Seminar Announcement

Friday, October 26th, 2018
12:00 pm – 1:00 pm
Olin Engineering, Room 202
Marquette University

Yen-Sheng Lin, Ph.D.
Postdoctoral Fellow
Leg & Walking Laboratory
Shirley Ryan AbilityLab

Abstract

“Patient-Centric Research in Musculoskeletal Biomechanics and Imaging”

Dr. Yen-Sheng Lin is a Postdoctoral Fellow in the Leg & Walking Laboratory at Shirley Ryan AbilityLab (formerly known as Rehabilitation Institute of Chicago). He was trained in mechanical and biomedical engineering and received Ph.D. in Rehabilitation Science and Technology from the University of Pittsburgh. Dr. Lin’s research interests include musculoskeletal biomechanics and imaging to identify the risk factors of the secondary complications followed by neurophysiological diseases. He developed various methods that utilize advanced imaging technologies to study the mechanism of overuse injuries in wheelchair users. His previous work examined biplane fluoroscopic images in manual wheelchair users with spinal cord injury to elucidate the anatomical and functional responses of repetitive shoulder activities. This imaging modality provided a unique platform for the validation of the Freehand Ultrasound technique, which captures the imaging-based kinematics and morphological structures simultaneously. This unique combination of motion capture and ultrasound systems provides quantitative and non-invasive musculoskeletal measurements during functional activities. In addition, he took the lead in developing the quantitative ultrasound techniques with the video-based automatic tracking algorithm to study morphological and physiological abnormality in individuals with paraplegia. This entails an interdisciplinary approach that brings together engineers, physiatrists, and physical therapists to develop scientific-driven strategies for improving the mobility strategies among individuals with neurological disorders.

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