

CALL FOR ABSTRACTS – ICT ENERGY Workshop

“Minimizing Energy Consumption of Computing to The Limit”

Co-located with HiPEAC 2016 Conference, Prague; January 20th, 2016

<https://www.hipeac.net/2016/prague/>

- **Scope of the Workshop:**

Energy consumption of information and communication technologies (ICT) has grown dramatically in the recent years. In addition, heat production during computation has become a key challenge to address in order to make computing systems operate in a reliable manner, especially in high-performance computing (HPC). Similarly, in mobile devices it has become key the development of autonomous power sources and technologies to deploy long-lasting low-power devices. Therefore, this workshop explores recent advances and future challenges in these fields, as it is aimed at promoting the best practices towards “zero-power ICT” strategies and energy-minimal HPC systems.

Stemming from the research efforts being carried in EU projects related to this topic, aligned with the ICT-Energy Coordination Activity (www.ict-energy.eu), this workshop focuses on opportunities and challenges of novel energy-efficient computing solutions (both for ultra-low power mobile systems and HPC servers). Especial interest will be given to approaches at the interface between hardware and software, as well as promising research directions, covering different layers of the hardware-software stack, towards the realization of energy-minimal computing systems.

Topics of interest for presentation at the workshop include (but are not limited to):

- Low-power hardware solutions (near- or sub-threshold operation, approximate computing, reversible computing, application-specific accelerators, etc.)
- Energy management software technologies at design- and/or run-time (compilation techniques, operating system management, application-based optimizations etc.)
- Energy generation, and monitoring solutions for power or temperature.
- Energy-aware computing in HPC systems and datacenters.

- **Submission Guidelines:**

The workshop seeks 1-page abstract submissions from academia and industry, presenting research contributions or industrial case studies. Submissions must be written in English and **sent by e-mail to David Atienza (david.atienza@epfl.ch) before the deadline.**

- **Important Dates:**

1-page abstract submission deadline: December 1st, 2015

Acceptance Notification: December 7th, 2015

- **Workshop Organizers:**

David Atienza, EPFL, Switzerland (david.atienza@epfl.ch).

Kerstin Eder, Univ. of Bristol, United Kingdom (Kerstin.Eder@bristol.ac.uk).

Luca Gammaitoni, Univ. of Perugia, Italy (luca.gammaitoni@nipslab.org).