Special Issue

Motion Planning for Autonomous and Intelligent Mobile Robots in Unstructured Environments

Message from the Guest Editor

The robotics industry has experienced revolutionary growth in the past decade, and robots have transitioned from structured factory settings to unstructured environments. In particular, mobile robots have found extensive applications in elderly care, warehouse automation, patrolling and surveillance, and space exploration, as well as search and rescue operations. To succeed in these important fields, the development of motion-planning techniques is vital. Unlike path planning in the traditional automation industry, which can be hardcoded, motion planning for autonomous mobile robots, including both UGVs and UAVs, need take the surrounding environment into consideration. This Special Issue aims to showcase recent advances related to motion planning autonomous and intelligent mobile robots in unstructured environments. Topics of interest include, but are not limited to, the following:

- Path planning of UGVs in dynamic or unstructured environments;
- Obstacle avoidance of mobile robots;
- Motion planning drones and UAVs with collision avoidance;
- Sensor-based motion control of UGVs and UAVs;
- Mission planning for drones or UAVs;
- Implementation of path-planning techniques to new robot systems.

Guest Editor

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Deadline for manuscript submissions

30 April 2026

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About the Journal

Message from the Editor-in-Chief

It is my great pleasure to welcome you to our open access journal, *Robotics*, which is dedicated to both the foundations of artificial intelligence, bio-mechanics and mechatronics, and the real-world applications of robotic perception, cognition and actions. The 21st century is the robotics century and intelligent robots will change our lifestyle forever. Let us work together toward the realization of intelligent robots step by step.
It is great fun to create intelligent robots and imagine their practical applications. *Robotics* is now ready to serve you in the long journey towards such a goal.

Editor-in-Chief

Prof. Dr. Marco Ceccarelli
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