

Special Issue

Railway Vehicle Maintenance 4.0

Message from the Guest Editors

In recent years, a range of industries, including manufacturing, aviation and construction, have benefited from developments in increased use of automation, use of modern sensors and data analytics, the Internet of Things (IoT) and process optimization based on machine learning. These developments have been associated with the '4th Industrial Revolution'. There is a significant opportunity to apply some of the same technologies and techniques to improve the efficiency of railway vehicle maintenance. This already starting to occur, especially with the significant increase in the use Remote Condition Monitoring (RCM) systems on new trains. The cost of maintaining railway vehicles is a significant proportion of their whole life cost, up to 40%; further research is required to continue to improve the efficiency and reliability of rail vehicle maintenance. The Special Issue seeks original research papers from researchers in industry or academia that focus on improving the efficiency, reliability and safety associated with rail vehicle maintenance. Papers describing a clear need for the work with a discussion on the route to implementation are of particular interest.

Guest Editors

Prof. Dr. Gareth Tucker

Institute of Railway Research, University of Huddersfield, Huddersfield
HD13DH, UK

Prof. Dr. Simon Iwnicki

Institute of Railway Research, University of Huddersfield, Huddersfield
HD13DH, UK

Deadline for manuscript submissions

closed (30 September 2023)



Machines

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 4.7



mdpi.com/si/138261

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

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





Machines

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 4.7



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