Title: Emerging Technologies in Rehabilitation Robotics

Abstract:
Rehabilitation robotics and assistive technologies have become an integral part of society serving persons with physical and cognitive disabilities. In this keynote, we will discuss the latest advances developed at USF's Center for Assistive, Rehabilitation and Robotics Technologies (CARRT), and we will cover topics such as wheelchair-mounted robotic arms, object grasp refinement, brain-machine interfaces, and virtual reality for vocational rehabilitation, among other topics.

Bio:
Redwan Alqasemi earned his BSc, MSc, and PhD degree in Mechanical Engineering in 1994, 2001, and 2007 consecutively. He is currently a research professor at the University of South Florida's Mechanical Engineering Department and a lead researcher at the Center for Assistive, Rehabilitation and Robotics Technologies (CARRT). Dr. Alqasemi is a senior member of IEEE society, a member of the National Academy of Inventors (NAI), and a board member of the Lifeboat Foundation Scientific Advisory Board. He served as a panelist for several NSF/NIH programs and the Department of Veterans Affairs (VA) Rehabilitation Research & Development Service (RRDS) program. Dr. Alqasemi has published more than 200 technical papers in national and international journals and conferences in the field of robotics and assistive/rehabilitation technologies, and he is an Associate Editor for the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), committee member for IEEE Control Systems Society on Intelligent Control, and for MDPI Sensors Journal. His research interests include: rehabilitation robotics and assistive technologies, human-robot interaction and controls, virtual reality simulation, haptic interfaces, and brain-computer interfaces. Dr. Alqasemi holds five full US patents, several provisional patents, and some of his work is ready for commercial use.