Special Issue

Advances towards Intelligent Computer-Assisted Interventions: From Medical Imaging to Surgical Robotics

Message from the Guest Editors

Over the past decade, artificial intelligence and robotics have instigated enormous changes to human societies and research fields. Intelligent and further automated robotic surgery is a promising research area that attracts more and more attention among researchers, due to its potential high accuracy and safety. This Special Issue therefore aims to collate both original research and review articles on recent advances in the theories, methodologies, and applications pertaining to fields of computer-assisted interventions. Both classical and deep-learning-based methods in fields of medical imaging and surgical robotics are welcomed. Potential topics include, but are not limited to, the following:

- Medical image segmentation;
- Object detection in medical images;
- Medical image registration/fusion;
- Uncertainty modelling for medical imaging;
- 2D/3D point cloud registration;
- Hand-eye calibration algorithms;
- X+Reality for computer-assisted intervention;
- Surgical robotics;
- Automated surgical instrument detection/segmentation;
- Automated surgical phase recognition;
- Advanced deep learning methods/theories for medical imaging.

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Deadline for manuscript submissions

closed (31 July 2024)

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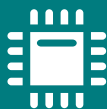**Impact Factor 3.5**
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Message from the Editor-in-Chief

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.

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