Special Issue

Transforming Classic Machining into Smart Manufacturing

Message from the Guest Editors

In recent years, smart manufacturing technologies have revolutionized the industry, enabling unprecedented levels of precision, efficiency, and safety; however, while large-scale industries have embraced these advancements, many small businesses, research labs, and educational institutions continue to rely on traditional, non-automated devices, such as manual milling machines, lathes, cutting tools, and printers. This Special Issue seeks to address the gap by exploring innovative methods to retrofit and automate non-automated devices. Potential topics for this Special Issue include, but are not limited to, the following:

- Retrofitting manual devices: Techniques for automating manual milling machines, lathes, cutting tools, and printers through the addition of custom modules.
- Integration of sensors, vision systems, and acoustic analysis: Applications of real-time monitoring, feedback, and control to improve precision and safety.
- Low-cost automation solutions: Development of affordable and scalable technologies for small businesses and research labs.
- Human–machine interaction: Innovations in user interfaces and control systems that enhance usability and accessibility.

Guest Editors

Dr. Jonghyun Kim

Manufacturing and Fusion Engineering Lab, Keimyung University, Daegu, Republic of Korea

Prof. Dr. Haewoon Choi

Laboratory for Advanced System Engineering and Research, Keimyung University, Daegu, Republic of Korea

Deadline for manuscript submissions

30 November 2025

Machines

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.7

mdpi.com/si/234358

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).