

Postdoctoral/Engineering Position in Brain-Machine Interfacing at The Cleveland Clinic

We are seeking an outstanding postdoctoral candidate or engineer for research in brain-machine interfacing and restoration of movement after paralysis via electrical stimulation of the peripheral nerves. Our work is part of a larger government funded clinical trial (ReHAB: **R**econnecting the **H**and and **A**rm to the **B**rain) to restore arm function to paralyzed individuals by using their intracortical brain signals to control peripheral nerve stimulators that reanimate their paralyzed muscles. The specific focus of our five-year NIH-funded project (PIs: **Drs. Dawn Taylor** and **Bolu Ajiboye**) is to improve brain-controlled limb movements by more effectively modulating limb stiffness (i.e. degree of co-contraction of antagonist muscle) to improve limb stability while also minimizing muscle fatigue.

Research activities include working with healthy non-human primates trained to use their brain signals to control a computer simulation of a paralyzed arm, and spinal-cord-injured humans controlling their own paralyzed arm. Ideal candidates will have experience/familiarity in some or all of the following: neural recordings in non-human primates and/or humans; peripheral nerve stimulation for restoration of movement; real-time neural signal processing; writing custom programs to control multiple pieces of hardware and control objects in a virtual environment (matlab skills preferred); computational or biomechanical modeling. An advanced degree in Biomedical Engineering, Computer Engineering, or Neurosciences is preferred but other applicants will be considered.

This is a great opportunity to work with our large interdisciplinary team of researchers, engineers and clinicians to gain a wide range of skills beneficial for your future neural or rehab-related career. Interested candidates should submit their curriculum vitae to Dawn Taylor, PhD (dawn.taylor@case.edu). The Cleveland Clinic is an equal opportunity employer, and we encourage applications from a diverse range of candidates.

