Special Issue

Modeling, Topologies, and Modulation Techniques of Power Converters (DC/DC and DC/AC) for the Grid-Integration with Renewable Energy Sources

Message from the Guest Editors

Power converters play a significant role in integrating renewable energy sources with the grid. Developing a new topology of DC/DC and DC/AC power converters to minimize the production cost, high power density, high efficiency, and high reliability is the researchers' ultimate goal. This Special Issue aims to develop highly efficient power converters with low cost and novel modulation techniques to improve the power quality. The topics of this Special Issue include but are not limited to:

- Development of novel, highly efficient power converter topologies (DC/DC and DC/AC power conversion) for RES;
- Power converter reliability enhancement: fault tolerance, elimination of leakage current, soft charging for switched-capacitor topologies;
- Modeling techniques of renewable energy sources;
- Maximum power point tracking algorithms;
- Recent trends of grid-synchronization strategies for RES systems;
- Harmonics and harmonic stability in renewable-based power plants

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Message from the Editor-in-Chief

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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