Special Issue

Indoor Navigation: Indoor Positioning System Using Sensing Technologies

Message from the Guest Editor

Traditional outdoor navigation technologies, such as Global Navigation Satellite Systems, are ineffective indoors due to weak signal reception, posing a challenge for context-aware services vital for social networking, advertising, recommendation systems, and healthcare. Indoor positioning systems address this challenge by leveraging a variety of sensing technologies, including Wi-Fi, Bluetooth, RFID, Ultra-Wide Band, and IMU sensors. The complexity of indoor environments, combined with human motion patterns and uncertain sensor data, necessitates modeling indoor positioning with powerful mathematical models (typically non-linear and non-Gaussian) to accurately predict pedestrian locations. Sensor fusion plays a pivotal role by integrating data from multiple sensors, improving accuracy and reliability. This Special Issue explores innovative approaches in indoor navigation and positioning using advanced sensing technologies. Researchers are invited to contribute their cutting-edge findings, focusing on solutions that combine various sensing technologies to enhance the effectiveness of indoor positioning systems.

Guest Editor

Prof. Dr. Frank Deinzer

Faculty of Computer Science and Business Information Systems, Technical University of Applied Sciences Wuerzburg-Schweinfurt, 97074 Wuerzburg, Germany

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Sensors
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sensors@mdpi.com

mdpi.com/journal/sensors

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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.

Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro
Dipartimento di Ingegneria Elettrica e dell'Informazione (Department of Electrical and Information Engineering), Politecnico di Bari, Via Edoardo Orabona n. 4, 70125 Bari, Italy

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