**The ‘Key’ to Next Generation of Mobile Radio Access and Networks Technologies**

---

**Call for Papers**

The transmitted data volume increases approximately by a factor of 10 every 5 years, corresponding to an increase of the associated energy consumption by approximately 16 – 20 % per year. Currently, 3 % of the world-wide energy is consumed by the ICT sector contributing to about 2 % of the world-wide CO2 emissions (comparable to the world-wide CO2 emissions by airline industry or one quarter of the world-wide CO2 emissions by cars). Doubling of energy consumptions every 5 years imposes serious concerns for the environment. On the other hand, 10 folds increase in 5 years in data volume does not linearly translate to revenue and the cost of network operation has now become a critical factor for mobile and wireless networks operations. Therefore, lowering energy consumption of future wireless radio systems is demanding greater attention and requires new technologies and solutions and is becoming an important factor in specification of future standards, an important differentiating factor in choice of new products.

These needs create inter-disciplinary research challenges including semiconductor technology, hardware, network architectures and equipments, protocols, services, radio transmission schemes, network management and deployment/operation. All aiming at higher efficiencies at transmit power and consumed energy.

The third International Workshop on Green Wireless (W-GREEN) will focus on the inter-disciplinary research challenges associated with all aspects of mobile and wireless networks and systems.

The full day workshop aims to bring together internationally-leading academics and industrial perspectives and thinking to highlight the key technologies and solutions and also debate on appropriate metric for measuring end-to-end system energy efficiency itself and fundamental limits of energy efficiencies.

Original papers describing both theoretical and experimental results within the scope of Green Wireless are solicited. Topics of interest include, but are not limited to, the following:

- Holistic view of energy consumption in wireless communications
- Architectures and design of low power equipments (sensors, terminals, network infrastructure)
- Cognitive and opportunistic networks (spectrum sharing models, etc.)
- Cooperative and heterogeneous networks
- Reconfigurable networks (geographic routing, admission control, handover, etc.)
- Cross layer and interference pollution (advanced adaptive mechanisms, MAC, scheduling, power control)
- Traffic engineering
- Network load balance and smart information storage in distributed networks

---

**Extended summaries of papers should be submitted to:** laurent.herault@cea.fr

---

**Workshop Organisers (Chairs)**

- Dr. Laurent Hérault (Chair)
  - CEA-Leti
- Professor Rahim Tafazolli (Chair)
  - CCSR, University of Surrey
- Professor Merouane Debbah (Co-Chair)
  - Supelec, Alcatel-Lucent Chair on Flexible Radio
- Professor Matti Latva-aho (TPC Co-Chair)
  - CWC, University of Oulu
- Professor Luis M. Correia (TPC Co-Chair)
  - IST/IT, Technical University of Lisbon
- Dietrich Zeller (TPC Co-Chair)
  - Alcatel-Lucent
- Dr. Stefan Kaiser (TPC Co-Chair)
  - DOCOMO Communications Laboratories Europe

**Technical Program Committee**

- Simon Fletcher – NEC, UK
- Emilio Calvanese Strinati - CEA-LETI, France
- Jacques Palicot - Supelec, France
- Aawatif Hayar - Eurecom, France
- Alberto Conte - Alcatel Lucent, France
- Ian Oppermann - CSIRO, Australia
- Lars Rasmussen - KTH, Sweden
- Behnaam Aazhang - Rice University, USA
- Carlos Pomalaza-Raez - University of Purdue, USA
- Allen MacKenzie - Virginia Tech, USA
- Vinod Kumar - Alcatel-Lucent, France
- Oliver Blume - Alcatel-Lucent, Germany
- Marios Kountouris – Supelec, France
- Vincent Poor - Princeton, USA
- Doron Ezri - Green Wireless, Israel
- Shugong Xu - Huawei, China
- Tony Quek - Institute for Infocomm Research, Singapore
- Antonio Cappone – Universita de Milano, Italy
- Suresh Goyal – Bell Labs, USA

---

**Important Dates**

- **Paper Submission:** 7th July 2011
- **Acceptance Notification:** 15th July 2011
- **Camera-Ready:** 30th August 2011
- **Workshop:** 11th September 2011
PRELIMINARY PROGRAM

Invited speakers

• Magnus Olsson, Ericsson: “Energy efficient networks - Reducing cost and carbon footprint”
• Per Ljung, Nokia: “Low Power Opportunities for Handsets”
• Ian Opperman, CSIRO (TBC)

Accepted papers

• Muhammad Ali Imran & al., University of Surrey: “Energy Aware Radio Technologies - EARTH: A theoretical trade-off and a system level approach”
• Istvan Godor & al., Ericsson & BME: “Power Saving in Mobile Networks by Modifying Base Station Sectorization / Power Saving Potential in Heterogeneous Cellular Mobile Networks” (Title to be refined)
• Anton Ambrosya & al., Alcaltel-Lucent: “Energy saving potential of integrated hardware and resource management solutions for wireless base stations”
• Rohit Gupta, CEA-LETI: “Green scheduling to minimize Base Station transmit power and UE circuit power consumption”
• Hauke Holtkamp & al., DOCOMO EuroLabs: “Minimal average consumption downlink base station power control strategy”

Panel session