

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.

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