

# Special Issue

## AI-Integrated Advanced Robotics Towards Industry 5.0

### Message from the Guest Editors

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.

### Guest Editors

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### Deadline for manuscript submissions

31 October 2025



## Machines

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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.

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### Editor-in-Chief

Prof. Dr. Antonio J. Marques Cardoso  
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