



Trends and Prospects in DC–DC/DC–AC Converters and Their Control Techniques for Renewable Energy Applications

Guest Editors:

Dr. Ramy Georgious

LEMUR Group, Department of
Electrical Engineering, University
of Oviedo, 33204 Gijon, Spain

Dr. Sarah Saeed

LEMUR Group, Department of
Electrical Engineering, University
of Oviedo, 33204 Gijon, Spain

Deadline for manuscript
submissions:

closed (20 April 2025)

Message from the Guest Editors

Dear Colleagues,

This Special Issue aims to bring together the latest research on DC–DC/DC–AC converters and their control techniques for use in renewable energy applications. It is intended to constitute a useful resource for researchers, engineers, and practitioners working in the field of power electronics and renewable energy systems. Potential authors are encouraged to submit research papers that present original and innovative contributions to the field. Topics of interest include, but are not limited to advanced converter topologies, soft switching techniques, resonant converters, multilevel converters, and power electronic interfaces for use in renewable energy systems. In addition, the Special Issue welcomes papers on advanced control strategies for DC–DC/DC–AC converters, including discussions of voltage / current mode control, predictive control, sliding mode control, PID control, and model predictive control.

Prof. Dr. Ramy Georgious

Dr. Sarah Saeed

Guest Editors

Keywords

DC–DC/DC–AC converters

Control strategies

Modulation techniques

Renewable energy

Power electronics





energies



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Enrico Sciubba

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

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: CiteScore - Q1 (Control and Optimization)

Contact Us

Energies Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/energies
energies@mdpi.com
[X@energies_mdpi](https://twitter.com/energies_mdpi)