Integrating robotics and human control systems

Ravi Balasubramanian Associate Professor in MIME Oregon State CoRIS Institute

This talk will provide an overview of research in OSU's Robotics and Human Control Systems Lab directed by Prof. Balasubramanian. Prof. Balasubramanian's work seeks to simultaneously draw inspiration from the human body's control system to advance robotic systems and to use robotic systems to understand the human body and improve quality of life. This viewpoint spawns many unique research questions across domains. In this talk, Prof. Balasubramanian will highlight ongoing research work in robotics-inspired passive implant design for orthopedic surgery for re-engineering the mechanics of movement and force transmission from within the body, focussing on their benefits and challenges.



Prof. Ravi Balasubramanian is an Associate Professor in the Collaborative Robotics and Intelligent Systems (CoRIS) Institute and the School of Mechanical, Industrial, and Manufacturing Engineering at Oregon State University (OSU). He directs the Robotics and Human Control Systems Laboratory at OSU. Born in India, Prof. Balasubramanian received his B.Eng. in Mechanical Engineering from the National University of Singapore with top honors and his PhD from the Robotics Institute at Carnegie Mellon University. He did a post-doctoral fellowship at the University of Washington in computational neuroscience and biomechanics, was a researcher at Intel Labs Seattle in personal robotics, and then was a research scientist at Yale University. Prof. Balasubramanian has received the NSF CAREER grant and the Congressionally Directed Medical Research Program Neuromusculoskeletal Injuries Research Award, among other honors.

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