

Special Issue Reprint

Advances in Industrial Robotics and Intelligent Systems

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Robotics and intelligent systems often appear to be linked, as they take advantage of the best abilities of each other towards a common goal. In industry, it is common to see robotic systems aided by machine learning and vice versa and in applications spanning from robot navigation, grasping, human–robot interaction/collaboration, safety, and team management, among others. Achievements targeting the industrial domain can be directly applied in robotic systems operating in other domains. While the advancements in the last few years have been enormous, industrial robotics and intelligent systems face several scientific and technological challenges related to their integration with other systems, interaction with humans, safety, flexibility, reconfigurability, and autonomy. These challenges are especially relevant when robots operate in unstructured industrial environments and share their workspaces with human co-workers and other robots. This reprint collects research and technological achievements related to advanced intelligent robotic systems. The contributions cover the coordination of multiple robots navigating on the factory floor, path planning strategies, human–robot interaction, robot redundancy and kinematics, systems integration, grasping, and manipulation.

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