

# CAAI Transactions on Intelligence Technology

## Call for Papers



**Deadline for submissions: 31st July 2024**

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## Special Issue on: AI Technologies and Applications in Medical Robots

During the last three decades, medical robots have been increasingly used to perform a growing number of health tasks. As such, they show promising future potential for use in a wide range of health issues. Medical robots are robotic machines utilized in general health sciences. They can be categorized into three main classes: (1) medical devices including surgery robotic devices, diagnosis and drug delivery devices, (2) assistive robotics including wearable robots and rehabilitation devices, and (3) robots mimicking the human body including prostheses, artificial organs, and body-part simulators. Today, artificial intelligence (AI) is present along the entire wide spectrum of medical robot applications, which mainly include surgery, rehabilitation, therapeutics treatments, as well as prosthesis and orthosis. AI technology helps improve the accuracy, safety and intelligence of medical robots in intelligent diagnosis, surgical planning, instrument operation, clinical evaluation, signal and image processing, actuation and control, data acquisition and other aspects. Therefore, this special issue CAAI Transactions on Intelligence Technology, devoted to AI Technologies and Applications in Medical Robots, seeks current research and actual applications that represent a step forward in this field. We aim to highlight the areas where AI methods are used to empower medical robots.

Topics of interest include, but are not limited to:

- Artificial intelligence (AI) including deep learning applicable for medical robots
- Medical robot technique and systems
- Medical image processing in medical robots
- Surgical planning in medical robots
- Navigation technique in medical robots
- Image registration in medical robots
- Human-robot interaction in medical robots
- Deep reinforcement learning (DRL) for medical robots
- Medical robot control

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