

Special Issue on  
**Advanced Optimization Techniques for Operation and Control of Intelligent Power Systems**

# CALL FOR PAPERS

Electricity demand across the world is increasing due to the huge amounts of energy required to develop and maintain prosperous economies and perform many modern activities. In order to transfer electrical powers from generation-side to demand-side in the most adequate way, smart and intelligent power technologies are utilized around the world. These technologies convert the conventional power grid into the intelligent grid (IG). In the IG, several operational, control and security related issues exist which can be addressed with the help of advanced optimization algorithms. Information and communication technologies (ICTs) are the backbone of the IG. Recent advances in the field of informatics, therefore, plays a vital role in the implementation of IGs. Some of the key challenges for IG implementation include energy metering and control, data collection and management, energy optimization and control, and grid strengthening integration of intermittent generation.

In order to cope with the ever-increasing operations and control complexities in IGs, new architectures, concepts, algorithms, and procedures related to the IG and ICTs are very much essential to IG performance optimization. This Special Issue therefore aims to encourage researchers to address the technical issues and research gaps in intelligent power systems and informatics with the help of advanced optimization algorithms. Original research and review articles are welcome.

Potential topics include but are not limited to the following:

- ▶ Intelligent power system operation, automation, protection, control, monitoring, security, dynamics, stability and other technical issues
- ▶ Advanced architectures for intelligent power systems
- ▶ Recent ICT advances for the control and management of intelligent power systems
- ▶ Artificial intelligence applications to control intelligent power systems
- ▶ Advance heuristic and meta-heuristic optimization algorithms to solve control and operational issues in intelligent power systems
- ▶ Control of intelligent day-ahead electricity market

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jcse/aotsc/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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