



Advanced Control Techniques for Power Converter and Drives

Guest Editors:

Dr. Daniele Scirè

Department of Engineering,
University of Palermo, 90128
Palermo, Italy

Prof. Dr. Gianpaolo Vitale

ICAR Institute for High
Performance Computing and
Networking, National Research
Council of Italy, Via Ugo La Malfa,
153, 90146 Palermo, Italy

Deadline for manuscript
submissions:
closed (15 July 2025)

Message from the Guest Editors

Dear Colleagues,

This Special Issue aims to showcase the latest advancements and research findings in the domain of advanced control techniques for enhancing the performance, efficiency, and robustness of power converters and electric drives in various applications.

This Special Issue will cover a wide range of topics, including but not limited to:

1. **Control Algorithms:** predictive control, adaptive control, fuzzy logic control, and neural-network-based control.
2. **Dynamic Modeling and Identification**
3. **Optimization Objectives:** energy efficiency, improved transient response, reduced harmonic distortion, and enhanced stability.
4. **Robustness and Fault Tolerance**
5. **Real-Time Implementation**
6. **Integration of Renewable Energy:** explore how advanced control techniques can optimize power converters and drives
7. **Applications:** including motor drives, renewable energy systems, electric vehicles, industrial automation, and more.
8. **Hybrid Control Approaches**





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Flavio Canavero

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

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 guestedited by leading experts in selected topics of interest.

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), CAPlus / SciFinder, Inspec, Ei Compendex and other databases.

Journal Rank: JCR - Q2 (Engineering, Electrical and Electronic) / CiteScore - Q1 (Electrical and Electronic Engineering)

Contact Us

Electronics Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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

mdpi.com/journal/electronics
electronics@mdpi.com
[X@electronicsMDPI](https://x.com/electronicsMDPI)