

Postdoctoral Positions Available
Adaptive Neural Systems Lab (Dr. Ranu Jung)
Florida International University, Miami, FL

Florida International University (FIU) is a multi-campus public research university located in Miami, a vibrant, international city. FIU offers more than 180 baccalaureate, masters, and professional and doctoral degree programs to over 44,000 students. FIU has achieved Carnegie Research University status (with high research activity) and is one of the 20 largest universities in the nation.

Three postdoctoral positions are available in the laboratory of Dr. Ranu Jung in the Adaptive Neural Systems Laboratory (ANS), Department of Biomedical Engineering at FIU in Miami, Florida (<http://www.bme.fiu.edu>). Selected candidates will be part of an on-going, multi-disciplinary effort to develop an advanced prosthetic system capable of providing sensory feedback and motor control for upper extremity amputees and assessing brain function. The postdoctoral researchers will also interact extensively with biomedical and electrical engineers from academia (Profs. Lin, Godavarty, Fan @FIU and Prof. Abbas at ASU), neuroscientists (Dr. Horch@FIU), clinicians (Drs Orbay and McCarthy @ FIU), industrial partners, other staff and students. Candidates must be able to demonstrate excellent communication skills and the ability to work as part of a team. The advertised positions are for two years, renewable on a yearly basis based on performance and continued funding.

Position 1 (Job No. 35343)

The fellow will focus on experimental evaluation of sensory perception and sensorimotor performance using the developed novel prosthetic system. This work will require experimental design for psychophysics studies and extensive analysis of data from sensory and sensorimotor experiments. A PhD or comparable advanced degree in Neuroscience, Biomedical Engineering or related fields is required. Applicants must have a strong background in neuroscience (particularly, neural stimulation research, somatosensory perception and neural control of manipulation). Prior experience of working with human subjects is highly desirable but not required. Knowledge of regulatory requirements for human subject medical device development would be very beneficial. Applicants must be comfortable programming in Matlab or Python (desirable).

Position 2 (Job No. 35344)

The fellow will focus on understanding the organization of sensory and motor maps in the human brain and it's reorganization as the person learns to use the developed prosthetic system. This work will require the use of state of the art techniques such as fNIR, TMS and EEG. A PhD or comparable advanced degree in Neuroscience, Biomedical Engineering or related fields is required. Applicants must have a strong background in neuroscience (particularly, neural stimulation and recording research and somatosensory perception). Prior experience of working with TMS, fNIR, EEG and conducting multimodal data fusion analysis and programming is highly desirable.

Position 3 (Job No. 35345)

The fellow will focus on implantable, mixed signal IC design for peripheral nerve recording applications. The candidate will also be responsible for IC fabrication, testing and integration with existing system. A PhD or comparable advanced degree in Electrical Engineering or related fields with an emphasis on mixed signal IC design and prior experience with designing IC's for neural signal processing applications is required. Prior experience with designing wireless systems is highly desirable.

The Adaptive Neural Systems lab is focused on developing and applying new technology to address the complex problems presented by neurological disability. The scope of the lab's activities includes the design and development of neural enabled technology, the evaluation of neurotechnology in pre-clinical trials, and the transfer of these technologies to biomedical industry and clinical practice. The Biomedical Engineering Department at Florida International University is leading the state in biomedical engineering education. It is endowed by generous support from the Wallace H. Coulter Foundation, the Ware Foundation and the State of Florida. Many faculty in the department work closely with researchers in the Brain Institute at the Miami Children's Hospital, CATE Institute for neuroscience research and many biomedical companies in South Florida. Applications must be submitted online at <https://www.fiujobs.org>.