

## Special Issue

# Power System Simulation with Renewable Power: Protection, Optimization and Control

### Message from the Guest Editors

Undoubtedly, renewable energy sources (RES) have changed traditional transmission grids and represent a significant electricity resource in modern power systems. This Special Issue will present the latest research developments and practical applications in the field of protection, control, and optimization in new scenarios for future power systems. These include, in particular but not exclusively:

- Modeling, design, analysis, and control of low-power and high-power converters for renewable energy conversion and their interconnections;
- Design and control of intelligent power plants for future power grids;
- Modelling, control, and simulation of battery-based energy storage systems integrated in renewable plants;
- Optimization algorithms for energy management and intelligent control of RES plants in distribution grid;
- Planning and operation of renewable power systems;
- Analysis and control of DC and hybrid AC/DC power networks;
- Diagnostics, maintenance, risks, reliability, vulnerability, and self-healing of grids;
- Big data analysis.

---

### Guest Editors

Dr. Jesus C. Hernandez

Electrical Engineering Department, University of Jaen, Campus Las Lagunillas, 23071 Jaen, Spain

Dr. Oscar Danilo Montoya

Facultad de Ingeniería, Universidad Distrital Francisco José de Caldas, Bogotá D.C. 110231, Colombia

---

### Deadline for manuscript submissions

closed (30 April 2022)



## Electronics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 6.1



[mdpi.com/si/58823](https://mdpi.com/si/58823)

*Electronics*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[electronics@mdpi.com](mailto: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).