Special Issue

Intelligent Predictive Maintenance and Machine Condition Monitoring

Message from the Guest Editors

This Special Issue welcomes the submission of high-quality original research and review manuscripts that introduce innovative concepts, algorithms, methodologies, and technologies contributing to the evolution of intelligent maintenance frameworks. The scope of this Special Issue includes, but is not limited to, the following topics:

- Intelligent fault prediction and condition management in high-speed trains, wind turbines, engines, gas turbines, compressors, and machine tools;
- Monitoring and maintenance strategies for critical components such as bearings, gears, and rotors;
- Emerging sensing and data collection techniques for equipment condition assessment;
- Artificial intelligence, machine learning, and deep learning applications in prognostics and maintenance;
- Signal processing and feature analysis methods for fault detection and performance tracking;
- Implementation of digital twin and cyber–physical systems in health management.

We invite researchers and practitioners to contribute their original work to this Special Issue.
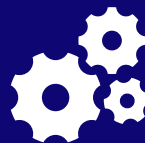
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About the Journal

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

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.9 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).