Human Engineering Research Laboratories

VA Pittsburgh Healthcare System
VA Rehabilitation Research and Development

University of Pittsburgh
School of Health and Rehabilitation Sciences
School of Medicine

UPMC Rehabilitation Institute
Center for Assistive Technology

http://www.herl.pitt.edu/
Our Mission:

To continuously improve the mobility and function of people with disabilities through advanced engineering in clinical research and medical rehabilitation.

Our Vision:

To create a world where all people with disabilities have unencumbered mobility and function so that they can fully participate in and contribute to society.
Research

HERL is proud to have been at the forefront of assistive technology research for 20 years. Since 1994, we have been seeking solutions to mobility problems for veterans and all people with disabilities using state-of-the-art laboratories and research instruments.

Our research encompasses a wide spectrum of the most up-to-date technology, from virtual reality experiments to electronics work with robotics to 3D computer modeling, printing, and machining. We work on medical and bioengineering issues, such as evaluation of transfer methods and preservation of remaining function, and we create data capture, collection, and monitoring systems. Our researchers also work directly with people who use wheelchairs and a variety of assistive devices to bring both immediate and long-term benefits to individuals with disabilities.

HERL’s extensive lab space includes a clinical laboratory, a robotics laboratory, and a prototyping and testing facility.
Education

HERL supports research and design projects for masters, doctoral, and post-doctoral students. As part of the School of Health and Rehabilitation Sciences and the School of Medicine at the University of Pittsburgh, we educate bioengineers, rehabilitation engineers, rehabilitation professionals, physical and occupational therapists, and physicians. HERL is directed by a multidisciplinary team that brings a diverse approach to education. We also provide in-service training for rehabilitation engineers and technicians. Competitive assistantships are available to qualified applicants.

HERL also has several internship programs that provide a unique opportunity for high school students, undergraduate students, and veterans transitioning to college to engage in a variety of educational, clinical, and research training activities.

Activities

HERL conducts research at veterans’ sporting events such as the National Veterans Wheelchair Games and the National Disabled Veterans Winter Sports Clinic. These events help us to interact with and serve our veterans who use wheelchairs, as well as disseminate our research results, educate wheelchair users on our work, and recruit subjects for our research studies.

HERL collaborates with the Walter Reed National Military Medical Center to host the State-of-the-Science Symposia series to update healthcare professionals on the latest information needed to treat people with disabilities, especially returning wounded soldiers. Rehabilitation experts from the VA, Department of Defense, universities, and private industry have gathered at the workshops to lecture on topics such as polytrauma, traumatic brain injury, and regenerative medicine.

HERL uses our research as a vehicle to engage students in science, technology, engineering, and math. HERL mentors teams of middle
school students in the annual FIRST Lego League competition, participates in a job shadowing program for local high school students, and partners with other regional and national organizations like the Boy and Girl Scouts of America and museums, including Carnegie Science Center and the New York Hall of Science.

HERL’s programs and research projects receive funding from private industries, corporate foundations, nonprofit groups, and government agencies. HERL-affiliated researchers have received many patents, several of which have successfully made it to the marketplace.