Special Issue

Sustainable Railway Infrastructures: Health Monitoring, Assessment and Maintenance: 2nd Edition

Message from the Guest Editors

Following the success of the first edition, the second edition of this Special Issue focuses on the latest innovations in railway infrastructure management. Recent progress in sensing technologies, artificial intelligence (AI), and big data analytics has enabled more efficient monitoring, predictive maintenance, and data-driven decision-making. Additionally, emerging approaches such as digital twins, machine learning, and IoT-based systems offer new opportunities to enhance the resilience and sustainability of railway networks. We welcome original research, case studies, and comprehensive review papers that address (but are not limited to) advanced monitoring techniques, AI-powered predictive maintenance, risk assessment and adaptation strategies, and lifecycle management and optimization. This Special Issue aims to foster interdisciplinary collaboration and showcase transformative solutions for the future of railway sustainability. Contributions from both academia and industry are highly encouraged.

Guest Editors

Dr. Jie Geng

Dr. Yuntai Zhang

Dr. Zhipeng Lai

Deadline for manuscript submissions

31 October 2025

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/237954

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

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

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)