

Special Issue

Model Predictive Control-Based Approach for Microgrids

Message from the Guest Editors

The optimization of energy microgrids through model-based predictive control (MPC) schemes enables the reconciliation of different operational objectives while respecting the constraints imposed by the considered scenarios.

Topics of interest for this Special Issue include, but are not limited to, the following:

- Centralized, decentralized, distributed, and hybrid approaches;
- Integrated approaches (MPC in combination with data-driven techniques, such as, and not restricted to, RL);
- Deterministic and stochastic settings;
- Single, multiple, and microgrid aggregation;
- Single and multilevel control architectures;
- AC, DC, and hybrid microgrid;
- Renewable integration and decarbonization;
- Smart microgrid and smart grid modeling, simulations, and operations;
- Smart sector integration (e.g., green transport systems) and/or strictly related topics (e.g., energy communities);
- Reliability, resiliency, robustness, and stability;
- Cybersecurity, cyberthreat mitigation, cyberattack countermeasures.

Guest Editors

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Deadline for manuscript submissions

closed (10 January 2025)



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About the Journal

Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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