



robotics



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Localization and 3D Mapping of Intelligent Robotics

Guest Editors:

Prof. Dr. Mónica Ballesta

Systems Engineering and
Automation Department,
Universidad Miguel Hernández
de Elche (Alicante), 03202 Elche,
Spain

Prof. Dr. Oscar Reinoso García

Department of Systems
Engineering and Automation,
Miguel Hernández University,
03202 Elche, Spain

Dr. María Flores Tenza

Systems Engineering and
Automation Department,
Universidad Miguel Hernández
de Elche (Alicante), 03202 Elche,
Spain

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Message from the Guest Editors

Dear Colleagues,

Localization involves determining a robot's position relative to its surroundings, typically achieved through techniques like Simultaneous Localization and Mapping (SLAM).

Navigation heavily relies on accurate localization data, allowing robots to plan optimal paths and avoid obstacles in real-time. This capability is essential for applications ranging from warehouse logistics to search and rescue missions.

Moreover, the fusion of perception and detection technologies enables robots to interpret their surroundings comprehensively, identifying objects, obstacles, and hazards. This environment recognition capability enhances safety and efficiency across various tasks.

These advancements in localization and mapping have far-reaching applications, including industrial automation, agricultural robotics, and exploration in hazardous environments. As technology continues to evolve, intelligent robots equipped with sophisticated localization and mapping capabilities will further revolutionize numerous fields, making operations safer, more efficient, and increasingly autonomous.

Guest Editors



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Special Issue



Editor-in-Chief

Prof. Dr. Marco Ceccarelli

LARM2: Laboratory of Robot
Mechatronics, Department of
Industrial Engineering, University
of Rome Tor Vergata, Via del
Politecnico 1, 00133 Roma, Italy

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.

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Robotics Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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