

Special Issue

LiDAR Technology for Intelligent Transportation Systems and Smart Driving

Message from the Guest Editors

This Special Issue highlights recent advances in LiDAR sensing for intelligent transportation systems (ITS) and smart driving, bridging research and real-world deployment. Topics include:

- Roadside (infrastructure-based) LiDAR systems for traffic detection, tracking, and trajectory extraction.
- Mobile LiDAR for road asset inventory, pavement condition assessment, and high-definition mapping.
- LiDAR-based perception for connected and autonomous vehicles, including lane-keeping and motion planning.
- Sensor fusion of LiDAR with cameras, radar, GNSS/IMU, and V2X data.
- Deep learning, foundation models, and geospatial AI for point cloud processing and scene understanding.
- Pedestrian, cyclist, and wheelchair user detection, tracking, trajectory prediction, and risk assessment.
- LiDAR data quality, denoising, and robustness under adverse weather (rain, snow, fog, dust).
- Digital twins, virtual reality, and simulation environments built from LiDAR data for ITS and CAV testing.
- Real-time edge computing, embedded systems, and low-latency architectures for LiDAR analytics.
- Engineering deployment, calibration, standardization, privacy, and cybersecurity of LiDAR-based ITSs.

Guest Editors

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Message from the Editor-in-Chief

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