

Special Issue

Modelling, Estimation and Control of Grid-Connected Converter Systems under Adverse Grid Voltage Conditions

Message from the Guest Editors

In order to meet the demand of an ever-changing scenario of the customer devices landscape, innovative techniques are required that can cope with the presence of various distortions in the grid. This Special Issue will consider recent developments in the modelling, estimation and control of grid-connected converter systems under adverse grid conditions. Both original research articles and reviews are welcome.

Topics of interest for this Special Issue include but are not limited to,

- Grid-synchronisation techniques (PLL, FLL etc.);
- Harmonics and grid abnormalities detection techniques;
- Advanced control of grid-connected devices;
- Advanced power converter topology development for distorted grid;
- Topology development, modelling, estimation and control of EV chargers;
- Multifunctional grid-connected renewable energy systems;
- Adaptive and learning-based techniques (e.g., neural networks) for grid-connected systems;
- Energy management of grid-connected systems;
- Control of grid-connected high voltage DC (HVDC) converters and modular multilevel converters (MMC);
- Stability and interaction issues in grid-connected converters.

Guest Editors

Dr. Hafiz Ahmed

Dr. Mohammad Amin

Prof. Dr. Mohamed Benbouzid

Deadline for manuscript submissions

closed (30 November 2021)



Electronics

an Open Access Journal
by MDPI

Impact Factor 2.6
CiteScore 6.1



mdpi.com/si/65130

Electronics
Editorial Office
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 6.1



[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 guestedited 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 (Engineering, Electrical and Electronic) /
CiteScore - Q1 (Electrical and Electronic Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.4 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).