

Special Issue

Design and Control of High-Power AC-DC/DC-DC Power Converters in Emerging Energy and Industrial Applications

Message from the Guest Editor

High-power power electronic converters play a crucial role in energy and industrial systems. They possess applicative potential in a variety of domains. Numerous power electronic converter topologies have been designed. In addition, various controllers are employed in the control schemes. The objective of this Special Issue is to focus on high-power power electronic converters by (1) addressing their emerging applications and associated challenges, (2) improving their steady-state performance and dynamic stability response under different conditions, (3) proposing novel control algorithms for efficient and robust operation, and (4) improving the design of the power circuit. In this Special Issue, articles that perform evaluations and verify results using offline simulations that are complimented by real-time simulations or circuit prototypes results are welcome. The scope of this Special Issue includes the following topics.

- Grid-following power converters.
- Grid-forming power converters.
- High-voltage DC interconnections.
- Fast-charging vehicle stations.
- Novel control algorithms for high-power power converters.
- Novel converters power circuit schemes.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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