

Special Issue

Simultaneous Localization and Mapping (SLAM) of Mobile Robots

Message from the Guest Editors

SLAM has been a fundamental and challenging technology in enabling mobile robots to operate autonomously in unknown environments, where safety and precision are the vital issues for reliable and high-level autonomous applications. This SI seeks to gather insights into state-of-the-art research and to promote the continuous progress of SLAM technology for mobile robots. Topics of interest for this Special Issue include, but are not limited to the following:

- Advanced SLAM Algorithm Development: The improvement of existing algorithms to increase the accuracy and robustness of localization and mapping.
- AI and ML for SLAM: The integration of advanced AI and ML techniques with SLAM algorithms in dynamic and complex environments.
- Cooperative SLAM: Multi-robot SLAM system development, dealing with communication barriers, co-localization issues, and joint optimization problems to enable efficient and effective multi-robot navigation.
- Fast SLAM for Edge Deployment: Real-time SLAM on edge devices, Hardware–Software co-design optimization, efficient data processing technologies, and resource-constrained SLAM solutions.
- Expansion of Application Scenarios

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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 guestedited by leading experts in selected topics of interest.

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