

Special Issue

Sensor-Based Surgical and Medical Robotics: Challenges and Opportunities

Message from the Guest Editors

This Special Issue aims to discuss innovative sensors-based surgical and medical robots, as well as the intelligent algorithms that make full use of the sensors. Authors are invited to submit articles relating to "Sensor-Based Surgical Robotics: Challenges and Opportunities", with topics including, but not limited to, the following:

- AI-based medical/surgical algorithms;
- AI-enabled medical/surgical robotics;
- Clinical applications of sensors;
- Computer vision for medical/surgical robotics;
- Deep learning methods for medical/surgical robotics;
- Sensors for the automation of medical/surgical robotics;
- Hardware–software integration in medical/surgical robotics;
- Human–computer interaction methods in medical/surgical robotics;
- Planning and control algorithms in medical/surgical robotics;
- Preoperative medical image computing;
- Probability and uncertainty analysis in medical/surgical robotics;
- Perception techniques in medical/surgical robotics;
- Medical/surgical robots and systems;
- Navigation, localization, mapping, and SLAM in medical/surgical robotics;
- Neurorobotics;
- Safety in medical/surgical robotics;
- VR/AR techniques in medical/surgical robotics.

Guest Editors

Dr. Jingwei Song

1. United Imaging Research Institute of Intelligent Imaging, Beijing 100144, China
2. Department of Naval Architecture and Marine Engineering, University of Michigan, Ann Arbor, MI 48109, USA

Dr. Cristina P. Santos

Center for MicroElectroMechanical Systems (CMEMS), University of Minho, 4710-057 Braga, Portugal



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/144191

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

[mdpi.com/journal/
sensors](https://mdpi.com/journal/sensors)





Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



[mdpi.com/journal/
sensors](https://mdpi.com/journal/sensors)



About the Journal

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.

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

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)