



## CALL FOR PAPERS

### Journal of Modern Power Systems and Clean Energy

#### **Special Section on State Estimation for Future Cyber-Physical Power and Energy Systems: Challenges and Solutions**

The primary purpose of the traditional power system is to transfer energy from a few central generators to a varying number of customers. With the development of advanced sensing, monitoring, communication, computation and control technologies, the future smart grid is extending this functionality by allowing a two-way flow of both electricity and information, yielding a complex cyber-physical energy system. Furthermore, with the integration of renewable power plants and distributed generation (DGs) on the generation side, and new demand-response technologies on the demand side, such as electric vehicles, controllable building energy and integrated energy system of Industry Park, the system dynamic characteristics become more complicated. As a result, there is an urgent need for the development of new state estimation algorithms for the integrated cyber-physical energy system modeling, situational awareness, operation and control.

This special section aims to discuss the current challenges and solutions for future cyber-physical power and energy system state estimation. The topics of interests include, but are not limited to:

- State estimation algorithms for power electronics-dominated system
- New developments of power system dynamic state estimation
- Models and methods for integrated energy system state estimation
- Models and methods for active distribution systems state estimation
- Hybridization of conventional state estimation and data analytics methods
- Distributed implementation of state estimation methods
- State and parameter estimation for systems with uncertain electrical models
- Interplay of cyber and physical layers on state estimation algorithms
- Cyber vulnerabilities of state estimation and countermeasures
- State estimation considering heterogeneous data resources

#### **Submission Guidelines**

<https://mc03.manuscriptcentral.com/mpce>

The article templates can be downloaded from <http://www.mpce.info>.

#### **Important Dates**

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