applicative themes in connection with the objectives and strategy of the respective staff. The new research center has functions of proper research and of managing of the university research activities.

Structures

Research Institutes	0
Research Centers	1
Research Laboratories	4
Multi-user Research Centers	0

Top Priority Research Directions

The financial administration of resources at the commercial societies; Managerial Strategies; Market Surveys.

Outstanding Research Infrastructure

The Scientific Research takes place within four laboratories which are constituted on certain research directions (management laboratory, marketing laboratory, accounting and financial analysis laboratory, audit laboratory).

Human Resources

Professors	11
Senior Lecturers	2
Lecturers	18
Assistant Lecturers	6
Teaching Assistant	4
Research Fellows	0
Administrative Staff	27
Students	2690
of which:	
Undergraduate	2211
Master	479
PhD - full attendance	0
PhD - attendance not required	0



The research material basis is provided by 160 computers, 6 video-projectors, 2 OHPs, 10 printers to which we may add collections of case studies, documentary materials, bibliography on various issues, enterprise games etc.

International Cooperation

- The University has been a member of the non-profit European Academic Organization SPACE since 2004;
- Joint author within the project financed by the European Commission with the theme "European Studies - Intercultural Communication" - An Intensive European Course supported by ICTS);
- Member in CEEMAN;
- There are international collaboration protocols between our university and universities from Italy (Perugia), Cyprus (Nicosia), Belgium (Gent) etc.

International Scientific Activities (the 10 most important ones)

- The Moldavian - Romanian international scientific symposium "Achievements and trends in implementing mechanisms of the competitive economy", Kishinev;
- Romanian - Moldavian international symposium "Economics on the brink of the new millenium", Bacau, December 2000;
- Romanian - Moldavian symposium "New dimensions of the economic - financial administration within the competitive economy" Bacau, 2003;
- International Symposium "Economics with a view to the European Integration", Bacau, 2004.

Products created/homologated/ capitalized/Inventions/Patents (mention maximum 10 significant products)

- 13**
- Cecal Al., Paraschivescu A. s.a.: *Procedeu de depoluare a apelor pluviale colectate in urma penetrarii haldelor cu minereu uranifer*, Brevet RO 18531
 - Cecal Al., Paraschivescu A. s. a.: *Procedeu de extractie a ionilor de uraniu cu tributilfosfat in hexena*, Brevet RO 119459
 - Bontas Dumitru: *Motor hidraulic rectiliniu*, Brevet RO 78389
 - Bontas Dumitru, Profir Dan: *Reductor de turatie*, Brevet RO 83077

The number of papers published in journals from the main stream of publications 122 (the most cited 10 papers)

- Pavaloaia W., Pavaloaia D.: *Patrimony Evaluation Methods*, Economic Tribune no. 29-31, 2003
- Lupu N.: *The Effect of Involving the Invested Capital*, Economic Tribune, no. 46, 2001;
- Bontas D., Paraschivescu A.: *Company Environment, Quality and Management Journal*, no. 4, 2004;
- Gherasim D.: *The Role of Utilities in Price Negotiation*, The Trade Journal, no. 7, 2001;
- Gherasim T.: *The Touristic Market*, Marketing - Management Journal, no. 1 - 2, 1998;
- Puiu T., Puiu V.: *Possibilities of creating favorable residual stresses in the superficial layer of the ball screw run ways*, *Economical issues*, The Mechanics of Solids Institute Journal, under the aegis of the Romanian Academy, Bucharest, 1999;
- Tudose A.: *Multimedia Databases*, Economic Tribune no. 21, 1998;
- Drugus L.: *What will the weather be like on the world financial markets?* "Theoretical and Applied Economics" Supplement of the Economist newspaper no. 593-594 din 4 mai 2000;
- Gherasim A.: *The Marketing Information System*, The Trade Journal, no. 9 (33), Year III, 2002
- Fotache G., Cisca V.: *The Optimization of the Company's Capital Structure*, Economic Tribune, no. 45, 2003.

The number of papers published in volumes of international scientific conferences with reviewers 73

(10 papers presented at the most prestigious events)

- Paraschivescu V., Nistor D.: *Contributia a l'étude des possibilités pour le traitement de resins*, Chimie Aplique - Colocviu Român - Francez, Bacau, 2000;
 - Bilba R.: *CASE instruments. UML Language Applications*, Vol. The International Scientific Symposium "Achievements and Tendencies in the implementation of the competitive economy mechanisms", Kishinev - Republic of Moldova, 2000;
 - Puiu V., Puiu T.: *Favourable Initial (Remanent) Tensions in Ellicoidal Ball Transmissions*, *Economic Estimatioms*, Tehnomus Scientific Conference, Suceava, 1999;
 - Paraschivescu A., Bilba R.: *The New Dimension of the Bar Code*, *Achievements and Tendencies in Implementing the Mechanisms of Competitive Economy, Materials and Syntheses*, Kishinev, Republic of Moldova, 1999;
 - Gherasim D., Puiu T.: *Ways of Interpreting Exchange Relations*, *Knowledge and Progress*, Sibiu, 2002;
 - Branza A.: *Companies Reference on the Internet*, *Proceedings of 2nd International Conference on the Management of Technological Changes*, Bucuresti, 2001;
 - Drugus L.: *Ethics is Political Economics. Moral behavior is Good Management*, in *Philosophy for Business*, no 9, 13th June 2004;
- (Continued on page 360)

- Bontas Dumitru: *Stand pentru încercarea la oboseala de contact a transmisiiilor surub piulita cu bile*, Brevet RO 83157
- Puiu Vasile, Bontas Dumitru: *Piulita pentru transmisii elicoidale cu bile*, Brevet RO 91811
- Filimon Liviu, Bontas Dumitru: *Aparat pentru perceptia ortogonalitatii liniilor*, Brevet RO 93921
- Filimon Liviu, Bontas Dumitru: *Aparat pentru perceptia unor arii*, Brevet RO 93924
- Gherghel Mihai, Dumitru Bontas: *Freza-disc reglabila*, Brevet RO 94155.



The Laboratory of Accountancy, Financial Analysis and Financial Administration Informatics



The purpose of the laboratory is to provide a high technological standard (compatible with those from western universities) not only for the initial and continuous formation of students, on the one hand, but also of the teaching staff, for the organization and elaboration of lectures in different forms that would completely fit the international university standards and demands, on the other hand.

The laboratory is used for the completion of the scientific research field performed by interdisciplinary teams formed for the teaching staff and students. The information facilities are successfully used by the teaching staff that take part in doctoral programs, in drawing up the applicative and research components of different papers.

The Marketing Laboratory

The purpose of the laboratory is to ensure a good professional training of students and master students in the field of Marketing, to allow them to apply the knowledge acquired during the lecture, to facilitate the access to different sources of information, data bases, collections of on-line publications, virtual libraries.



Location: BACAU, 96 Pictor Aman Street,
Phone number: 0234-562.600;

(Continued from page 359)

- Pavaloaia W., Pavaloaia D.: *Riscul în economie*, Buletinul științific U.C.C.M. Kishinev, Republic of Moldova, 1999;
- Tudose A., *Virtuellement, vôtre*, IEAI International Conference Craiova, 1997;
- Puiu T., Puiu V., Ciucescu D., Macarie F.: *Economical effects of the favorable residual stress on ball screw*, DAAM International Vienna, Annals of DAAM & Proceeding of the 14th International DAAM Symposium, Vienna - Austria, 2003.

The number of scientific books published by publishing houses acknowledged abroad 80
(maximum 10 significant books)

- Ciucescu D.V., Bontas D., *Some Ways to Improve Higher Techno-*

logical Education Activity to Meet Social Needs, Romanian Academy, Iasi Office, TSTM-5, 1999;

- Ciucescu D.V., Bontas D., *Du virtuel au matériel par le prototype rapide*, Univ. Hassa 1st Publishing House, Settat, Maroc, 1999;
- *Managementul productiei industriale*, Editia a II-a revizuita si completata, Editura Tehnico-Info Chisinau, 2004;
- Gherasim T., Caraus M., *Calculatia costurilor*, Editura Universitatii, Kishinev, Republic of Moldova, 1993;
- Puiu T., *Managementul aprovizionarii*, Editura Tehnico-Info, Kishinev, Republic of Moldova, 2004;
- Gherasim T., Caraus M., *Preturi si tarife*, 320, Firma Editorial - Poligrafica "Tipografia Centrala" si Editura Universitatii, Kishinev, Republic of Moldova, 1998.

The laboratory has as a goal to ensure a good documentation of the marketing experts that would enable them to realize applicative research in the field

The Management Laboratory

The Management Laboratory was set up with the purpose of being organized as a simulated enterprise. The virtual firm is an instrument of practical training in economics, that uses procedures and means identical to those from real firms, except the products and money that are virtual.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	464	50000
2003	400	18875
2002	528	18000
2001	973	56247
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



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Prof. Cornel Haranguș, PhD

Historical Overview of the University

Founded in 1991, the "TIBISCUS" University of Timisoara - Romania has functioned with a number of 5 faculties, reaching at the present the number of 8 faculties.

Since 17.07.2002, "Tibiscus" University has become a part of the national system of education, being accredited by the Romanian Parliament.



Faculties and Departments

- Faculty of Computers science - Computer science;
- Faculty of Design - Design;
- Faculty of Economics - Economics and Applied disciplines;
- Faculty of Journalism - Journalism;
- Faculty of Law and Public Administration - Law;
- Faculty of Modern Applied Languages - Modern Applied Languages
- Faculty of Psychology - Psychology;
- Faculty of Physical Education - Physical Education.

Master and Doctoral Programs

MASTER - Style and fashion; Marketing and design; Web design for e-Business; EU law and European integration; Computers science and mass-media; Management and marketing in advertising; Quality control in economy; Accounting and book-keeping for local public administration; Business strategy for EU; Methods and tools for psychologic evaluation.

Patrimony

Tibiscus University patrimony consists of two buildings with 21 class-rooms, 41 seminary rooms, 21 laboratories, university library and sports room.

Also, Tibiscus has two pieces of land for building the university campus, computers for didactic and administrative use, vehicles, sport facilities, etc.

Fields in which human resources are trained

Arts; Computer science; Economics; Journalism; Law and Public Administration; Modern Applied Languages; Psychology; Physical Education.

Presentation of research activity chart

Research in Tibiscus university is organized inside the component faculty. A research group exists in each of these faculties and it has a special research laboratory with computers and the department library containing books and other professional publications.

Structures

Research Institutes	-
Research Centers	1
Research Laboratories	7
Multi-user Research Centers	-

Top Priority Research Directions

Linguistic geography; Romanian law and EU integration; Law philosophy; Accounting and book-keeping; Management and marketing; Information society, design; Modern journalism; Multimedia databases; Modeling; Creativity skill and hyper intelligence.

International Cooperation

The Faculty of Modern Applied Languages has a Research center for linguistic

Human Resources

Professors	15
Senior Lecturers	21
Lecturers	38
Assistant Lecturers	16
Teaching Assistant	6
Research Fellows	1
Administrative staff	21
Students	2505
of which:	
Undergraduate	2220
Master	285
PhD - full attendance	0
PhD - attendance not required	0

geography which contribute together with Toronto University at The New Romanian Linguistic Atlas.

The Faculty of Psychology develops a set of psychological test (Vienna tests system) together with the Schuhfried Institut.

The Faculty of Law and Public Administration is involved in a cooperation with Las Palmas University regarding EU laws and European integration.

The Faculty of Computers Science has a partnership with Fachhochschule Oldenburg Germany for Java programming.

International Scientific Activities (the 10 most important ones)

- International Congres on Psychology 2004*
- Actualities and Perspectives in Hard&Soft* 2004;
- Truvist Romanian-Dutch Symposium 2003;
- "Subject and subjectivity in social sciences" Symposium 2002;
- "Culpability and sacrifice" Symposium 2002;
- "Law dynamics in modern society" 2000.



The number of papers published in ISI-quoted journals

3

(the most cited 10 papers)

- "La filosofia al alcance de los centros", Ciprian Valcan, Armas y Letras nr. 1 Monterey Mexic 2005;
- "The rights of Linguistic and cultural minorities in post-1945 Europe", Miodrag Milin, Human Rights in Europe, Geneva, 2003;
- "Le nom de l'empereur Trajan dans l'onomastique roumaine", Viorica Goicu, Semantica lexica, lexicologia y onomastica Verlag Tubingen 2003.

The number of papers published in journals from the main stream of publications

24

(the most cited 10 papers)

- "Aspects regarding the debiting process through complex electric erosion by using functions with more variable", Tiberiu-Marius Kamyanszky, Buletinul Institutului Politehnic din Iasi, Tomul V (LIV), Fascicula a V-a, Sectia Constructii de masini, Iasi, 2004;
- "Blaga's Metaphysics", Cornel Haranguş, Meridian Blaga Cluj Napoca, 2002;
- "Organizing Customs Check", Dumitru Popovici, Revista Economica, The Economic-Financial Control, no 5, Bucharest 2001
- "Optimised Homotropic Structuring Element for Typed and Handwritten Characters", Dan Laurenţiu Lacrămă, Şnep Ioan, Corneliu I. Toma, The Scientific Bulletin of the Polytechnic University of Timisoara, vol 46(60), Fasc.1, 2001;
- "Self-image in Psychological Disorders", Alina Zămoştean, Psychology no. 4, 2001;
- "A Decade of Literature", Adrian Dinu Racheru, Luceafarul, no. 45-46, 2000;
- "The Significance of the word 'baba' in Romanian Toponymy", Viorica Goicu, The Romanian Language XLIX, 3/2000
- "The Audience Offence", Carmen Paraschiv, Revista de drept penal, no. 4, 2000;

- "The influence of the Constitution upon the Assurance Measures", Lidia Barac, Revista de drept penal, no. 3, 2000;

- "A New Method for Score Interpreting on the Scale of the California Psychological Inventory", Monica Albu, Studia Universitaria Babeş-Bolyai Cluj-Napoca 2000.

The number of papers published in volumes of international scientific conferences with reviewers

37

(10 papers presented at the most prestigious events)

- "La terminologie du contract - elaboration d'un dictionnaire bilingue", Dorina Chiş Lingua Pax Symposium, Bucharest University, 2004;
- "Optimised Neural Network for the Stainless Steel Processing Parameters Selection", Lacrămă Dan Laurenţiu, Kamyanszky Tiberiu-Marius, Proceedings of NEUREL 2004-The Seventh Seminar on Neural Network Applications in Electrical Engineering, Belgrad 2004;
- "Java Interface for Multimedia Databases", Lacrămă Dan Laurenţiu, Kamyanszky Tiberiu-Marius, SACS2004, Proceedings of the 8th International Symposium on Automatic Control and Computer Science, Iasi, 2004, ISBN: 973-621-086-3, 4 pages, 2004;
- "Rationalite et illusion", Cornel Haranguş, Actes du XXIX-eme Congres ASPLF, Nise 2002;
- "North Atlantic Treaty Organization Wars on Yugoslavia" in Great Events:1991-2001, Miodrag Milin, Salem Press, Pasadena 2002;
- "CNS malformation" Corina Muşuroi and all, Jurnal of maternal, fetal and neonatal medicine The XVIIIth European Congres of Perinatal Medicine, Oslo, 2002;
- "Ethique et politique dans la pratique politique des pays de l'Oest", Cornel Haranguş, Actes du XXVIII-eme Congres ASPLF, Bologna 2000;

(Continued on page 363)



Other Activities

The Faculty of Design of "Tibiscus" University organized exhibitions in the country and abroad in partnership with Carmel Foundation and Truivist Enterprises from Holland. The most important events were:

- Marian Adrian - Cybernetic Design;
- Marilena Dolniceanu - Painting;
- Marcel Breileanu - Painting;
- Petru Galis - Painting;
- Corina Comarnitschi and Claudia Marta - Graphic exhibition;
- Lucia Cristea - Graphic exhibition;
- Visual Identity at the "Tibiscus" University.

International Affiliations of the University

- "Tibiscus" University of Timisoara is a member of the Association of the Democratic Universities AUDEM.

A history of success

"Tibiscus" University of Timisoara

"Tibiscus" University of Timisoara derives from the Institute for Permanent Studies and Education, founded by Augusta Anca and other university professors, in 1991. The issue of the law 88/1993 was of a great importance for the development of the private universities in Romania, because it represented the base of their legalization. The Institute for Permanent Studies and Education entered the competition for accreditation due to the quality in form and content of the educational process that it promoted by founding new faculties and specializations as well as by its staff policy. In 1998 the institute obtained, by judicial decision, the title of a faculty with the name of "Tibiscus" inspired by the Gaeto-Dacian name of Timis River.

On 17th July 2002 "Tibiscus" University obtains the legal foundation or the accreditation. Accreditation is a term that applies to faculties, to their specializations as

(Continued from page 362)

- "Le culte des saints dans la toponymie romane", Simona Goicu-Cealmof, Congres internațional de toponimia i onomastica catalanes, Valencia 200;
- "Human Resources Management, the structure and Qualification of the Staff Which Will Work in the Local Public Finance System", Dumitru Popovici, Simpozionul internațional Descentralizarea finanțelor publice realizări și retrospectivă București 2000;
- "The Somatic Criterion and the Self-regulation of the Motric Behaviour with Young Women", Doina Moț, Jubilee Congress A.R.A. Cleveland 2000.

The number of scientific books published by publishing houses acknowledged abroad 7
(maximum 10 significant books)

- "Dictionaire historique de l'antroponymie romane" in vol. "L'homme

et les parties du corps humain", Viorica Goicu, Max Njemeyer Verlag Turbingen, 2004;

- "Belgium: A History", Miodrag Milin, Peter Lang, New York 2002;
- "Romania: The quest for NATO Membership", Mariana Cernicova, in vol. "Enlarging NATO The national debates", ed. Lynne Rienner Publishers, 2001;
- "Europe since 1945: An Encyclopedia", Miodrag Milin, Garland Publishers, New York 2001;
- "An introduction to the thought of Antonio Rosmini", Miodrag Milin, Donald Howard, Kyle Eidahl and Karl Roider, Loyola University Press, New Orleans, 2000;
- "La rethorique du sublime chez Vasile Pârvan" in vol. "La terre et l'ecrit", ed. Societe Historique et Archeologique du Forey, Montbrison 2000;
- "Flexible Word Division into Characters", Lacrămă Dan Laurențiu, Vaslu Radu, Alexa Florin, in vol. World Scientific and Engineering Society Press, Athens Greece, 2000.

well as to the whole institution. There is a relation between the two levels of the accreditation, because a university as an institution may not be accredited without having already had at least one accredited faculty. "Tibiscus" University was in the excellent situation of having at the time of its accreditation five accredited faculties: The Faculty of Design, The Faculty of Journalism, The Faculty of Economic Sciences, The Faculty of Law and the Faculty of Psychology. The Faculty of Applied Modern Languages was accredited later, while the Faculty of Computer Science and The Faculty of Sport and Physical Education, which are newer, are to be accredited.

By accreditation "Tibiscus" University has got the juridical status of a private law and public interest institution, integrated to the high education national system from Romania. By virtue of this status, the university has the right to organize the university degree exam at the accredited specializations.

In the year of its accreditation "Tibiscus" University adopted a new Charter, which

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	14500	21000
2003	40700	19500
2002	38600	8300
2001	-	-
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



Press Centre

This space is set up for public activities (such as meetings with public figures) and as Centre for student counseling and professional orientation.

- Capacity: 25 seats.
- Equipment: 1 computer, 1 xerox, 1 Tv, 1 video-projector.



Internet Room

- Capacity: 6 stations with non-stop access to the Internet.
- Equipment: 6 personal computers with Internet connection for access to scientific information, communication with other people, dissertation editing, essay writing, etc.



The number of papers published in journals from the main streams of publications

248

(the most cited 10 papers)

- *Higher Standards for the Client - Bank Relationship*, Persida Cechin-Crista, DEU Annals, Economics/2004;
- *Fiscal Reforms in Central and Eastern European Countries - An Objective Necessity of the Transition to Market Economy*, Danut Rada, Papers of the "The Day of the Economist" Seminar, Resita, 2002;
- *The Transition to the European Unique Currency*, Sorin Blaj, Priorities in Romanian Economy, Timisoara, 2001;
- *Obodjeja - Trends in the Concept of Consonance*, Adrian Mateia, Papers of the 10th National Conference of Cybernetics, Bucuresti, 2002;
- *Considerations about the Juridical Nature of the Preemption Right*, Dumitru Comean, The Law 1/2004;
- *Common Property of Concubines over Mobile Assets Obtained Together through Onerous Acts*, Florin Popescu, The Law 1/2004;
- *The Unemployment of 'Diplomas' in Romania*, Nicu Trandafir, DEU Annals, Economics/2004;

- *The Concept of Fiscal Obligation*, Valentin Carstea, "Financial Audit" Review 2/2003.

The number of papers published in volumes of international scientific conferences with reviewers

22

(10 papers presented at the most prestigious events)

- *The Prospect, Expectation on the Evolution of the Vector of Quality in the Functioning of the Cybernetic System*, Constantin Dumitrescu, The 27th annual congress ARA, 2002, vol.I. 2;
- *The Implications of the Inflationist Medium on Company Management*, Persida Cechin-Crista, Papers of the International Symposium "Universitaria Ropot 2001, Petrosani, 2001;
- *The Concepts of Welfare and Poverty*, Sorin Blaj, Papers of the "Lumea financiara - prezent si perspectiva" International Symposium, Cluj-Napoca;
- *Syntax in Eminescu's "Hyperion"*, Livius Petru Bercea, International Symposium "Mihai Eminescu in the Waves of Time", Timisoara - Berlin, 2000.the Waves of Time", Timisoara - Berlin, 2000.

The Library

The university library has an approximate number of 40,000 law and economics volumes. Remarkable is a special fund of old and rare books donated by the founder of the university, containing mainly law volumes, publications and documents from the 19th century.



Rector

Prof. Eng. Lidia Cristea, PhD

Historical Overview of the University

"Gh. Cristea" Romanian University of Sciences and Arts, the first independent and non-political university, was founded in 1990 by Prof. Eng. Gheorghe Cristea, Ph.D., an internationally renowned specialist in the field of theoretical and nuclear physics. Since 1992, the University has continually striven to improve its education and research activities, to adapt its curricula and syllabi to European



standards, to establish a network of relations with other academic institutions, throughout Europe.

Faculties and Departments

- Juridical sciences: Law;
- Social and political sciences: Administrative sciences; Public administration;
- Communication sciences: Social communication and public relations;
- International relations and European studies;
- Political Sciences;
- Economic sciences: Economics; Environmental economics;
- Finances;
- International business and economics;
- Statistics and economic IT;
- IT econometrics;
- Arts: Theatre, Choreography, Humanities, English language and literature - French language and literature.

Master and Doctoral Programs

MASTER - International finance and currency relations; Environmental issues in the context of European integration; Home and foreign

tourism; Information science and technology; Insurance and re-insurance; International securities market; European quality policies; European commercial law; European forensics - European administrative law.

Patrimony

3 buildings with an educational utility area of 4769 square metres, 2 gymnasiums, 1 recreational facility (sauna), means of transport, computers, biotics facilities, Internet network.

Fields in which human resources are trained

Law, economics, social communication, humanities, administration, choreography.

Presentation of research activity chart

Department of scientific research, Department of quality management, Department for the implementation of the Bologna Process, Department of professional training ; Research centres.

Structures

Research Institutes	0
Research Centers	8
Research Laboratories	1
Multi-user Research Centers	0

Top Priority Research Directions

Economic research is oriented towards modelling, on mathematical and theory of systems bases, internal and international economic/social processes; issues of quality management in education; designing economic and financial activities with the help of IT, environmental impact of technological development.

Judicial research deals with harmonizing national legislation to the international one; crime prevention.

Issues of social communication, philology and art are the object of specific research.

Human Resources

Professors	7
Senior Lecturers	14
Lecturers	21
Assistant Lecturers	8
Teaching Assistant	5
Research Fellows	1
Administrative Staff	32
Coregraph masters	6
Students	1500
of which:	
Undergraduate	1410
Master	90
PhD - full attendance	0
PhD - attendance not required	0



Outstanding Research Infrastructure

Research in the field of the general theory of systems using mathematical modelling by differential calculus in convex local topological spaces received the excellence award from the British "Literati Club" for 2001, an award for the best presentation from The Centre of Hyperincursion and Anticipation in Orderly Systems (Belgium) and the excellence award from The International Institute for Advanced Studies in System Science and Cybernetics (Windsor, Canada).

International Cooperation

Co-operation contract with The Economic Academy of Poznan, Poland, on the project "Certifying the Quality of Educational Quality Process by Applying ISO Standards".

International scientific activities (the 10 most important ones)

- Alternative Economic Strategies;
- Juridica;
- UNIVERSALIA.

The number of papers published in ISI-quoted journals

2

(the most cited 10 papers)

- E. Otlăcan, *About the Mathematical Expression of the Observation operators*, *Kybernetes*, vol. 29 nr. 9/10, 2000, pp. 1058-1068, MBC University Press: Bradford, Marea Britanică;
- E. Otlăcan, *The Synergy and the Chaos Identified in the Constitutive Equation of a Dynamic System, Computing Anticipatory Systems, American Institute of Physics, A.I.P. Conference Proceedings*, pp.328-337, Melville, New York, 2003.

The number of papers published in journals from the main stream of publications

315

(the most cited 10 papers)

- L. Cristea, *Environmentally sustainable development in connection with environment education, The Danube River: Environment & Education*, nr.1, 2003, pp. 3-7;
- D. Gogoncea, *Using Linked Lists in the Modelling by Graphs the Discreet Events Systems*, A.E.S., 2001, pp 241-250;
- A.C. Iordana, *Convențiile matrimoniale - trecut și prezent*, *Juridica* 2000 pp.164-176;
- D. Ivañel, O. Volosetschi, *Information Systems Auditing - Past, Present, Future*, A.E.S., 2003, pp 283-291;
- M. Moldoveanu, *Romania within the Equation of Globalization and European Integration, Alternative Economic Strategies*, 2003, pp.81-85, București;

- V. Nistoreanu, *Financial Leasing Evaluation Models in Romania*, A.E.S., 2003, pp. 198-205;
- Th. Olteanu, *The Lippovan Russians of Romania*, *Universalia* 2003, nr1, pp.3-8;
- E. Otlăcan, *Globalization as a continuous vectorial function on the informational topology of the world*, *NOEMA*, vol II, nr 1, 2003;
- A. Pinte, *The small group and juvenile delinquency*, *Juridica*, 2002 pp. 97-104;
- E. Ticames, *Aspects concerning the "career" of public servants*, *Juridica* 2002 pp.47-52.

The number of papers published in volumes of international scientific conferences with reviewers

90 (10 papers presented at the most prestigious events)

- L. Cristea, *The Flexibility of Management Structures in Romania's Private University System in the Context of International Relations*, *Danube Rectors Conference*, 3rd DRC, IRO Seminar, University of Pécs, Hungary, 5-8 July 2003;
- L. Cristea, *The Role of Education in The Danube Environment*, 2nd International Conference on Ecological Protection of the Planet Earth, Bio-Environment and Bio-Culture June 5-8, Sofia, Bulgaria;
- L. Cristea, *The Applied of the environmental Management System in the Company PIRELLI RO*, HELECO'03, An International Exhibition and Conference on Technology, 2003, Athens, Greek;
- L. Cristea, *Long Distance Higher Education - an Alternative for the Future*, *MicroCAD 2003 International Scientific Conference*, March 6-7 2003, University of Miskolc, Hungary;
- L. Cristea, D. Ivañel, G. Rădulescu, *The Implementation of the Quality Management System (QMS) at ROM-CIF SA FIEN*, *Ecological Protection of the Planet Earth, Bio-Environment and Bio-Culture* June 5-8, Sofia, Bulgaria;
- L. Cristea, E. Otlăcan, *The Optimum Relation Between Incomes and Expenses in the Educational Management*, *The 16th International Conference in Systems Science*, Wroclaw, Poland, 2001, vol 3 pp. 342-348;
- L. Cristea, E. Otlăcan, *University Autonomy Between Taxation Laws Enforcement and the Education Quality Improvement Requirements*, *Euroconference on University and Enterprise*, "La Sapienza" University Rome, 2002, sept.26-28, Proceedings pp. 362-369;
- E. Otlăcan, *What the Functional Calculus Tells about the Future Evolution of a System*, *InterSymp2004 Conference*, 29th July-5th August, 2004, Baden-Baden, Germany, published in *Anticipative and Predictive Models in System Science*, vol1, pp. 27-32 by the IAS in Windsor, Canada;
- E. Otlăcan, *L'option en faveur de la multidisciplinarité chez les fondateurs de l'école roumaine de mathématique Traian Lalescu - le 120e anniversaire*, *NOESIS, Travaux du Comité Roumain d'Histoire et Philosophie des sciences*, Ed. Academiei Române 2003 pp.117-120;
- E. Otlăcan, R.P. Otlăcan, *Mathematical Models to Express the Memory of the Systems*, *TAKIS Congress*, Nitra, Slovakia 2002 sept. 2-5, Proceedings 243-252.

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Forensics laboratories

Laboratory of judiciary photography is the place where the students make the judiciary photos taken when examining a crime scene. 10-student teams go to the laboratory, where they develop the film, then make the black-and-white photos.



Laboratory of judiciary ballistics, the group of students examine the traces left on the gun barrels on projectiles by means of laboratory microscopes. After being examined, the traces are photographed at the microscope and examined against those left on those shot experimentally with the suspect gun. The laboratory exhibits presentations of digital traces left by fingers, palms and the bare foot. They are classified according to type and varieties. Individual identification is achieved on the basis of characteristic elements which are to be found on the papillary drawing.



(Continued from page 368)

The number of scientific books published by publishing houses acknowledged abroad

(maximum 10 significant books)

- *European Integration through education - traditions, the present and the future*, Lidia Cristea, Lublin 2004, Marie - Curie Skłodowska University Press, ISBN 83-2272175-7, pp.393-401.

1

The laboratory is equipped with a forensics kit for the examination of the crime scene and of the criminal's papillary marks. The laboratory can also examine the bio-forensic traces discovered at the crime scene and the traces left by footwear, means of transport, etc. There is also a laser appliance for the examination of microscopic traces, as well as ultraviolet lamps for the examination of forged writing and of the banknotes involved in bribery delinquencies.



In the seminar room the students carry out practical activities of examining the papillary traces created by the professor. The students have to discover the traces, take specimens by means of chemical substances and compare them. The room also provides the students with a forensics catalogue, which illustrates and presents various cases of murders, thefts, robberies, road accidents, etc.

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	120	-
2003	204	-
2002	135	-
2001	23	-
2000	-	-
1999	-	-
1998	-	-
1997	-	-
1996	-	-
1995	-	-



International Affiliations of the University

- * Fédération Européenne des Ecoles (F.E.D.E.)
- * Danube Rectors Conference (D.R.C.)
- * COPERNICUS
- * Balkan Rectors Conference (B.R.C.)
- * CIRCEOS
- * Association of European Universities

International Cooperation

- * École supérieure de commerce, Paris
- * University of Padova
- * Research Institute, Onati
- * University of Maribor
- * University of Pécs
- * West University, Sopron
- * University of Information Technology, Rzeszow
- * University of Criminology, Chisinau
- * University of Cahul
- * Macedonia University, Tessaalonik
- * Dumlipinar University, Kutahya
- * Ballet University, München
- * University of Trecein
- * University of Vilnius
- * Institute of International Political and Economic Relations, Belgrade

THE DANUBE RIVER ENVIRONMENT & EDUCATION



14, Portului St., Tulcea, ROMANIA; Phone/Fax: 004.021.346.16.41; web site: www.ugc.ro

URA



ROMANIAN-AMERICAN UNIVERSITY



Rector fondator

Prof. Ion Smedescu, PhD

Historical Overview of the University

The Romanian-American University was established in 1991, following the initiative of Professor Ion Smedescu, Rector and Founder, aiming at promoting the educational values of American and European higher education, against the background of Romanian education rich traditions, highly acknowledged at international level.

It is the "first university of this kind in



Central and Eastern Europe", concluded the participants at the International Conference of American University and College Presidents, which took place in Cairo in April 1996. The University was authorized through Law no. 274/15 May 2002, becoming a warrant of the generations of students under the guidance of highly professional and moral faculty members.

Teaching and research take place in a modern campus, which prompted His Excellency, Ambassador Jeronimo Moscardo, to state: "I would like to congratulate President Ion Smedescu for having built this great Romanian American University campus - this "21st century wonder". Even governments in the wide world have fallen short of grasping the necessary power to achieve such a grandiose building solely aimed at youth education. Professor Ion Smedescu's enthusiasm and struggle to make possible this momentous creation are a proper lesson for future generations".

Faculties and Departments

- 6 faculties: School of Domestic and International Commercial and Financial-Banking Relations; Management - Marketing School; School of Domestic and International Tourism Economics; School of IT Management Systems;

School of European Economic Integration Studies; Law School.

- 4 departments: Research Department; Postgraduate Studies Department; Foreign Languages Department.
- 3 centers: Brazilian Studies Center; Romanian Japanese Studies Center; Career Counselling and Planning Center.

Master and Doctoral Programs

MASTER - 10 programs: Financial banking management; Commercial law; Marketing; Business management; Financial auditing; Economic IT; Business management in tourism; American legal and economic studies; European economic accession; Commercial Law Institutions.

Patrimony

The University boasts a modern Campus (34.000 sqm), an impressive building through its size, architecture, building technology, facilities and functionality, and distinguishes itself by a harmonious university-like atmosphere, a successful combination between useful and pleasant, modern and efficient education and science.

Entrance hall - The complexity of the building and design works that led to the completion of the Campus has a great economic and social impact, not only through the value of the investment, but also by providing new jobs, both along the objective construction, and along its entire operating period.

This building includes: an auditorium (500 seats), 200-seats lecture rooms, course and seminar rooms equipped with air conditioning, research labs, library, Tourism Agency, lecture rooms, medical facilities, a chapel, a student's dormitory with panoramic-sight elevators and Internet connection, a cafeteria, snack-bars, Internet-café, gyms, electronic information system (INFOMAT), surveillance video cameras, radio station, close circuit TV.

Fields in which human resources are trained

Economics and international business; Finances; Accounting; Business administration; Statistics and Economic IT; Management; Marketing; Economy; International Relationships and European Studies; Law.

Human Resources

Professors	33
Senior Lecturers	13
Lecturers	26
Assistant Lecturers	58
Teaching Assistant	30
Research Fellows	-
Administrative staff	120
Students	11587
of which:	
Undergraduate	10384
Master	1243
PhD - full attendance	7
PhD - attendance not required	-



Presentation of research activity chart

The scientific research activity takes place within departments, in each faculty research centers/labs as well as the Research Department, which coordinates these centers. The operational management is supported by the scientific research vice-president.

The Scientific Research Session of the Teaching Staff takes place on an annual basis, being attended by professors and researchers from other universities and research labs in Romania and abroad; 10 sessions have taken place until now and 2020 papers have been published in 36 volumes. The students scientific research is presented within the Session of the Students Working Groups that takes place yearly on May.

Structures

Research Institutes	0
Research Centers	8
Research Laboratories	6
Multi-user Research Centers	0

Top Priority Research Directions

The strategic lines promoted by the university take into consideration the promotion of research excellence and performance, based on the assessment of the existing potential and establishment of partnerships with other universities and research institutes. The main research trends are: modern education techniques; IT management, international business relationships - trade exchanges, payment system, cash flow; financial-banking development, accounting, management and marketing systems; tourism economics; European integration, regional development and globalization; environmental protection and sustainable development; improvement of the institutional legal system.

Outstanding Research Infrastructure

The research activity takes place in research labs and in the Research Department equipped with the latest technology: 6 research labs in the ICT domains and one in the multimedia field, with 100 networked and Internet connected computers, and also 7

The number of papers published in ISI-quoted journals

11

(the most cited 10 papers)

- Bonciu Fl., *Romania - EU Accession Prospects after the Helsinki Summit; the Business Environment*, The Vienna Institute for International Economic Studies (WIIW), Research Reports, No.227/September 2000;
- Bonciu Fl., *Policies Diverting FDI from Romania*, The Vienna Institute for International Economic Studies (WIIW) - Monthly Report 12/2001;
- Moise M., Năianu B.P., *Hierarchical Mathematical Modeling of the Technological Processes as a Premise in an Efficient Revaluation of Resources and Energy*, in Int. Journal - Natural Resources and Energy: Non-Dissipation and Management, IACNRE, New York, ISSN 1071-3603. pp. 14-25, 2002;
- Moise M., Bedros P.N., *Use of the Fuzzy Theory for Group Decision Assistance in Evaluating Complex System's Alternatives*, in Journal GEP - A Gepipari Tudományos Egyesület Muszaki Folyóirata, L II, EVFO, 2001;
- Popovici A., Popovici M. A., Mincu N., 1998 - *A Comparative Study of Processing Simulated and Experimental Data in Elastic Light Scattering*, Mathematical Biosciences 157 no. 1-2, 1999.

The number of papers published in journals from the main stream of publications

1278

(the most cited 10 papers)

- Barbulescu C-tin, *How to Organize and Carry on the Reengineering Process*, The Economic Tribune, no. 45, 2000;

- Bonciu Fl., *Global Evaluations 2001-2002 in the Field of Direct Foreign Investments*, The Economic Tribune, no.15, 2002;
- Dinu M., Cioaca A., *The Impact of Exploiting Natural Subsoil Resources on the Subcarpathian Relief (Romania)*, Geogr. Fis. Dinam. Quatern. Comit. Glaciol. Ital., Torino, 2000;
- Moise M., Năianu B., P., *Development Technologies Virtual Learning Environments, Based on Multimedia Methods and Techniques, Telematics, the Internet Tools and Pedagogic Methods of the "Problem Based Learning" Type*, The Romanian Magazine of Informatics and Automatics, Vol. 12/1, 2002;
- Parausanu V., *Aspects Regarding the Synthesis of Etoxylic Alcohols with Wide Distribution of Etoxyxymes*, The Chemistry Magazine, No. 52, 2001;
- Popovici A., *The Technical and Economic Optimization of the Systems Security with SECURIT-PC Software Package*, Economic Computation and Economic Cybernetics Studies and Research, 35, no. 3, 2001;
- Purcarea Th., *Functional Market Economy and Competition*, The Economic Tribune, no.7/13, 2002;
- Samuel J., Nicolae A., *A Monetary Policy Model for the Romanian Economy*, Economic Computation and Economic Cybernetics Studies and Research, no.1-4, 2002;
- Sava S., *La relation déficit commerciale durant la transition vers l'économie de marché*, Revue Roumaine de Science Economique, nr.1, 2000;
- Tudorache D., *ROL Denomination Traits*, The Economic Tribune, no.25, 2005.

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servers; a research lab for permanent development, a criminology lab. There is also a multimedia lab in the University which is equipped with high performance tools and a demo software package designed for on-line learning. The student scientific research takes place in labs, genuine development labs.



International Cooperation

International cooperation has been achieved within international programs and memoranda of agreement with foreign universities and institutions.

JEAN MONNET (2): at present there are two active projects, "European Community Law" and "European Economic Integration" targeted at economic school students.

LEONARDO DA VINCI (4): "Objectives and Strategies for European Alignment of the Higher Education Management" (2001), "Regional Interdependencies in Hotel Management" (2002), "Efficient University Management and New Ways of Teaching" (2003) and "Strategic Management of Tourism. The Impact of Tourism on the Environment: in-dexes and measurements" (2004), which enabled faculty members to perform experience exchanges and to initiate common research programs.

SOCRATES - ERASMUS (2): there are over 20 present cooperation with European Universities (France, England, Spain, Denmark, Finland, Lithuania, Poland, Slovenia, Czech), which enable the development of student and faculty exchange through the ERASMUS Program and facilitate the development of topic networks.

COOPERATION WITH AMERICAN UNIVERSITIES, carried out through short span courses and lectures delivered by elite American faculty staff, contribute to the RAU students training and faculty member specialization for a quality education system and also to the specialization of professorial staff to coordinate research programs and to encourage scientific outcome. The seminar on the topic "Research Strategies and Publications", presented by Professor James McCollum from the University of Alabama is scheduled for the 2005-2006 academic year.

(Continued from page 372)

The number of papers published in volumes of international scientific conferences with reviewers 192 (10 papers presented at the most prestigious events)

- Botezatu C., *The Component and Interface Generator Environment*, in Proc. of The Sixth International Conference on Economic Informatics, May, Bucharest, 2003;
- Chichemea V., *The use of the Business Game "decision in cascade" within the Master's Degree Programs*, in Proc. of The Central and East European Conference in Business Information Systems, Babes-Bolyai University, May, Cluj, 2004;
- Dinu, M., Cioaca, A., *Contribution to the Romanian Geomorphic Study of the Environment*, in Proc. of The 5th Conference on Geomorphology, Tokyo, August-Sept., 2001;
- Folcut O., *Commerce and competition*, in Proc. of The American Romanian Academy for Arts and Science, Kishinev, 2005;
- Moise M., *A Rough Set Approach to Acquire New Knowledge*, in Proc. of The Pannonian Applied Mathematical Meetings-PAMM2003 - Interuniversity Network, PC. 141, Balaton, May 23-24, 2003;
- Papuc M., *The Influence of the Trademark in Home Country over the Purchasing of European Union Goods by the Romanian Consumer*, in Proc. of The 29th Congress of Science and Art Romanian American Academy, Bochum Germany, September 7-12, 2004;
- Purcarea Th., *Giving Priority to Increased International Cooperation and Coordination*, in Proc. of The Fourth Session of the Group of Experts on Competition Law and Policy, UNCTAD, Palais des Nations, Geneva, July 3-5, 2002;
- Samuel J., Moisa A., *Fiscal Policy, Public Capital and Economic Growth*, in Proc. of The Fifty Eighth International Atlantic Economic Conference, Chicago, SUA, 7-10 October, 2004;
- Sava S., *L'élargissement de l'Union Européenne - Condition et possibilité d'adhésion d'un pays en transition*, in Proc. of The International Symposium - Le management de la transition - relations économiques au dedans et au dehors, Targoviste, novembre 5-6, 2004;
- Zaharia M., Popa A., *Considerations Regarding Open-source Software Development for Profit*, in Proc. of The 5th International Symposium of Economic Informatics, Bucharest, May, 2001;

Financial resources obtained for research

	National millions ROL	Internat. EURO
2004	1.730	67.657
2003	327,9	-
2002	101,00	19.200
2001	152,00	0
2000	601,00	0
1999	87,00	-
1998	215,00	-
1997	84,00	-
1996	50,00	-
1995	42,00	-



Presentation of the University

Academic research springs from the same source as the university, being considered a necessary aspect of the educational process and a decisive factor for setting the standards of quality educational process and for the development of society as a whole.

The university's authorization has allowed the inclusion of a new way of thinking in the scientific research programs, strategic approach, meant to strengthen the current capacities, and to launch again competitive scientific research through a more active involvement of the faculty members into national and international financed programs, into CNCISIS grants, grant from the Romanian Academy grants and from international institutions with a view to establishing partnerships and thematic research networks.

Currently, the Romanian American University deals with fundamental research for the development of knowledge and for applied research within the national programs RELANSIN and CERES, CNCISIS grants, grants from the Romanian Academy and international grants. The year 2003 witnessed the involvement of the University into the competitions of the FRAME IV and PHARE - CE programs, and starting with 2004, applied research, ordered by commercial companies and meant to solve the problems that the Romanian economy and society face, represents a major preoccupation for the specialized faculty members.

Within the programs proposed and submitted by the Romanian American University, the integration into the European research area is a top priority; these concerns have led to the setting up of an interesting conference with the topic "European Union Finances and Financial guidelines for the 2007-2013 period", headed by Mr Jonathan Scheele, Head of the European Commission Delegation in Romania.

In March 24th 2005, the Romanian American University hosted a special scientific



event, occasioned by the launching of the volume "Project Management - A Practical Approach", co-authored by Professor James K. McCollum, University of Huntsville, Alabama and by Professor Cristian Silviu Banacu.

The event was honored by the attendance of His Excellency Mr Thomas Delare, Deputy Chief of Mission, US Embassy in Bucharest, Mr Mircea Miroiu, Program Manager with the Fulbright Commission, visiting professors from James Madison University, Virginia, USA, faculty members, and managers of important Romanian institutions.

The bilingual, Romanian-English book is an effective answer to the challenges that higher education and research face nowadays, in a knowledge-based society entailing "lifelong learning", in order to adapt itself to the dynamic requirements of the global labor market. Published by the "Universitara" Publishing House, with an introduction written by Professor Ion Smedescu, the work represents an actual practical guide targeting project managers, a synthesis of the authors' personal experience in drawing up projects, in the support of Romanian students becoming acquainted with the specialized English language, and of foreign students enrolled in Romania.



The Conference for Information Security was a major event, since it was the first of its kind to take place in Eastern Europe, in 2000. The conference was organized by RAU and the Centre of Academic Proficiency for Education and Research in the field of information security within James Madison University in Virginia, USA.

Among the participants, there were experts from central institutions, economic units, representatives of institutions in charge of information security in Romania and representatives of similar institutions from the Republic of Moldavia.

The conference chairman, professor Alan Berg, creator of one of the seven INFOSEC programs, drew up following the initiative of



the USA President, which is meant to train specialists in information security and IT, people who should be able to protect information, to protect solid tracking systems.

The aim of the conference was to render the Romanian public opinion more sensitive in the domain of information security, to present the evolution tendencies in this field and the projects of an educational programme within RAU, similar to a James Madison University programme. The debates sought to find answers to current problems in the field of information security:

- 1) What policy must be pursued in order to protect information?
- 2) What do universities do in order to raise awareness regarding information security?
- 3) What does an institution perform for the network security?
- 4) What anti-virus programme is being used and what does a university do in order to instruct in the field of viruses?
- 5) How does RAU keep pace with the information boom in information security?

The conclusions of the conference led to the creation of a forum for specialists in information security within universities, who should share information and knowledge and provide assistance to enterprises in this field as well as perform studies regarding information security.

Presentation of laboratories

IT laboratories

The 6 research laboratories in the ICT field, equipped with the latest technologies enable the faculty members and the students to participate in the contests of proficiency scientific research within national and international programs (the Frame Programs no. 6 and 7).
The multimedia laboratory

It undergoes a process of organization and its major function is to apply technologies,



methodologies, standards and the best practices in the field of virtual educational environments. The laboratory will house an e-learning platform, which will provide modern teaching solutions with a wide range of applicability in all domains within the University.

Within the e-learning platform, different concepts pertaining to academic education will be applied: individual study on the basis of documents, virtual programs, training of teams based on collaboration, training conducted by professor/ instructor, mixed education representing a blend between e-learning and classroom seminars.

The Forensics Laboratory

It currently undergoes a process of organization with a view to lowering the level of cor-



ruption in the law system and the organized crime rate by a rapid integration of specialists. The modern equipment of the laboratory will enable the sustained promotion of the scientific tests in the activity of criminal research, it will also enable the formation of abilities and skills necessary for the criminology examination within the print processing laboratory and of material evidence, as well as followings all the proceedings of criminal pursuit, with particular reference to search, reconstruction, presentation with a view to identification, defendant hearing and confrontation.

Presentation of laboratories International Cooperation



Specialty clinics

The laboratories are unique within the Romanian higher education system and they have been set up within the university and they operate mainly as small enterprises for economics undergraduates or as legal institutions for the students in law.

The Centre for Brazilian Studies

Within the Centre for Brazilian Studies, the students and the faculty members have the opportunity to learn Portuguese and to do research in Brazilian culture and civilization.

The Centre for Romanian-Japanese Studies

At the Centre for Romanian - Japanese Studies, students and the faculty members attend Japanese courses, debates, roundtables and workshops regarding Japanese economy, art and culture with a view to drawing up joint international research projects.



International cooperation

In order to accomplish its mission and its objectives, the University has concluded memoranda of agreement with foreign universities and institutions:

- USA: James Madison University (Virginia), American University (Washington D.C.), Barry

University (Florida), De Sales University (Pennsylvania) etc.

- BRAZIL: the academic centre FIEO - Sao Paulo

- EUROPE: Huron USA University - London, International

Starting with 2004, the university started academic cooperation within the SOCRATES-ERASMUS programme, which led to the establishment of bilateral agreements and enabled students to study abroad in famous European universities. Among our partner universities, we would like to mention: Kemi - Tornio Polytechnic-Finland, Tietgen Skolen Business College - Denmark, Escuela Politecnica Superior de GANDIA - Spain, University of Pardubice - the Czech Republic, University of Maribor- Slovenia, Klaipeda College of Social Sciences-Lithuania, Akademia Gorniczo-Hutnicza-Krakow-Poland, Academy of Humanities and Economics in Lodz-Poland, Universite De Cergy Pontoise- France.

Regarding international cooperation, for the year 2005, RAU intends to extend and consolidate international cooperation with European universities and institutions with a view to start joint participations to international programs, performing academic exchanges based on specialization modules, setting up topic networks.

International relations of the university

The university is a member in the South-Eastern Europe Network for European Studies within the Centre for Studies on European Integration pertaining to the Rheinische Friedrich Wilhelms-Bonn University.

As a member of the European Association for International Education, Professor Ion Smedescu, Ph. D., together with the university, has access to information regarding international academic education, extending the range of cooperation with foreign educational institutions with a view to adjusting the educational offer to the new economic and social context of European and transatlantic accession.



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