Special Issue

System Reliability and Predictive Maintenance in Industrial Engineering—2nd Edition

Message from the Guest Editors

Today, companies focus on achieving operational excellence by optimizing the performances of physical assets. A critical element in achieving this goal is ensuring high levels of asset reliability and availability, leveraging technological evolution in ICTs and system automation. The widespread integration of sensors and monitoring systems in industrial plants, coupled with artificial intelligence (AI) and data-driven techniques, allow decision-makers to access real-time data on operating conditions, performance, and safety. Furthermore, these technologies provide advanced forecasting capabilities for more efficient maintenance decisions. The Special Issue is open to contributions from researchers who want to share their experiences, insights, and research findings. It will discuss innovative approaches, methods, tools, and techniques in systems reliability and predictive maintenance.Topics include but are not limited to:**Predictive maintenance and Analytics; Condition monitoring and Diagnostics; Risk based reliability; Digital twins and Advanced Simulations; IoT and Industry 4.0 and 5.0 in Maintenance; Case Studies in Industrial Contexts**

Guest Editors

Dr. Natalia Trapani

Department of Electrical, Electronics and Computer Engineering (DIEEI), University of Catania, 95123 Catania, Italy

Dr. Filippo De Carlo

Department of Industrial Engineering (DIEF), University of Florence, 50134 Florence, Italy

Deadline for manuscript submissions

30 November 2025

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/238295

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)