Special Issue

Recent Advances in the Design and Control of Modern Power Electronic Interfaces for Renewable Energy Integration

Message from the Guest Editors

The modern liberalization of the energy market, however, has defined a new trend, shifting us toward decentralized generation, bidirectional power flow, active energy management at different nodes in the network, intelligent measurements and control, and optimized system efficiency. These are the key features for the realization of a flexible, intelligent, reliable, accessible, and economic network (smart grid). This Special Issue aims to gather together the latest developments and allow researchers to share experiences in studying and developing emerging power electronic converters and control and design methods for the integration of renewable energies. Research areas may include (but are not limited to) the following:

- Artificial intelligence-based design and control of power converters;
- Active power decoupling;
- Transformerless inverters with a wide input voltage range;
- High step-up DC-DC converters;
- Advanced MPPT techniques;
- Fault detection and diagnosis;
- Fault-tolerant control;
- Advanced control with ancillary grid services;
- Islanding detection;
- Design and control of energy storage systems coordinated with renewable energy sources.

Guest Editors

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Deadline for manuscript submissions

closed (30 September 2023)

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Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

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