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Special Issue on Smart Grid Communications

The so-called Smart Grids, or the intelligent electricity grid that utilize modern IT / communication / control technologies, have attracted increasing attentions in recent years and become a global trend nowadays. As the revolution of the electric grid system, it enables modern intelligent electricity generation, transmission and distribution by incorporating elements of traditional and advanced power engineering, sophisticated sensing and monitoring technology and two-way communications to provide better performance, increased reliability and efficient usage of renewable energy. To realize this vision, advances in communication technologies, data aggregation and mining, and optimized scheduling and control, security and privacy becomes crucial. While deploying state-of-the-art technologies in smart grids, tremendous challenges are anticipated: their direct applicability may lead to inefficiencies, unreliability, non- interoperability, security vulnerability, privacy leakages and so on despite of their success use in LAN/WAN, wireless network, telecommunication, INTERNET, etc. in recent a few decades.

To address the posed challenges Journal of Communication has inaugurated a special issue on Smart Grid Communications. Authors are invited to submit their original and unpublished research contributions to this special issue in relevant areas of smart grid communications including but not limited to the following:

- Communications architectures, protocols, services, and systems
- Standardization, interoperability, and regulation
- Cyber-physical system and cyber-physical approach
- Physical and MAC layer protocols for smart grid applications
- Home-area, Neighborhood-area, Field-area, and Wide-area networks
- Sensor, actuator, and machine-to-machine networks for smart grid
- Advanced Metering Infrastructure (AMI) communications and management
- Simulation and performance analysis of smart grid operations and communications
- Planning, scheduling, allocation, optimization, and control of smart grid resources
- Cyber security, privacy, and digital forensics
- Reliability, availability, robustness, fault-tolerance, and self-healing
- Quality-of-Service provisioning
- Communications to support demand-response management, load, and pricing management
- Support for renewable energy generation, micro grids, and storage
- Plug-in hybrid electric vehicle (PHEV) system and network
- Wireless sensor network applications
- Cloud computing for smart grids
- AI and machine learning approaches for smart grid operations and communications
- Big data analytics and management
- Smart grid test beds, field trials, and success stories

The papers must be formatted according to JCM guidelines: (www.academypublisher.com/jcm/authorguide.html).
Authors should submit their complete manuscript via EDAS according to the following timetable:

Paper Submission Deadline	May 15, 2013
Acceptance Notification	July 15, 2013
Final Manuscript Due	August 15, 2013
Tentative Publication Date	Q4 2013 or Q1 2014

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