



سمینار تخصصی قطب علمی کنترل صنعتی

موضوع سخنرانی

Robotic Assistance for Improving Surgeries and Therapies

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Biography: Dr. Mahdi Tavakoli Afshari received his BSc and MSc degrees in Electrical Engineering from Ferdowsi University and K.N. Toosi University, Iran, in 1996 and 1999, respectively. He then received his PhD degree in Electrical and Computer Engineering from the University of Western Ontario, London, ON, Canada, in 2005. In 2006, he was a post-doctoral research associate at Canadian Surgical Technologies and Advanced Robotics (CSTAR), London, ON, Canada. In 2007-2008, and prior to joining the Department of Electrical and Computer Engineering at the University of Alberta as an assistant professor.

Dr. Tavakoli was an NSERC Post-Doctoral Fellow with the BioRobotics Laboratory of the School of Engineering and Applied Sciences at Harvard University, Cambridge, MA, USA. Dr. Tavakoli's research interests broadly involve the areas of robotics and systems control. Specifically, his research focuses on haptics and teleoperation control, medical robotics, and image-guided surgery. Dr. Tavakoli is the first author of the book "Haptics for Teleoperated Surgical Robotic Systems" (World Scientific, 2008).

Abstract

This presentation will discuss the potentials of telerobotics technologies for assisting and improving healthcare – we will consider telesurgery and telerehabilitation as two examples. Robotics can facilitate surgery through several small incisions in the body (as opposed to open surgery) and over a long distance. Robotics can also enable in-home telerehabilitation (as opposed to hospital-based rehabilitation) of patients suffering from impairments in bodily motion through emulating physical hand-over-hand movement therapy over the Internet.