Special Issue

Tool Wear Condition Monitoring in Smart Manufacturing: Sensors, Analytics, and Decision-Making

Message from the Guest Editors

This Special Issue invites the submission of original research, reviews, data/benchmark papers, and industrial case studies that close the loop from sensing → analytics → action. Topics of interest include sensor design and fusion; signal processing and feature learning; physics-informed and hybrid modeling; remaining useful life (RUL) and uncertainty quantification; explainable AI; digital twins and cyber–physical systems for simulation-in-the-loop; and edge/embedded deployment for real-time control. Application domains span turning, milling, drilling/micro-drilling, grinding, and other machining operations. We also welcome contributions focused on organizational and technical enablers—workforce competencies, data reliability and governance, system integration, and change management—as well as practical challenges such as scalability, interoperability, latency constraints, and validation in realistic industrial environments. Submissions that demonstrate actionable decisions (e.g., adaptive control, alarms, predictive maintenance, and scheduling) and measurable impact on throughput, quality, and sustainability are particularly encouraged.

Guest Editors

Dr. Saman Fattahi

Dr. Angkush Kumar Ghosh

Dr. Armin Siahsarani

Deadline for manuscript submissions

30 June 2026

Machines

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.7

mdpi.com/si/258213

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

mdpi.com/journal/machines

Machines

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.7

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 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).