



## Digitalization and Advanced Control Techniques of Integrated Photovoltaic Systems

Guest Editors:

**Dr. Ibrahim Anwar Ibrahim**

School of Electrical and Data  
Engineering, University of  
Technology Sydney, Sydney  
2007, Australia

**Dr. Nabil Mohammed**

Faculty of Engineering, Monash  
University, Melbourne 3800,  
Australia

**Prof. Dr. Jahangir Hossain**

School of Electrical and Data  
Engineering, University of  
Technology Sydney, Sydney,  
NSW 2007 (PO Box 123), Australia

Deadline for manuscript  
submissions:

**closed (15 February 2023)**

### Message from the Guest Editors

Dear Colleagues,

The rapid increase in photovoltaic (PV) installation at small and large scales can pose significant technical issues related to the voltage levels and capacity of the network assets in distribution networks. New solutions and digitalization of energy systems, especially PV systems, must be developed to support decision making and improve generation capacity and efficiency.

This Special Issue includes (but not limited to) the following topics:

- State-of-the-art reviews on integrated PV systems and applications.
- On-line and off-line PV system performance forecasting methods.
- PV system sizing and optimization.
- Energy management of PV systems.
- AI applications for PV systems.
- Cybersecurity of Digital PV Systems.
- Power converter topologies for PV systems.
- Grid-following inverter controls.
- Grid monitoring and synchronization techniques for 1ph/3ph PV systems
- Fault ride-through enhancement for grid-tied PV systems
- Integration of storage batteries with PV systems.





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 guest-edited 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 \(Web of Science\)](#), [CAPus / SciFinder](#), [Inspec](#), and [other databases](#).

**Journal Rank:** JCR - Q2 (*Electrical and Electronic Engineering*) CiteScore - Q2 (*Electrical and Electronic Engineering*)

## Contact Us

---

*Electronics* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/electronics](http://mdpi.com/journal/electronics)  
[electronics@mdpi.com](mailto:electronics@mdpi.com)  
[X@electronicsMDPI](https://twitter.com/electronicsMDPI)