



## Operation of Smart Grids and Microgrids: Methods, Strategies, Optimization, and Challenges

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submissions:

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### Message from the Guest Editor

This Special Issue is dedicated to the application of advanced optimization manners and methods to the operation and control of smart grids, and microgrids, focusing on renewable energy resources, managing and decision-making regarding the operational issues in the presence of different uncertainties by wind power plants, photovoltaic systems, and electric vehicles; as well as different strategies and applications such as energy storages, demand responses, combined power and heat aspects, and the other resources/strategies applied to the integration of renewables and increasing their flexibility. Furthermore, the application of different energy carriers in these new systems is of great importance.

Points of interest include, but are not limited to:

- Uncertainty modeling and decision-making;
- Optimal power flow;
- Optimal power and gas flow;
- Combined heat and power economic/emission dispatch problem;
- Optimal energy management;
- Electric vehicle management;
- Energy storage strategies and devices;
- Optimization algorithms;
- Control strategies;
- Hybrid (AC/DC) power networks;
- Multi-energy carrier operation;
- Demand response programs.





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