

Special Issue

Design, Modeling and Control of Power Converters

Message from the Guest Editors

Since the invention of semiconductor switches in the twentieth century, the share of power electronic converters in energy conversion has grown steadily. In particular, with recent advances in wide-bandgap devices, the current, voltage, and frequency rating of power electronic converters have experienced a surge leading to applications that were not previously feasible. Additionally, with increasing concerns regarding climate change and CO₂ emission, improved-efficiency renewable energy generation has attracted significant attention in the last decade. The control of power electronic converters is a key discipline in order to meet the challenges of the future of power electronics and its applications. Each application requires a dedicated control that fixes the performance of the system. However, to design better control systems for power converter systems, new modeling and design techniques have to be developed. The scope of this Special Issue is therefore to document the latest research trends in the design, modeling, and control of power converters.

Guest Editors

Dr. Daniel Montesinos-Miracle

Departament d'Enginyeria Elèctrica, Centre d'Innovació Tecnològica en Convertidors Estàtics i Accionaments, Universitat Politècnica de Catalunya, 08034 Barcelona, Spain

Dr. Behrooz Bahrani

Department of Electrical and Computer Systems Engineering, Monash University, Clayton, VIC 3800, Australia

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and Industrial Engineering, University
Niccolò Cusano, 00166 Roma, Italy

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