Virtual Reality-Augmented Rehabilitation (VR-AR) Laboratory

Director:

Rachel M. Proffitt, OTD, OTR/L
proffittrm@health.missouri.edu
Faculty Office: 573-884-2418
Fax: 573-884-2610
811A Clark Hall
Columbia, MO 65211

Mission:

To produce high-quality evidence for using virtual reality-based occupational therapy interventions

General Laboratory Description:

The goal of Dr. Proffitt’s lab is develop, test, and implement virtual reality (VR) technologies as occupational therapy interventions for persons receiving rehabilitation services across the spectrum of care. People with disabilities, their caregivers, and rehabilitation clinicians are all active participants in the development process through User Centered Design. Technologies such as the Nintendo Wii, the Microsoft Kinect, the Oculus Rift, and the Leap Motion are utilized with client populations including stroke, traumatic brain injury, spinal cord injury, and amputees. Dr. Proffitt collaborates with investigators at University of Missouri, University of Southern California, Washington University in St. Louis, as well as clinics throughout the United States, Germany, and Brazil.

Focus Areas:

Virtual Reality, Technology, Neurological Injuries, Motor Function, Occupational Performance

Current Projects:

1. Determining the mechanisms of virtual reality for rehabilitation
   a. The goal of this project is to determine the individual features of the virtual reality intervention, Mystic Isle, that lead to specific changes in engagement, motivation, and motor performance in persons with chronic stroke.

2. Translating evidence of VR-based interventions in chronic stroke
   a. The goal of this project is to translate current evidence of efficacious stroke interventions to improve motor performance into virtual reality-based tasks.
3. Novel Technologies as a Rehabilitation Intervention in Stroke

a. The goal of this project is to investigate two novel technologies, the Oculus Rift and Microsoft Kinect, and determine the optimal method of intervention delivery for persons with chronic stroke.

FOR INFORMATION ABOUT PUBLICATIONS AND FUNDING:
https://shp.missouri.edu/ot/viewProfile.php?facultyName=proffitt-rachel