Special Issue

Modern Machine Learning Applications in Control and Optimization of Energy Power and Storage Systems

Message from the Guest Editors

This Special Issue, titled "Modern Machine Learning Applications in Control and Optimization of Energy Power and Storage Systems", seeks high-quality research contributions that focus on the application of modern ML models to the control and optimization of energy power and storage systems. This curated collection of pioneering research aims to deliver valuable insights and innovative solutions, thereby shaping the future of energy power and storage systems through the lens of modern ML techniques. Topics include, but are not limited to, the following:

- Modern ML models for grid management and control;
- Forecasting renewable energy generation (solar, wind, etc.) using ML;
- ML for optimization of renewable energy integration;
- Use of DL and RL in power system optimization;
- Energy consumption pattern analysis and prediction;
- ML-based detection and prevention of cyber-attacks;
- DL for power system state estimation;
- DL for distribution network reconfiguration;
- ML for power big data anomaly detection;
- ML for energy storage management system optimization and control.

Guest Editors

Dr. Wentao Ma
School of Electrical Engineering, Xi'an University of Technology, Xi'an 710048, China

Dr. Tengpeng Chen
Department of Instrumental & Electrical Engineering, Xiamen University, Xiamen 361005, China

Deadline for manuscript submissions

28 February 2026

Processes

mdpi.com/si/220457

mdpi.com/journal/processes

Processes

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))