

## Postdoctoral Research Fellow Position at Massachusetts General Hospital/Harvard Medical School

The Athinoula A. Martinos Center for Biomedical Imaging, Department of Radiology at Massachusetts General Hospital is offering a postdoctoral position focusing on applying advanced multi-modal neuroimaging methodology for translational applications in the Translational Neuroimaging and Neural Control (TNNC) Laboratory. This position is open now until filled.

Potential candidates will be considered based on the following research directions:

- a) Optimize the high spatiotemporal fMRI method, e.g. line-scanning and single-vessel fMRI, to specify circuit dysfunction and vasomotion impairment in transgenic mice of mutated gene as risk factors of Schizophrenia and Bipolar diseases.
- b) Develop a novel wireless implantable RF coil array in combination with fiber photometry or electrophysiological recordings to acquire neuro-glia-vascular signals across different scales.
- c) Apply neural network computational methods to analyze fMRI/EEG/fiber photometry recording-based brain dynamic signals, aiming to interpret the consciousness state changes of comatose animal models.
- d) Develop an advanced optical imaging device (e.g. MR-compatible miniscope) for brain dynamic signal recordings, e.g.,  $\text{Ca}^{2+}$ , Glutamate, dopamine with simultaneous fMRI in awake rodents.

A Ph.D. (or equivalent) in electrical engineering, biomedical engineering, computer science, medical physics, or a related field is required; however, strong candidates with other scientific backgrounds will also be considered.

Candidates with strong computational/programming skills and experience in fMRI are preferred. Also, we welcome candidates with experience in multi-photon optical imaging, fiber photometry, or *in vivo* electrophysiology in animal models (rodents) to apply for this position, who can be trained to learn how to perform animal fMRI and perform fMRI data analysis.

We welcome candidates with high motivation, curiosity, and scientific maturity. The candidate should have strong teamwork skills and be flexible for night or weekend imaging time shifts.

Please send your CV to describe your background, interests, and research goals to Dr. Xin Yu by e-mail: [xyu9@mgh.harvard.edu](mailto:xyu9@mgh.harvard.edu). Please include "Postdoc Application for Multi-modal Neuroimaging" in the subject line of your email.

