Special Issue

Cutting-Edge Sensor and Fusion Approaches for Robust and Reliable Autonomous Driving

Message from the Guest Editors

Autonomous driving technology relies on the accurate perception of a vehicle's surroundings through the integration of diverse sensors and advanced fusion algorithms. This Special Issue welcomes original research articles, reviews, and technical notes on recent advancements in sensor technology and multi-sensor fusion for autonomous driving applications. Topics of interest include sensor calibration, data synchronization, environmental perception, obstacle detection, and decision-making algorithms that integrate data from cameras, LiDAR, radar, and other modalities. Innovative sensor fusion frameworks—at data, feature, and decision levels that enhance robustness and safety under varying conditions are of particular interest. Contributions addressing sensor noise, computational complexity, real-time processing, and deep learning-based fusion are encouraged. This issue aims to provide a comprehensive overview of state-of-the-art sensor systems and fusion methods, highlight technological breakthroughs, and foster interdisciplinary collaboration for safer and more reliable autonomous vehicles.

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Message from the Editor-in-Chief

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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