IRIVI Seminar Series

Wearable Device Design and Biomechanical Research at Sandia National Labs

Featuring Jason Wheeler Ph.D. | R&D Staff Member; Robotics and Counter-Robotics, Sandia National Laboratories

> February 9, 2022 | 12:15PM - 1:15PM Marcus Nanotechnology Building 1116 - 1118 | 345 Ferst Drive

Abstract: Musculoskeletal biomechanics research has provided numerous important insights into human movement that inform the design of assistive devices. These devices have the potential to retore or rehabilitate lost function, augment performance, and reduce injury risk to individuals in physically demanding jobs. This talk will describe research and development of wearable devices at Sandia National Laboratories, including wearable haptics for motion feedback, smart prosthetic sockets, and wearable robotic devices aimed at injury prevention and performance augmentation. Sandia has several active robotics programs and is working to further grow our team and capabilities.

Bio: Jason Wheeler is a Distinguished R&D Staff Member in the Robotics and Counter-Robotics R&D Department at Sandia National Laboratories. His primary research interests lie in wearable robotics and musculoskeletal biomechanics, though he works in many related and unrelated fields, including robotic design and controls, haptics, and electron microscopy. He received an MS in mechanical engineering from MIT and a Ph.D. from Stanford University. He has or is currently leading several programs at Sandia for the Departments of Energy and Defense and is the author of several publications and patents.

Georgia Tech Institute for Robotics and Intelligent Machines

