

Rehabilitation Engineering Research Center (RERC)

The overarching objective of this RERC is to Optimize Participation Through Technology (OPTT) for people aging with and into a disability. The OPTT-RERC a synergistic partnership between the rehabilitation, engineering, and clinical research expertise at the University of Southern California's Division of Biokinesiology and Physical Therapy, Division of Occupational Science and Occupational Therapy, the Viterbi School of Engineering, Information Sciences Institute, Institute for Creative Technologies, Rossier School of Education, Davis School of Gerontology, Keck School of Medicine, and [Rancho Los Amigos National Rehabilitation Center](#).

The ICT's Virtual Reality and Gaming for Home-based Motor rehabilitation project is one of the four core projects that falls under the RERC program. The project, headed by Skip Rizzo and Belinda Lange, focuses on the development of prototype applications using the Microsoft Kinect, the Nintendo Wii Fit and web cameras designed specifically for exercise and rehabilitation. This project involves the use of focus groups, user-testing in clinics and clinic and home based assessments for a range of impairments (such as older adults at risk of falls, people with spinal cord injury, people who survived stroke and people with traumatic brain injury). The Microsoft Kinect Based tool, Jewel Mine, is an example of one of the prototypes developed as part of the RERC.

MedVR Team: Skip Rizzo, Belinda Lange, Sebastian Koenig, Chien-Yen (Kevin) Chang, Kevin Feeley and Rachel Proffitt