Special Issue

Advances in Kinematic Planning and Dynamic Control of Intelligent Robots

Message from the Guest Editors

The field of robotics is undergoing a paradigm shift driven by advancements in computational algorithms, sensor technologies, and adaptive control systems. Kinematic planning and dynamic control lie at the heart of enabling robots to perform complex tasks in unstructured environments, from industrial automation and autonomous navigation to medical robotics and human–robot collaborations. Research areas include, but are not limited to, the following

- Kinematic path planning for multi-joint and mobile robots.
- Dynamic modeling and control of robotic manipulators and legged systems.
- Real-time trajectory optimization under environmental constraints.
- Machine learning-driven motion planning for adaptive robotics.
- Collision avoidance in dynamic or cluttered environments.
- Human–robot interaction with emphasis on safety and compliance.
- Sensor fusion for enhanced localization and control accuracy.
- Energy-efficient actuation and torque optimization.
- Multi-robot coordination and swarm dynamics.
- Simulation frameworks for validating kinematic and dynamic models.

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Deadline for manuscript submissions

15 December 2025

Electronics

an Open Access Journal by MDPI

Impact Factor 2.6
CiteScore 6.1

mdpi.com/si/241241

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

Editor-in-Chief

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