

Special Issue

Intelligent Condition Monitoring and Fault Diagnosis

Message from the Guest Editor

This Special Issue, titled “Intelligent Condition Monitoring and Fault Diagnosis,” invites innovative research at the crossroads of rail vehicle dynamics, advanced signal processing, and data-driven methods, with a focus on axle box-bearing dynamics.

Submissions exploring theoretical modeling, sensor data analytics, and intelligent diagnostic algorithms are encouraged. Key topics include:

- Multi-sensor fusion for real-time condition monitoring.
- AI-driven anomaly detection and predictive maintenance to enhance reliability and safety.
- Advanced signal processing combined with machine learning for early fault detection and remaining useful life estimation.
- Practical applications of intelligent monitoring systems, such as cloud-based solutions and human-machine interfaces, promoting optimized rail operations and informed decisions.

This issue aims to connect theory with practical technologies to reduce downtime, cut costs, and improve railway safety, fostering knowledge exchange among academics, engineers, and practitioners. We look forward to your contributions.

Guest Editor

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Deadline for manuscript submissions

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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

Prof. Dr. Antonio J. Marques Cardoso
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