

Special Issue

Next-Generation Fault Detection and Diagnosis: AI-Driven Models, Predictive Maintenance, and Adaptive Systems

Message from the Guest Editors

Condition monitoring is essential for modern industrial intelligent maintenance, enhancing the reliability of equipment through predictive data analytics. Next-generation machine learning techniques overcome the limitations of traditional deep learning, such as data dependence and interpretability, and are better suited for industrial environments with large-scale data and high safety demands.

This Special Issue highlights cutting-edge research and applications of next-generation machine learning in predictive analytics for condition monitoring across sectors, including aerospace, rail transportation, energy and chemical engineering, agricultural machinery, and semiconductor manufacturing, with a focus on health monitoring and management of advanced manufacturing systems. We welcome submissions on novel methods, industrial cases, and cyber-physical system integrations.

Guest Editors

Dr. Chuancang Ding

Dr. Jinyang Jiao

Dr. Baoxiang Wang

Deadline for manuscript submissions

closed (15 March 2026)



Electronics

an Open Access Journal
by MDPI

Impact Factor 2.6
CiteScore 6.1



mdpi.com/si/250341

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).