



## Best Practice in Simultaneous Localization and Mapping (SLAM)

Guest Editors:

**Dr. Michał R. Nowicki**

Institute of Robotics and Machine Intelligence, Poznan University of Technology, 60-965 Poznan, Poland

**Prof. Dr. Giorgio Grisetti**

Department of Systems and Computer Science, Sapienza University of Rome, 00185 Rome, Italy

**Dr. Marco Camurri**

Oxford Robotics Institute, University of Oxford, Oxford OX2 6NN, UK

Deadline for manuscript submissions:  
**closed (31 March 2022)**

### Message from the Guest Editors

SLAM algorithms are deployed in different platforms, with increasing levels of accuracy and robustness. Transitioning from controlled lab environments to in-field deployment is challenging, and is made possible via the accumulation of solid expertise on practical aspects with SLAM. The best practices would be beneficial, it is a key enabler to unleash the true potential of robot autonomy. The developments also coincide with in autonomous robots. The availability of localization techniques drives development forward in planning and control domains that when combined form an autonomous agent.

The Special Issue is to invite papers that deal with challenging issues in SLAM. Topics include: Best practice in visual, LiDAR, and radar SLAM; Fault detection and recovery; Tight integration of SLAM algorithms with planning and control systems; Emerging application domains and their inherent challenges; Calibration methods for single and multi-cue SLAM systems; SLAM with non-conventional sensors; Core SLAM aspects (Position tracking; Optimization; Uncertainty estimation (also marginalization); Data association; Loop closing); Learning-based methods to enhance model-based SLAM systems.





*sensors*



an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Vittorio M. N. Passaro**

Department of Electrical and  
Information Engineering,  
Politecnico di Bari, Via Orabona  
4, 70126 Bari, Italy

## 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.

## Author Benefits

**Open Access** : free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High Visibility**: indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [PubMed](#), [MEDLINE](#), [PMC](#), [Ei Compendex](#), [Inspec](#), [Astrophysics Data System](#), and [other databases](#).

**Journal Rank**: JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Instrumentation)

## Contact Us

---

*Sensors* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/sensors](http://mdpi.com/journal/sensors)  
[sensors@mdpi.com](mailto:sensors@mdpi.com)  
[X@Sensors\\_MDPI](#)