Joint China-Cuba Laboratory in UESTC is seeking for Postdoctoral Researchers

The postdoctoral researchers will join the projects i) to develop computational methods to examine network-level structural and functional brain connectivity to shed light on the neurobiological mechanism of disease, paving the way for early detection and intervention. ii) to develop new mathematical and statistical techniques for processing neurofeedback in real time using fMRI and EEG and further application in clinical setting to modify altered brain circuits. Particularly, our research focuses on

- Mathematical modeling of effective connectivity by using data driven approaches (Tensor Methods as well as Bayesian Wiener-Akaike Granger-Causality

- The development of Neural mass and Neural field models based integrated with state space methods for model inversion.
- Novel EEG/MEG source localization with emphasis on the biophysical origin of these phenomena
- New acquisition methods for fMRI and simultaneous EEG/fMRI recording and multimodal fusion including EEG fingerprinting of fMRI neurofeedback techniques.
- Development of scalable and efficient algorithms/methods to run on HPC cluster for Big Data processing
- Creation of and interaction with large scale population neuroimaging databases of normal and pathological subjects.
- The development of inexpensive systems based on wearable devices for Brain Body Imaging for population-based management of cognitive aging and the dementias

A particular approach is to examine usually accepted assumptions and methods and see if they need radical transformations thus leading to innovative new techniques and knowledge ("myth busting")

Candidates are also expected to take part in mentoring the students and organize workshops.

The positions will start immediately as the candidates are accepted, usually for two-year which can be negotiable. Opportunities to work with an excellent network of domestic and international scientists and doctors. Salary will be 10,000 RMB (per month, less 8% of taxes), plus monthly and yearly bonus from the research projects. Travel tickets will be covered annually by the UESTC. Postdoctoral researchers are encouraged to present their work in international conferences yearly in which all expenses will be covered by the lab. Free accommodation in the apartment of university buildings, equipped with electrodomestic tools and furniture will be provided.

Requirements

Candidates must have a strong background in computational neuroscience and/or mathematical modeling and have at least one first authored publication in relevant subjects. They must have obtained or about to obtain a PhD from Biomedical Engineering, Computer Engineering, Physics,

Mathematics or a related field with research interests in neuroinformatics, cognitive neuroscience and/or multimodal neuroimaging. Experience with MRI, fMRI and EEG processing is preferred.

Research group

Neuroinformatics Collaboratory is a newly founded lab by Pedro Valdes-Sosa due to 1000 Talent Professor of China grant. This lab is based at a Chinese National Key Lab for Neuroinformation, University of Electronic Sciences and Technology of China (UESTC), the burgeoning West China's information science and technology and Neuroscience base that is the Asian center of the joint Chinese-Cuba Laboratory for Frontiers Research in Translational Neuroscience. We aim to be the link between different groups at UESTC and Cuban Neuroscience Center, including the Key Laboratory for Neuroinformation of Dezhong Yao, the Laboratory for Social, Cognitive and Affective Neuroscience Lab of Keith Kendrick, and the Cognitive Neuroscience Department of Maria Antonieta Bobes and Mitchell Valdes at CNEURO. We also have close ties with the Laboratory of Neuroimaging (LONI), International Neuroinformatics Portal (INCF) and the Brain Imaging Center of the Montreal Neurological Institute. Our lab focuses broadly on neuroinformatics, signal and neuroimage analysis, biophysics, neural modeling, and the application of these techniques to translational research to impact on the management of brain disorders. We use multimodal neuroimaging, and psychophysical techniques, including MRI, fMRI, DTI and EEG. More info can be found at www.neuroinformatics-collaboratory.org

UESTC is positioning itself to become one of the foremost international hubs of Neuroinformatics and Neuroimaging research.

Application

To apply, send a cover letter, a resume, and a letter of recommendation from a former advisor or head of department to our contact email: contact@neuroinformatics-collaboratory.org.

Contact Information

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