Special Issue

Advancements in Industrial Robotics and Automation

Message from the Guest Editors

This Special Issue aims to explore novel concepts and experimental findings that contribute to the field of advanced robotic systems by integrating innovative mechatronics, sensor technologies, vision systems, and artificial intelligence algorithms, enabling adaptive operation within dynamic production environments. Innovations in industrial robotics align with the concept of Industry 4.0/5.0 through the use of intelligent robotic systems and advanced automation technologies that focus on human–machine collaboration, adaptive automation, and sustainable production. This Special Issue is dedicated to presenting practical applications in robotics and automation, which can be supported by theoretical analyses, experimental research, and simulations. Research areas may include, but are not limited to, the following:

- Artificial intelligence applications in industrial robotics and automation;
- Virtual reality and augmented reality;
- Manufacturing process robotization according to Industry 4.0 and 5.0;
- Human–robot interaction;
- Advanced and sustainable manufacturing processes;
- Modeling and simulation for robotic process optimization;
- Advanced sensor and measurement technologies in robotic systems.

Guest Editors

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Deadline for manuscript submissions

20 May 2026

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/254523

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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