Special Issue

Smart Optimization Techniques for Microgrid Management

Message from the Guest Editor

In the evolving field of energy management, microgrids have emerged as a vital solution to enhance energy resilience, efficiency, and sustainability. The Special Issue focuses on innovative approaches that leverage advanced optimization techniques to improve the operation and control of microgrids. This collection aims to explore a range of smart optimization strategies, including but not limited to the following:

- **Artificial Intelligence and Machine Learning**: Utilizing AI-driven algorithms to predict energy demand.
- **Multi-objective Optimization**: Developing frameworks that balance competing objectives within microgrid operations.
- **Stochastic Optimization**: Addressing uncertainties in renewable energy generation and load demand through probabilistic modeling and robust optimization techniques.
- **Game Theory Applications**: Analyzing interactions among microgrid participants.
- **Distributed Optimization**: Exploring decentralized methods that allow local controllers to operate independently while achieving overarching system goals.

Researchers are invited to submit their findings, providing insights into how smart optimization can revolutionize microgrid management.

Guest Editor

Dr. Zineb Cabrane

Laboratory of Innovative Technologies, National School of Applied Sciences of Tangier, Abdelmalek Essaadi University, Tetouan 93000, Morocco

Deadline for manuscript submissions

1 September 2025

Processes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5

mdpi.com/si/228264

Processes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
processes@mdpi.com

mdpi.com/journal/processes

Processes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5

mdpi.com/journal/processes

About the Journal

Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Giancarlo Cravotto
Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, AGRIS, and other databases.

Journal Rank:

CiteScore - Q2 (Chemical Engineering (miscellaneous))

MDPI