IEEE ICC 2017
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Workshop on Integrating Communications, Control, and Computing Technologies for Smart Grid (ICT4SG)

The electricity grid is facing four major challenges — increasing electricity demand, ageing grid infrastructure, ever-increasing penetration of renewables, and significant uptake of electric vehicles. To address these challenges, it is of vital importance to integrate modern control, communication, and computing technologies into one of the most complicated systems on earth, the electricity grid, for building a self-directed and self-healing smart grid.

The realization of the smart grid will require collaborative and sustained efforts from the research communities of Power Electronics, Power & Energy, Control, Communication, and Computing over the years to come. This workshop aims to facilitate this effort and enhance international collaborations by disseminating cutting-edge research results spanning multiple disciplines. Participants will be able to share perspectives and the newest findings from research and ongoing projects relevant to smart grid. This will include a variety of smart grid applications and technologies, such as smart metering, demand side management, renewable energy integration, advanced control, communication, and computing technologies.

We invite paper submissions to this workshop including, but not limited to the topics listed below. Contributions that address the integration of multiple technologies into the smart grid are particularly encouraged.

From the perspective of communications

- Smart Grid Communication and networking
- Energy harvesting communications
- Machine-to-machine communications
- Smart Metering (or advanced metering system)
- Smart grid cyber security
- Smart grid privacy

From the perspective of control and power engineering

- Wireless power transfer and energy harvesting
- Distributed and autonomous control of micro-grids
- Renewable energy integration
- Demand side management and demand response
- Home/ neighbourhood / industrial area energy management
- Electric vehicle management
- Smart electricity pricing
- Intelligent distribution and transport networks
  Signal processing-enabled state estimation

From the perspective of computing

- Internet of things and its application to the smart grid
- Big data for smart grid
- Cloud computing for smart grid
- Smart grid optimization
- Cyber-physical power system modelling
- Mobile computing for energy management systems

Important Dates:

Paper Submission: **18 November 2016**
Notification Date: **17 February 2017**
Final Paper: **10 March 2017**

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Organizing Committee:

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