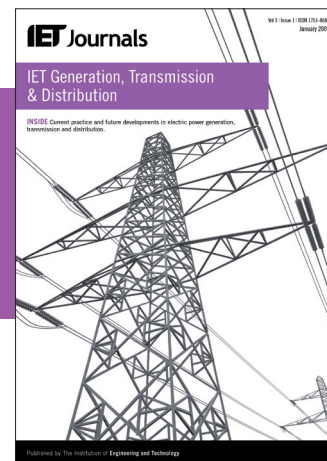


IET Generation, Transmission & Distribution Call for Papers



SPECIAL ISSUE ON: Wide Area Monitoring, Protection and Control

System-wide disturbances in power systems are a challenging problem due to the large scale and the complexity of the power system. Protection and control actions are required to stop the power system degradation, restore the system to a normal state, and minimize the impact of the disturbances. Some of the reasons why completely reliable operation is hard to achieve are: practically an infinite number of possible operating contingencies; unpredictable changes, due to the evolving nature of power systems, often a combination of unusual and undesired events (for example, human error combined with heavy weather and scheduled or unscheduled maintenance outages of the important system element); reliability design philosophy that is pushing the system close to the limits brought about by economic and environmental pressures. The trend in power system planning utilizes tight operating margins, with less redundancy, because of new constraints placed by economical and environmental factors. On the other hand, the advanced measurement and communication technology in wide area monitoring and control, better tools to control the disturbance, and new analytical techniques may provide better ways to detect and control an emergency.

Better detection and control strategies through the concept of wide area disturbance protection offer a better management of the disturbances and significant opportunity for higher power transfers and operating economies. This special issue offers an overview of ongoing research in real-time system monitoring, protection and control of large interconnected power systems. Research on new methodologies is sought involving both theoretical and innovative developments in wide-area monitoring, protection and control.

Topics of special interest include:

- assessment of risk of wide-area disturbances and development of cost-effective solutions for pre-emptive, preventive and remedial control/protection
- fast wide area system monitoring and signal processing techniques, both for system reliability/integrity and for security purposes
- model identification (static and dynamic) from time-synchronized system measurements
- enhancements to phasor measurement technology, specifications, development of standards and interoperability issues, technology gaps, application development
- emergency control and system integrity protection schemes (SIPS), control of system-wide disturbances
- wide-area measurement and control systems incorporating generation controls, FACTS and other high-leverage technologies
- technological issues in wide-area control, architectures, protection and communication systems
- factors affecting the performance of measurement-based systems (including, but not limited to, noise tolerance, closely spaced frequency components, non-stationarity of the system dynamics, etc.)

All papers must be submitted through the journal's Manuscript Central system:
<http://mc.manuscriptcentral.com/iet-gtd>

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1 September 2009

Authors to receive a

1st decision by:

December 2009

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Mid 2010

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