Special Issue

Advanced Control and Performance Optimization in Power Electronic Systems

Message from the Guest Editor

This Special Issue will highlight recent developments and ongoing research in the field of advanced control and performance optimization of power electronic systems, providing insights into current trends, challenges and opportunities for future innovation.

Topics of interest for publication include, but are not limited to, the following:

- Advanced control strategies for power electronic converters;
- Model predictive and nonlinear control;
- Artificial intelligence and machine learning applications;
- Performance optimization and loss reduction;
- Modulation techniques and digital control;
- Power quality and stability enhancement;
- Fault detection and diagnosis, and fault-tolerant operation;
- Renewable energy integration and storage systems;
- Electric mobility and charging infrastructure;
- Microgrids and smart grid applications;
- Emerging trends such as digital twins, edge computing and cyber–physical security in power electronics.

Guest Editor

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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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