

## Special Issue

# Fault Diagnosis and Health Monitoring of Mechanical Systems

### Message from the Guest Editors

This Special Issue aims to publish the latest advancements and research findings in the field of mechanical systems' fault diagnosis, as well as the health monitoring and interpretable intelligent recognition. It aims to explore innovative theories, methodologies, and technologies employed in ensuring the safety and longevity of mechanical systems. Topics covered may include, but are not limited to, dynamics mechanism analysis, signal adaptive filtering, blind source separation, predictive maintenance techniques, information fusion, intelligent systems' fault diagnosis, predictive techniques, IoT applications, interpretable deep learning algorithms, and digital twin approaches to mechanical systems' health maintenance. The Special Issue provides a platform for experts, scholars, and research groups in related fields to share their insights, experiences, and solutions contributing to the advancement of the intelligent fault diagnosis and health monitoring of mechanical systems.

### Guest Editors

Dr. Xiaoxi Ding

State Key Laboratory of Mechanical Transmission, Chongqing University, Chongqing 400044, China

Dr. Jun Zhu

School of Civil Aviation, Northwestern Polytechnical University, Xi'an 710072, China

### Deadline for manuscript submissions

closed (20 September 2024)



## Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/si/200838](https://mdpi.com/si/200838)

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

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





# Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



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



## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

---

### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,  
20133 Milano, 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), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering )