Special Issue

Advanced Sensors for Path Planning and Navigation in Challenging Environments

Message from the Guest Editors

The proliferation of mobile robots, including Unmanned Ground Vehicles (UGVs) and Unmanned Aerial Vehicles (UAVs), demands more efficient and reliable operational solutions, which can be achieved by upgrading them to Autonomous Guided Vehicles (AGVs). Applying proper sensing technologies combined with navigation and path planning algorithms is a core factor that impacts the implementation and performance of AGVs for reliable and feasible autonomous guidance. There is an urgent need for the development of AGVs in challenging environments, such as urban and indoor areas, where various objects (e.g., buildings and moving subjects) cause multipath and signal delay problems for radio-based positioning (GNSS, etc.). Multiple alternative sensors should be used with proper fusion algorithms to achieve reliable and seamless navigation and positioning in immersive environments. We encourage authors from academia and industry to publish new research results related to sensor fusion for AGV navigation and path planning in challenging environments.

Guest Editors

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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