

**IMMEDIATE POST-DOCTORAL TRAINING OPPORTUNITY
AT CASE WESTERN RESERVE UNIVERSITY & THE CLEVELAND VA MEDICAL CENTER**

BI-DIRECTIONAL NEUROPROSTHESIS FOR LOWER LIMB AMPUTEES

The Department of Biomedical Engineering at *Case Western Reserve University* and the *Center for Advanced Platform Technology (APT Center)* at the *Cleveland VA Medical Center* are inviting highly motivated individuals to apply for a new post-doctoral position dedicated to developing bi-directional neuroprosthesis for individuals with lower limb loss. This unique opportunity involves using high-density neural interface technology to activate peripheral nerves and record neural activity from muscles in the residual limb. The work will be performed at laboratories of *Drs. Hamid Charkhkar, Ronald Triolo, and Dustin Tyler*. The fellow will be intimately involved with characterizing elicited responses from sensory stimulation, recording and analyzing EMG activity from residual muscles, designing a controller based on neural activity in real time, interfacing with advanced lower limb prostheses, and determining effects of bi-directional neuroprosthesis on gait, balance and confidence in various environments.

Candidates should possess:

- A doctoral degree in a discipline related to neural engineering, biomedical engineering, or mechanical engineering with a research focus on neuroprosthetics.
- Expertise in neural stimulation and recording.
- Strong background in control theory and signal processing.
- Human subject protection training and clinical testing with human volunteers.
- Mastery of laboratory instrumentation and electronics, Matlab and C programming, data acquisition, and control system development.
- Fundamental knowledge of sensory-motor neurophysiology, biomechanics of gait and posture and human motor control.
- Ability to apply biological/engineering/design concepts in practice.
- Productive history or good potential of generating peer-reviewed publications.
- Demonstrated ability to work both independently and as a member of a team including clinicians, scientists, engineers, faculty and students.
- Excellent oral and written communication and interpersonal skills.

Applicants must be motivated and independent self-starters with a Ph.D. or equivalent. U.S. Citizenship or Permanent Residency **strongly** preferred. Salary is dependent on qualifications and experience in accordance with University policies.

Qualified candidates should send a CV and names of three references to:

CAREERS@APTCENTER.ORG

Please refer to this announcement and indicate citizenship status in your reply.

Case Western Reserve University and the *Cleveland VA Medical Center* are Equal Opportunity Affirmative Action Employer and does not discriminate on the basis of race, color, religion, national origin, sex, age, disability, or citizenship or veteran status as provided by law.