



Applications of Machine Learning and Artificial Intelligence in Modern Power and Energy Systems

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Message from the Guest Editors

Intelligent energy management, conversion and control are vital to optimize the generation, distribution and consumption of electrical energy and the corresponding necessity of using solid and liquid fossil fuels. With the technological improvements in renewable energy sources, electricity production is transitioning from the traditional centralized systems to distributed energy systems.

This Special Issue aims to collect new research information and contributions on intelligent energy management, conversion, prediction and control, including, but not limited to smart applications for power grid control, renewable energy sources, power electronic converters, fuel cells and others. Smart energy management and control can be effectively realized in various ways, including

- Effective load prediction and management, applying machine learning and artificial intelligence
- Fuel consumption forecasting and optimization
- Efficiency optimization in power flow management
- Power electronics energy conversion with loss minimization
- Monitoring and timely troubleshooting of intelligent energy systems
- Energy and power system management and optimization
- Energy and power resiliency and trust





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Message from the Editor-in-Chief

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