IEEE ICC™ 2018

IEEE International Conference on Communications

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COMMUNICATIONS FOR CONNECTING HUMANITY

CALL FOR PAPERS

SELECTED AREAS IN COMMUNICATIONS SYMPOSIUM

SMART GRID COMMUNICATIONS TRACK

Track Chair

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Scope and Topics of Interest

Communications technology has profoundly changed our daily lives in the last few decades. From the prosperity of e-commerce to the proliferation of social networking, communications have significantly improved system efficiency, functionality, adaptability and consumer-centricity. We are currently witnessing a similar enablement of power systems to that of a smarter grid providing opportunities for greater sustainability, reliability and increased capacity. As such smart grid systems are on the cusp of a rapid technological, economic and environmental evolution. Communications no doubt is at the center of this surge facilitating situational awareness, advanced operation and control and collaboration. For example, wide area monitoring protection and control, advanced metering and demand response represent a fraction of the new applications facilitated through greater grid connectivity. Smart grid communication systems must accommodate a wide variety of often changing requirements and constraints. Differences in geographic size, user scale, bandwidth, latency, reliability and security have resulted in great debate on appropriate media, tools and technologies. Moreover, the distinct characteristics of power systems make use of off-the-shelf communication systems infeasible at times.

The Smart Grid Communications track invites contributions that explore communication requirements in various grid applications, analyze existing communication technologies within that context and develop communication architectures, protocols and communication-centric data-management solutions meeting those requirements. Topics of interest include, but are not limited to:

- Channel characterization and modeling in smart grid systems
- Physical layer technologies for smart grid systems
- Medium access and routing protocols for smart grid systems
- Resource allocation and cross-layer optimization for smart grid systems
- Big data management and grid analytics for smart grid systems
- Communication-centric solutions for demand response, demand side management, and energy management
- Coexistence, interoperability and interference in smart grid systems
- Optimized implementation solutions in smart grid systems
- Architectures and networking in smart grid systems
- Data models, communications requirements and quality-of-service for data delivery in smart grid systems
- Modeling, performance analysis, and field trials for smart grid systems
- Effects of communication technologies on smart grid operation and control

- Economic approaches for improving smart grid communications and energy efficiency
- Communication-power system co-design
- Cyber-physical smart grid system modeling and analysis
- Cyber-physical security and attacks in smart grid systems
- Secure communication architectures for smart grid systems
- Standardization efforts and regulation for smart grid systems

Submission Guidelines

The IEEE ICC 2018 website provides full instructions on how to submit papers & the paper format.

You will select the desired symposium/track when submitting.

The paper submission deadline is October 15, 2017.

Only PDF files will be accepted for the review process and all submissions must be done through EDAS at http://edas.info/