Special Issue

Advances in Power Converters and Microgrids

Message from the Guest Editor

With advancements in renewable energy, a fully centralized grid is now feasible. Today's applications are more decentralized in power production and operation. Power converters in these environments must comply with various IEEE codes, current ripples, and operational limits. Thus, understanding the challenges is essential before addressing them with new converter topologies, control modifications, or larger system-level impacts. This Special Issue aims to present new advances in converter topologies, their operation, and their major impact in the field of microgrids. Topics of interest for publication include, but are not limited to, the following:

- New converter topologies applied for DC/AC systems for renewable applications;
- Applications based on solid-state transformers for renewable energy systems;
- Advanced linear/nonlinear control architecture for renewable energy resources;
- Impacts of using grid-forming converters in a microgrid and their operation;
- Different topologies of grid-forming converters and their operation;
- Application of grid-forming technologies to existing systems and their impacts.

Guest Editor

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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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