

Special Issue

Industry 5.0: Key Enabling Technologies, Requirements, Current Applications and Future Directions

Message from the Guest Editors

The evolution of industrial systems is transitioning from the efficiency-driven paradigm of Industry 4.0 toward the value-oriented vision of Industry 5.0, which emphasizes sustainability, resilience, and human-centricity. This next phase in industrial innovation seeks to embed human values directly into the design and operation of smart systems, ensuring that technology enhances—not replaces—human capabilities. This Special Issue invites original research articles and reviews that explore the technological, methodological, and ethical foundations of Industry 5.0. We seek contributions that demonstrate how emerging technologies enable sustainable, adaptive, and human-aligned industrial solutions. Topics of interest include, but are not limited to:

- Comparative analysis of Industry 4.0 and Industry 5.0 technologies;
- Human-centric system design;
- Collaborative robotics and human–robot interaction;
- Digital twins and CPHS;
- AI-driven maintenance and diagnostics;
- Immersive interfaces and cognitive ergonomics;
- Sustainable and ethical design of industrial systems;
- Human–machine interfaces and immersive technologies.

Guest Editors

Dr. Ludovica Maria Oliveri

Dr. Federico Briatore

Dr. Simone Arena

Deadline for manuscript submissions

28 February 2026



Machines

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 4.7



mdpi.com/si/250050

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 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).