

Symposium on Information Processing, Learning and Optimization for Smart Energy Infrastructures

General Chairs:

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The energy grid is undergoing a rapid transformation toward a more sustainable, efficient, resilient and secure infrastructure, in which advanced information science and technology play an essential role. New challenges emerge with the increasing penetration of renewable energy sources, extreme weather conditions, and cyber and physical security threats. Meanwhile, promising opportunities arise with next-generation monitoring and control devices as well as increasing customer participation. The rich algorithmic and analytical toolsets developed by the classical signal processing community along with contemporary and emerging advancements in the field are actively contributing to the development of innovative solutions for smart energy systems. Conversely, smart grid challenges are accelerating developments in core signal and information processing theory that are also applicable to new domains. This symposium aims to bring together researchers in the fields of information and signal processing, learning, and optimization for smart energy infrastructures. Topics include but are not limited to:

- Inference and learning for smart grids
- Power system state estimation
- Power system dynamics and transient analysis
- Phasor measurement units
- Smart meter data analytics and energy theft detection and mitigation
- Information processing for cybersecurity
- Optimal power flow and unit commitment
- Online energy management
- Demand-response and real-time pricing
- Robust and stochastic optimization methods for renewable energy management
- Interdependent energy infrastructures
- Optimization and learning for smart cities

Paper Submission: Prospective authors are invited to submit full-length papers (up to 4 pages for technical content including figures and possible references, and with one additional optional 5th page containing only references) and extended abstracts (up to 2 pages, for paper-less industry presentations and Ongoing Work presentations) via the GlobalSIP 2018 conference website. Manuscripts should be original (not submitted/published anywhere else) and written in accordance with the standard IEEE double-column paper template. The accepted abstracts will not be indexed in IEEE Xplore, however the abstracts and/or the presentations will be included in the IEEE SPS SigPort. Accepted papers and abstracts will be scheduled in lecture and poster sessions.

Important Dates:

- **June 17, 2018:** Paper submission due
- **Aug. 7, 2018:** Notification of Acceptance
- **Aug. 22, 2018:** Camera-ready paper due.

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