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Power Electronic Applications in Power and Energy Systems

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Message from the Guest Editors

Power electronics (PE) systems, with their control systems and communication capabilities, are expected to be the key elements in future power and energy systems, which will provide suitable interfaces and the bundling of different distributed energy resources (DERs) and loads into so-called active energy networks. As the coupling technology for DERs, the major advantages of PE will be the potential for improving efficiency and the introduction of new control possibilities for providing ancillary services to different energy systems. However, the interconnection of large amounts of unconventional and renewable energy-based sources may cause PE-based power and energy systems to operate in an undesirable and unpredictable fashion. Thus, there is a need for advanced PE techniques in order to ensure systems' integrity and accelerate their deployment in future power and energy systems applications.

The main aim of this Special Issue is to seek high-quality submissions that address recent breakthroughs and highlight emerging applications of power electronics in power and energy systems.

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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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