Medical Robotics

The field of robotics in the medical field is poised for very significant growth in the immediate future. A confluence of recent academic and industrial research has reached a threshold which is expected to lead to a breadth of new products ranging from: rehabilitation robots, service robots for the elderly and physically challenged, surgical mechanisms for minimally invasive procedures, new tools in informatics for immediate physician access to patient records, and tele-operated devices for field first aid. This progress has created a rapidly growing worldwide demand for new professionals in this area. Even more so than mobile or industrial robotics, however, medical robotics represents the fusion of a range of subjects; researchers with domain knowledge in mechanical engineering, medicine, electrical engineering, nursing, physiotherapy, computer science and informatics, neuroscience, physiology, artificial intelligence, and even psychology are all in a position to contribute to new products and research in this arena.

This special track attracted a number of high-quality papers drawing on a number of these cross-disciplinary topics in investigating the implementation of medical robotic devices and systems.