



CALL FOR PAPERS

Special Issue - **Integration of Intermittent Renewable Energy Resources into Power Grid**

The special issue will be published by **IEEE Systems Journal**, and the estimated publication date is May 2011.

Call for Contributions:

Renewable energy such as wind and solar power has attracted much attention. In recent years, larger capacity of wind/solar power is being integrated with conventional power grids. Therefore, it is necessary to address various challenging issues related to grid interconnection of such intermittent renewable energy resources, which are significantly different from the traditional dispatchable power sources. This special issue is intended as a state-of-the-art resource for researchers, practitioners, and decision-makers interested in studying various important problems in this area at the levels of power generation, transmission, and distribution.

Papers of original research on integration of intermittent renewable energy resources [at the system level](#) are solicited in the areas listed next and beyond:

- Planning and operations of power systems
- Impacts on system cost, reliability, and environment
- Hybrid generation systems
- Transmission and capacity planning
- Distributed generation
- Distributed resources management
- Micro-grid
- Wind/solar farm design and optimization
- Reliability evaluation and risk analysis
- Wind/solar power forecasting
- Demand side management
- Cyber-physical systems for power and energy applications
- Combined use with energy storage (including plug-in hybrid electric vehicles)
- Smart and sustainable buildings (e.g., zero-energy buildings)
- Power market
- Industrial measurement and control (e.g., SCADA, EMS, cyber security, network delays)
- Scientific computing and optimization in power and energy applications
- Probabilistic methods for decision-making support
- Artificial intelligence in complex power and energy systems
- Various smart grid applications

- Other related topics and emerging technologies

A broad range of system engineering approaches such as operations research, optimization, distributed measurement and control, and decision-making under uncertainties can be used. Submissions from industry practices are especially encouraged. We expect that a significant portion of the papers published in this special issue should be from industry experts.

Important Dates:

Full paper submission deadline: September 15, 2010

First-round review results notification: October 31, 2010

Revised paper submission deadline: December 15, 2010

Second-round review results notification: January 31, 2011

Final manuscript submission: March 15, 2011

Questions about the special issue should be directed to Prof. Lingfeng Wang (Lingfeng.wang@utoledo.edu). All manuscripts for this special issue should be submitted electronically to the IEEE Systems Journal website (<http://www.systemsjournal.org/login.php>). Authors should indicate that their manuscript is being submitted for the Special Issue on *Integration of Intermittent Renewable Energy Resources into Power Grid*. A copy of the manuscript should be emailed in PDF format to Prof. Lingfeng Wang.

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