



Technical Committee on Power and Energy Systems

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International Federation of Automatic Control (IFAC)
20th World Congress, July 9-14, 2017, Toulouse, France
<http://www.ifac2017.org/>

Call for Contributions

Invited Sessions and Open Invited Tracks on Smart Grids

Organizers: **Kwang Y. Lee**, Baylor University, USA
István Erlich, University of Duisburg-Essen, Germany

Sponsor: IFAC Technical Committee 6.3 - Power and Energy Systems

Recent increases in demand, production costs, and environmental concerns have triggered the efforts to develop Smart Grids for power systems. Control, information and communications technologies are at the core of the Smart Grid vision as they will empower today's power grid with the capability of supporting two-way energy and information flow, isolating and restoring power outages more quickly, facilitating the integration of renewable energy sources and empowering the consumer with tools for optimizing their energy consumption.

Following the tradition, the IFAC TC 6.3 is interested in organizing a Mini Symposium with a number of Invited Sessions & Open Invited Tracks on Smart Grid Control, Computer, and Communications (SmartGridC3), which are centered on all control, computer and communications aspects that are relevant to the Smart Grid and aim at bringing together researchers from Academia, Industry, and National Labs to exchange novel ideas, explore enabling technologies, discuss innovative designs, and share field trial experiences and lessons learnt.

1) Prospective authors are invited to submit original contributions (standard two-column IFAC format and up to 6 pages) on all aspects of Smart Grid Control, Computer, and Communications, including but not limited to:

- Power and energy systems with smart grids (planning, operation, and control)
- Integration of renewables and storage systems into power grids
- Virtual power plants, distributed generation, microgrids, renewables and storage
- Cyber-physical systems, security and privacy (intelligent monitoring and outage management)
- Wide-area monitoring, protection, communication, and control in energy systems
- Harmonic stability in power systems and power quality
- Grid forming operation and control of converter-based renewal generation units
- Treating uncertainties in power system planning, operation and control
- Architectures, networking and models for the smart grid
- Smart sensors and advanced metering infrastructure
- Energy management systems (with applications to building and home automation)
- Control, information and communications theory for power systems
- Field trials, deployments, and lessons learnt
- Regulatory issues and their impact on control, computer, and communications aspects

2) If you are interested in organizing an invited session or open invited tracks in the Mini Symposium on Smart Grids within the IFAC World Congress in Toulouse, please visit www.ifac2017.org/invited for more details about invited sessions and open invited tracks. If you have any question on how you can contribute, please contact TC 6.3 Chair, Kwang Y. Lee: Kwang_Y_Lee@baylor.edu or TC Vice-chair for Smart Grid, Istvan Erlich: istvan.erlich@uni-due.de

Important Dates:

15 September 2016 – Open Invited Tracks submission deadline
15 October 2016 – Invited Sessions submission deadline
31 October 2016 – IFAC-all (regular and invited) papers submission deadline
30 November 2016 – Workshops, Tutorials and Extended Abstracts submission deadline