

1. Title: Workshop on Green Mobile Computing Networks

2. Scope and topics:

As concerns about climate change, rising fossil fuel prices and energy security increase, companies and governments around the world are committing great efforts to develop new technologies for the green strategies addressing climate change globally and facilitating low greenhouse gas (GHG) development. Currently, the GHG emissions produced from the Information and Communication Technology (ICT) industry alone are equivalent to the GHG emissions of the entire aviation industry. Furthermore, with the increasing demand for higher data rates, the energy consumption for the ICT industry is increasing by 16-20% per year. Moreover, the energy costs for mobile operators can be as high as half of their annual operating budgets. In addition, the role of green communications and networking technologies includes not only the emission reduction and energy savings in communication products and services, but also enabling low GHG emissions in other industries, such as electric power smart grid.

On the other hand, there is phenomenal burst of research in mobile cloud computing, which extends cloud computing functions, services and results to the world of future mobile applications. Mobile applications demand greater resources and improved interactivity for better user experience. Resources in cloud computing platforms such as Google AppEngine and Microsoft Azure are a natural fit to remedy the lack of local resources in mobile devices. The availability of cloud computing resources on a pay-as-you-go basis, the advances in virtualization and the emergence of LTE-A and WiMAX, IEEE 802.11n and 60 GHz create a new set of rich research problems.

The Workshop on "Green Mobile Computing Networks" provides a forum for discussions of all these most recent developments and brings together industry and academia, engineers and researchers. The Workshop is in conjunction with IEEE ICC'2013 conference.

Topics: The Workshop invites submissions on the following topics (but not limited to):

- Trends and challenges of achieving low energy consumption and low GHG emission
- Energy efficiency and GHG emission metrics and measurements in mobile computing networks
- Communication networks for smart grids
- Energy efficient hardware, devices and designs
- Coordinated power and GHG emission control for network-wide optimization
- QoS provisioning and resource management in green mobile computing networks
- MAC, routing and transport protocols for green mobile computing networks
- Cross-layer optimization of green mobile computing networks
- End-to-end modeling and performance of green mobile computing networks
- Pricing and billing for green mobile computing devices and services
- Green 3G/4G/5G, wireless wide area infrastructures, short range networks, mesh topologies
- Security of green mobile computing networks
- Signal processing for green mobile computing networks
- Information theory for green mobile computing networks
- Cooperative theory, game theory and causal reasoning for green mobile computing networks
- Interdisciplinary research for green mobile computing networks
- Standards, policy and regulation for green mobile computing networks
- Experimental test-beds and results

3. Names, addresses, and affiliation of workshop organizers

General Chair:

F. Richard Yu (Carleton University, ON, Canada)

Steering Committee:

Victor C.M. Leung (the University of British Columbia, BC, Canada)

Xi Zhang (Texas A&M University, TX, USA)

Yanhua Zhang (Beijing University of Technology, Beijing, China)

TPC Co-Chairs:

Pengbo Si (Beijing University of Technology, Beijing, China)

Shengrong Bu (Huawei Technologies Canada, Ottawa, ON, Canada)

The authors are encouraged to submit full papers describing original, previously unpublished, complete research, not currently under review by another conference or journal, addressing state-of-the-art research and development. All submissions should be written in English with a maximum paper length of five (5) printed pages (10-point font) including figures.

The proceedings of the workshops program will be published as the ICC2013 main conference, and will be also included by IEEE Digital Library and indexed by EI.

4. Schedule

- Full Paper Submission: May 27, 2013
- Notification of Acceptance: June 30, 2013
- Camera-ready version & Author registration: July 15, 2013