Special Issue

Application of Power Electronics Converters in Electrical Power Systems

Message from the Guest Editors

Dear Colleagues

The global energy transition, driven by progressive electrification and the growing integration of renewable energy sources, demands highly efficient and flexible power conversion systems. Integrating diverse energy sources into electric power systems fundamentally depends on advanced and efficient power electronics. Smart grids and energy storage systems increasingly rely on power converters for dynamic demand management, real-time reconfiguration, and system-level optimization. At the same time, emerging challenges related to power quality, grid stability, and system protection require innovative power electronic solutions.

In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

Novel power conversion technologies;
Integrating emerging control strategies;
Advances in wide-bandgap semiconductors and new device technologies;
Applications in renewable energy systems, smart grids, and charging systems;
Solutions for power quality, protection, and stability in modern grids.

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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