* Title of the special session

Intelligent Control Technologies in Medical Robotics

* Brief description of the area of concern, with special focus on specific technical areas. Please make here an explicit reference to the sponsoring IES Technical Committee(s) (if any).

With the development of science and technology, the research on the field of medical robots has attracted enormous attention in the past decade. Medical robotics have an extensive range of applications, such as surgical robots, rehabilitation robots, nursing robots, educational robots, etc. The control technology of these robots has a crucial impact on medical effectiveness and quality. However, complexities and uncertainties of the model, saturation of actuating machinery, and security constraints of systems are critical challenges in developing distinguished and superior medical robotic control systems. To accommodate these issues, various control methods have been proposed in recent years. These methodologies can consequently improve the overall performance of medical robots in undertaking a wide range of missions.

The main aim of this special session is to present recent advances in the area of intelligent control in medical robotics based on model-based and data-driven technologies. The special session is subtitled below.

1. Intelligent control methods for medical robots

2. Intelligent navigation and path planning methods for medical robots

3. Learning-based control method for medical robots

4. Resilient estimation and control in medical robots

5. Human-robot interaction methods

6. Networked and distributed intelligent control in medical robots

7 Simulation and modeling of robotic systems

* The name and contact information of two or more special session organisers, who are willing to promote and organise a sufficient number of quality submissions to the special session.
* The background of the organisers.

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