

Special Issue

Application of Image and Video Analysis in Robotics Technology for Minimally Invasive Surgery

Message from the Guest Editors

We are pleased to invite submissions to a new Special Issue titled “Application of Image and Video Analysis in Robotics Technology for Minimally Invasive Surgery”.

The diffusion of minimally invasive surgery and robotic assistance has thrived in recent years. However, there are some issues that limit its widespread adoption, including its limited field of view, loss of depth perception, prolonged operative times, higher financial costs, and so on. To overcome these issues, digital technologies such as artificial intelligence and the metaverse are constantly being developed to revolutionize operating rooms according to Moore's Law of computation. Together, we can learn from robots, just as how they are learning from us. **Keywords:**

- tissue tracking
- surgical tool evaluation
- surgical action recognition
- three-dimensional scene reconstruction
- preoperative to intraoperative registration
- surgical workflow analysis
- surgical skill assessment
- computer vision and artificial intelligence
- metaverse
- minimally invasive surgery and robotic assistance

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Deadline for manuscript submissions

closed (20 August 2023)



Applied Sciences

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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