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CHIST-ERA is a consortium of research funding organisations in Europe with programmes supporting Information Communication Sciences & Technologies (ICST). CHIST-ERA promotes transnational and multidisciplinary ICST research by funding projects on selected topics with a potential to lead to significant breakthroughs.

CHIST-ERA also reinforces the European Research Area in ICST by deepening the cooperation among Member States as well as between them and the European Union. CHIST-ERA coordination activities are supported by the European Union's Future and Emerging Technologies scheme (FET) as an ERA-NET project.

PARTNERS & ASSOCIATES



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chist-era

European Coordinated Research on Long-term Challenges
in Information and Communication Sciences and Technologies ERA-NET

Call 2015

on

**User-Centric Security, Trust and
Privacy in the Internet of Things**

and

**Terahertz Band for Next-Generation
Mobile Communication Systems**

Call Deadline: 13th January 2016



Call 2015 Topics

CHIST-ERA is looking for transformative and highly multidisciplinary research projects in Information and Communication Sciences & Technologies (ICST). They should explore new ideas with potential for significant scientific and technical impacts in the long term.

Each year, CHIST-ERA launches a call for research proposals in two new topics of emergent scientific importance :

- 2010: Quantum Communication and Autonomic Systems
- 2011: Knowledge Extraction and Low-Power Computing
- 2012: Intelligent User Interfaces and Adaptive Communication Networks
- 2013: Adaptive Machines and Distributed Computing
- 2014: Cyber-Physical Systems and Human Language Understanding

User-Centric Security, Privacy and Trust in the Internet of Things (SPTIoT)

Projects should address one or more of the following research challenges, ensuring they include co-design with users to address the key, fundamental, but inter-related and interdisciplinary aspects of privacy, security and trust.

- Methods for data anonymisation
- Technical mechanisms to increase trustworthiness when data is shared between different providers
- Intrusion detection methods
- Authentication using trusted computing (lightweight hardware and software security)
- Dynamic security to allow systems to adapt to varying users
- Tools for supporting preferences and priorities of culturally diverse users
- Natural language for expressing data access/usage policy
- Data visualisation for increasing user awareness of privacy issues
- Empowering users with risk evaluation tool for their data and contacts; Assistive technology/techniques to encourage more secure behaviour and awareness of users

Terahertz Band for Next-Generation Mobile Communication Systems (TMCS)

Projects must deliver against one or more of the following outcomes for frequencies above 275 GHz, or at least above 200 GHz:

- Address novel component design and fabrication of THz devices and/or systems. Consideration should be given to the packaging and/or integration of components.
- Develop components for THz power generation (e.g. sources, novel high power, low-noise THz amplifiers for transmitters and receivers). New architectures that have these features should assist in overcoming the high path-loss at THz frequencies and lead to communications systems with much higher data rates.
- Push current emitted continuous-wave powers, up to 100 mW.
- Develop new interconnection schemes between systems and modules capable of efficiently transferring THz power around the system while minimising signal losses and interference.
- Spatial and temporal tuning of power output (e.g. phased-arrays to allow active control of beam spatial profiles and emission characteristics, as well as beam-steering).

Selection Procedure

The coordinator prepares a joint proposal for the consortium, using the template available on the CHIST-ERA website (www.chist-era.eu). The form is submitted using the electronic submission system on the website.

Consortium Eligibility

Projects have a duration of either 24 or 36 months.

The following criteria must be met:

- The consortium is international: it must have a minimum of three partners and partners must be located in at least three distinct countries.
- The consortium is balanced: at most 60% of the total funding may be requested by partners from one country.

The consortium needs to be focused, that is, the proposed research must have a clearly defined goal. Consortia should therefore normally contain between three and six partners.

Research groups who are not eligible to receive funding from any organisation participating in the concerned topic may be part of a consortium if they are able to secure their own funding. Third-party funding is not considered for the criteria above. The consortium coordinator must be supported by a funding organisation participating in the topic.

Funding Decision

The proposals will be evaluated by an international panel according to the following criteria: *Relevance to the Topic, Scientific & Technical Quality, Implementation, and Impact*. On the basis of the ranking and of available funding, the funders will propose a list of projects to be funded. The final decision remains with the funding organisations.