

Special Issue

Single-Stage DC-AC Power Conversion Systems

Message from the Guest Editors

Power inverters have been successfully used to integrate renewable energy into microgrids. The conventional inverter topologies provide DC-AC power conversion with a step-down (buck) voltage gain. To accommodate low DC voltage generated by renewable energy sources such as PV, a front-end DC-DC boost converter is required to generate a sufficient DC link voltage for the rear-end inverter. In recent years, significant research has been devoted to establishing novel topologies that combine voltage boosting and AC voltage generation into a single-stage power conversion. This single-stage power conversion system could be an attractive solution to improve efficiency, reliability, and compactness. The aim of the Special Issue is to attract original research and review papers in the field of power electronics. Major topics include, but are not limited to:

- Multilevel boost inverters;
- Buck-boost inverters;
- Impedance source inverters;
- Switched-capacitor inverters;
- Modulation and control techniques for power inverters;
- Power inverter design, reliability, and power density for renewable energy systems.

Guest Editors

Dr. Sze Sing Lee

Dr. Chee Shen Lim

Dr. Max M. Chen

Deadline for manuscript submissions

closed (10 August 2023)



Electronics

an Open Access Journal
by MDPI

Impact Factor 2.6
CiteScore 5.3



mdpi.com/si/123994

Electronics

MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
electronics@mdpi.com

[mdpi.com/journal/
electronics](https://mdpi.com/journal/electronics)





Electronics

an Open Access Journal
by MDPI

Impact Factor 2.6
CiteScore 5.3



[mdpi.com/journal/
electronics](https://mdpi.com/journal/electronics)



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.

Editor-in-Chief

Prof. Dr. Flavio Canavero

Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q2 (Control and Systems Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.8 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2024).