Special Issue

Signal Processing and Artificial Intelligence Technology for High-End Equipment Fault Diagnosis

Message from the Guest Editors

With the enrichment of functions and the integration of intelligence, the safety of high-end equipment in various industrial fields, such as high-speed trains, wind turbines, engines, gas turbines, compressors and machine tools, is receiving unprecedented attention from academia and industry. Fault diagnosis is an effective means to ensure the safe operation of machines, and it can significantly minimize operation and maintenance costs and enhance the economic benefits. Scholars, researchers and engineers are seeking advanced and efficient fault diagnosis technologies to ensure the performance and efficiency of machines, especially high-end equipment. With the advancement of monitoring and sensing technology, machine status data are continuously accumulated, providing effective support for the development of fault diagnosis technology based on signal processing and artificial intelligence. Therefore, this Special Issue aims to publish research work on condition monitoring and fault diagnosis of high-end equipment through advanced signal processing and artificial intelligence technologies.

Guest Editors

Dr. Bingyan Chen

Centre for Efficiency and Performance Engineering, University of Huddersfield, Huddersfield HD1 3DH, UK

Dr. Yao Cheng

State Key Laboratory of Rail Transit Vehicle System, Southwest Jiaotong University, Chengdu 610031, China

Deadline for manuscript submissions

closed (30 April 2025)

Machines

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.7

mdpi.com/si/202611

Machines
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
machines@mdpi.com

mdpi.com/journal/machines

Machines

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.7

mdpi.com/journal/machines

About the Journal

Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.
Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.
There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

Editor-in-Chief

Prof. Dr. Antonio J. Marques Cardoso
CISE—Electromechatronic Systems Research Centre, University of Beira Interior, Calçada Fonte do Lameiro, P-6201-001 Covilhã, Portugal

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Mechanical) / CiteScore - Q1 (Control and Optimization)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2025).

MDPI