



AI-Integrated Advanced Robotics towards Industry 5.0

Guest Editors:

Dr. Bugra Alkan

School of Engineering, London
South Bank University, 103
Borough Rd., London SE1 0AA,
UK

**Dr. Malarvizhi Kaniappan
Chinnathai**

School of Computer Science and
Engineering, University of
Westminster, 115 New Cavendish
St, London W1W 6UW, UK

Deadline for manuscript
submissions:

31 May 2025

Message from the Guest Editors

Dear Colleagues,

The primary objective of this Special Issue is to provide a comprehensive compilation of cutting-edge strategies and emerging trends/technologies within the domain of robotic-integrated smart manufacturing systems. It further aims to examine the various challenges and opportunities that arise from the integration of artificial intelligence into the domain of industrial robotics systems towards realising the goals of the concept of Industry 5.0, where robots and smart machines work alongside people to add resilience and sustainability to the manufacturing systems.

Topics of interest include, but are not limited to, the following:

- Collaborative robots in smart manufacturing and assembly;
- Simulation and modeling of robotic systems;
- Energy monitoring and optimisation of robotic systems;
- Data-driven cyber-physical robotic manufacturing and assembly;
- Decision-support systems for robotic applications;
- Intelligent robot-enabled material handling solutions;
- Path planning for automated guided vehicles and mobile robots for shop-floor logistics;
- Intelligent and adaptive gripper systems.





an Open Access Journal by MDPI

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

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.

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), Inspec, and other databases.

Journal Rank: JCR - Q2 (Engineering, Mechanical) / CiteScore - Q2 (Control and Optimization)

Contact Us

Machines Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/machines
machines@mdpi.com
[X@Machines_MDPI](https://twitter.com/Machines_MDPI)