

Position in Motor Control and Neurorehabilitation in BME at U Houston

Job Description:

One funded postdoctoral fellow position is available in the Department of Biomedical Engineering at the University of Houston, Houston, TX, USA. The post-doctoral position is available from January 2019. REIGN Lab (Rehabilitation Engineering for Improving Neuromotor Control) is currently focused on understanding the neural mechanisms of motor coordination in neurologically unimpaired and impaired individuals, especially in stroke survivors. We intend to translate scientific findings to develop novel therapeutic strategies and engineering application for improving motor function of individuals with neurological impairments. The laboratory also has opportunities to study aging and sensory/motor/cognitive functions and has an access to do research with other neurological populations. The lab will adopt brain imaging and stimulation in the near future to address questions on the neural mechanisms of motor coordination following neurological injuries at the level of the EMG and kinematics/kinetics as well as the brain activation. In Houston, Texas, there are 27 medical hospitals, one of which is TIRR, the #2 rehabilitation hospital in the US (<http://tirr.memorialhermann.org/>) where the laboratory has a network for collaboration. In addition, Neural Engineering and Neurorehabilitation is one of the three focuses in the Dept of the BME at UH (<http://www.bme.uh.edu/>). The University of Houston (UH) is a Carnegie Tier One research (R1) institution. UH is situated in one of the largest cities in the US. The campus is located in downtown Houston. Required Qualifications for postdoc position: • Ph.D. in motor control, neural engineering, motor learning, motor neurorehabilitation, motor neuroscience, physical (or occupational) therapy, or other engineering (ME, BME, EECS) • Experience in signal processing and programming (MATLAB, etc) • High self-motivation and persistence • Strong critical and analytical thinking skills • Strong technical writing, presentation and communication skills Preferred Qualifications for postdoc position: • Research expertise in EMG-guided computer interface • Proficient in the following: • Programming in LabView • Experience in electromyography • Experience in KINARM, brain stimulation (TMS) and/or imaging (EEG, fNIR, fMRI) • Human subjects experimental design and statistical analysis • Biomechanical experimental techniques including optical motion capture Interested candidates can send their curriculum vitae, a brief description of research interests and career goals, and contact information for three references to Dr. Jinsook Roh at jroh@uh.edu. Review of applicants will begin immediately and continue until the position is filled.

Job Functions:

The successful applicant will participate in work that includes the quantification of motor performance in the upper extremity of stroke survivors by using rehab-robotics and develop EMG-guided training protocols and assess their feasibility for motor improvement for stroke survivors. We welcome the application of motivated, problem-solving oriented scientists who have the passion to promote motor rehabilitation of people with neurological injuries through their work. The successful postdoc will contribute to building a new lab as well as publishing papers with the already collected data in the lab. This is a rich opportunity to build a network with people in neurorehabilitation and neural engineering in the Texas area including Texas Medical Center as well as with an established international network in South Korea.

Contact:

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