

Special Issue

Artificial Intelligence and Robotics in Manufacturing and Automation

Message from the Guest Editor

This Special Issue explores the latest advancements, challenges, and applications of AI and robotics in manufacturing and automation. We invite original research and review articles covering key areas including: AI-driven predictive analytics for maintenance and optimization; collaborative robots (cobots) and human-robot interaction; machine learning for process enhancement; swarm robotics and multi-robot coordination in decentralized manufacturing systems; intelligent quality control using machine vision and deep learning for defect detection; and energy-efficient AI solutions for sustainable manufacturing. Contributions highlighting real-world case studies, emerging trends, and innovative implementations are particularly welcome. By bridging academic research and industrial practice, this collection aims to foster knowledge exchange and provide comprehensive insights into how intelligent technologies are shaping the future of smart manufacturing. Researchers, engineers, and practitioners are invited to submit their work and join this important discourse on next-generation automation systems.

Guest Editor

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Deadline for manuscript submissions

31 December 2026



Machines

an Open Access Journal
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Impact Factor 2.5
CiteScore 4.7



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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
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