UNIVERSITY OF DELAWARE
ENGINEERING

DEPARTMENT OF BIOMEDICAL ENGINEERING

2021 SEMINAR SERIES

DAVID REINKENSMEYER, PH.D.

Professor, Mechanical & Aerospace Engineering

University of California, Irvine

4/23/2021

Zoom link HERE

Password: BMESeminar

10:30 PM EST

VISIT US ONLINE
for future lecture details
bme.udel.edu

ABSTRACT:

ROBOTICS AND SENSOR TECHNOLOGIES FOR MOVEMENT REHABILITATION AFTER STROKE: UNDERSTANDING EFFICACY AND UPTAKE

A key goal in movement rehabilitation after stroke is to promote beneficial sensory motor plasticity through movement practice. Starting about 30 years ago, researchers began introducing robotic technologies to help deliver and quantify movement practice. Today, these technologies are valuable investigational tools in rehabilitation research yet uptake into routine clinical practice has been partial and slow. In this talk I will overview what is known about the effectiveness of robotic-assisted therapy, including recent insights into who can benefit most from it and why, in the context of upper extremity stroke rehabilitation. I will also describe factors that determine the uptake of new technologies, some derived from analysis of large data sets from home-based movement training devices.

BIOGRAPHY:

David Reinkensmeyer is Professor in the Departments of Mechanical and Aerospace Engineering, Anatomy and Neurobiology, Biomedical Engineering, and Physical Medicine and Rehabilitation at the University of California at Irvine. He is co-director of the NIDILRR COMET Robotic Rehabilitation Engineering Center, co-director of the NIH K12 Engineering Career Development Center in Movement and Rehabilitation Sciences, and Editor-in-Chief of the Journal of Neuroengineering and Rehabilitation. He is a co-inventor of the T-WREX arm training exoskeleton, commercialized by Hocoma A.G. as ArmeoSpring and now in use in over 1000 rehabilitation facilities worldwide, and also co-inventor of the MusicGlove finger training device, commercialized by Flint Rehabilitation Devices. He is a fellow of the AIMBE.

BIOMEDICAL ENGINEERING
590 Avenue 1743 | Newark, DE 19716
bmeg-info@udel.edu