

Special Issue

Advances in Operation, Optimization and Control of Smart Grids: 2nd Edition

Message from the Guest Editors

Power systems have long been fundamental to societal development. The continuous growth in electricity demand has driven the expansion of these systems, bringing about significant challenges for the operation of large-scale power networks. The integration of communication, automation, and control technologies across generation, transmission, and distribution has given rise to the concept of smart grids. These modernized systems offer enhanced efficiency, safety, and resilience. Despite these advancements, several challenges remain, often demanding the development of innovative tools and methodologies to ensure the optimal operation of smart grids. This second edition of the Special Issue seeks to present recent advances and novel techniques in the operation, optimization, and control of smart grids. Topics of interest for this Special Issue include, but are not limited to, the following:

- Power system optimization;
- Integration of renewable energy sources;
- Control techniques for smart grids;
- Load forecasting techniques;
- Techniques for the operation of smart grids;
- Applications of artificial intelligence in smart grids;
- Applications of machine learning in smart grids.

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