

## Special Issue

# Advanced Sensor-Based Methods for Condition Monitoring, Diagnostics, and Fault-Tolerant Control of Power Converters

### Message from the Guest Editors

Power converters, as crucial components in power conversion, are extensively employed in applications such as electric vehicles, renewable energy systems, rail transportation, and power transmission. Ensuring their operational safety and reliability is paramount. The aim of this Special Issue is to integrate advanced sensor-based methods such as condition monitoring, diagnosis, and fault-tolerant control into existing control and/or information systems to enhance the reliability of power converters, thereby ensuring system operational safety and reducing maintenance costs. Various technologies such as sensor monitoring, artificial intelligence, analytical modeling, state estimation, and feature selection will be synergistically merged to enhance the monitoring accuracy and adaptability of practical systems. We invite researchers from academia and industry to submit original and unpublished manuscripts to this Special Issue to showcase the latest advancements in the relevant topics.

---

### Guest Editors

Dr. Dong Xie

Dr. Shuiqing Xu

Dr. Bo Yao

Dr. Hongjian Lin

---

### Deadline for manuscript submissions

30 September 2026



## Sensors

---

an Open Access Journal  
by MDPI

---

**Impact Factor 3.5**  
**CiteScore 8.2**  
**Indexed in PubMed**



[mdpi.com/si/205153](https://mdpi.com/si/205153)

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

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





# Sensors

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.5  
CiteScore 8.2  
Indexed in PubMed



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



## About the Journal

### Message from the Editor-in-Chief

*Sensors* is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. *Sensors* organizes Special Issues devoted to specific sensing areas and applications each year.

---

### Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro  
Department of Electrical and Information Engineering, Politecnico di Bari, Via Orabona 4, 70126 Bari, Italy

---

### 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), PubMed, MEDLINE, PMC, Ei Compendex, Inspec, Astrophysics Data System, and other databases.

#### Journal Rank:

JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Instrumentation)