Special Issue

Advances in Computer Vision and Artificial Intelligence Technologies for Industrial Robotics

Message from the Guest Editors

The rapid development of artificial intelligence (AI), the Internet of Things (IoT), and robotics has significantly accelerated the digital transformation of industries and enhanced productivity in manufacturing, logistics, and other sectors. By moving towards higher levels of intelligence, Industry 5.0 places greater emphasis on efficient human–robot collaboration, which poses new challenges to the ability of intelligent industrial robots to perceive, reason, and act in dynamic and complex environments. In the meantime, ensuring the trustworthiness, security, and robustness of AI-driven systems has become a key issue for practical implementation that is essential for improving the public trust and acceptance of these technologies. This Special Issue will present the latest research and innovations at the intersection of computer vision, multi-modal sensing, and AI-based decision making and industrial robotics, as well as explore trustworthy, secure, reliable, AI-driven system design and development for achieving wider public acceptance and technology adoption.

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Deadline for manuscript submissions

10 July 2026

Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/si/228418

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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