

Call for Papers

IEEE Journal on Selected Areas in Communications: Smart Grid Communications Series

The IEEE Journal on Selected Areas in Communications (J-SAC) has inaugurated a new series on communications for Smart Grid. "Smart Grid" refers to the modernization of the electric grid to enable more efficient generation, transmission, distribution, and usage of energy, resulting in sustainable energy production and consumption with reduced adverse effects on the environment and increased power reliability. While advances in renewable energy and network control are needed, advances in communication technologies, data fusion and mining, and scheduling and optimization are also crucial for realizing this vision. It is anticipated that many of the same communications technologies that have revolutionized our way of life in the past few decades will have direct applicability to Smart Grid, for example, the use of wireless communications in a single distribution network to collect and exchange information about quality, consumption, and pricing of electricity. While many off-the-shelf communications technologies can be deployed today in the Smart Grid, their use may lead to numerous inefficiencies, especially if energy-management-specific features are not included in data compression and the data collection infrastructure. Moreover, allowing multiple distribution networks to operate side-by-side, interface to customer equipment, and share information in a secure and reliable fashion poses a number of difficult communications challenges that remain unanswered in the context of Smart Grid.

This series focuses on identifying the numerous communication challenges posed by the Smart Grid and exploring research avenues for addressing them. Original contributions that are unpublished and not currently under review by any other journal are solicited in relevant areas of Smart Grid communications including but not limited to the following:

- Physical and MAC layer protocols for Smart Grid applications
- Spectrum sharing, coexistence and interference mitigation in Smart Grid communications
- Network control for the power grid
- Smart Grid sensor data fusion and mining models
- Communications to support demand-response, load, and pricing management
- Smart Grid cyber-physical network modeling and performance analysis
- Measurement data from Smart Grid testbeds and field trials
- Architecture and network topology for Smart Grid applications
- Cyber and physical vulnerabilities and Smart Grid security

Prospective authors should prepare their submissions in accordance with the rules specified in the 'Information for Authors' section of the JSAC guidelines (<http://www.jsac.ucsd.edu/Guidelines/info.html>). Each submission will be reviewed by at least three experts and evaluated by an editorial board dedicated to the area of communications for Smart Grid. Manuscripts should be submitted via EDAS, <http://edas.info/newPaper.php?c=11249>. While manuscripts can be submitted at any time, they should be submitted according to the following timetable to be considered for the inaugural July 2012 issue:

Manuscript submission: September 15, 2011

First reviews complete: December 15, 2011

Second reviews complete/all acceptance letters sent: March 1, 2012

Materials to publisher: April 1, 2012

Publication: July 2012

Series Editorial Board

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