

Special Issue

Recent Advance of Auto Navigation in Indoor Scenarios

Message from the Guest Editors

Location-based services (LBS) are vital for work, travel, factory production and other social activities, and indispensable to transportation, economy and society. Positioning is LBS's core, underpinning its functionality. The mature Global Navigation Satellite System (GNSS) provides 24/7 reliable meter/centimeter-level outdoor positioning but fails in shielded areas (e.g., tunnels, indoors). Though indoor positioning technologies have boomed to complement GNSS, complex indoor structures in GNSS-denied environments limit single technologies (low availability, poor accuracy, high costs). Thus, low-cost, wide-area, high-precision indoor positioning is a key urgent focus in navigation. Topics of This Special Issue include but are not limited to:

- Inertial navigation;
- Pedestrian, vehicle, bicycle, and drone dead reckoning;
- UWB, ultrasound, Wi-Fi, BLE, LED, visual, and magnetic positioning;
- Attitude and heading reference system;
- Gyroscope, accelerometer, and magnetometer calibration;
- Data-driven positioning method;
- Simultaneous localization and mapping (SLAM).

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