Postdoctoral Fellow in neuroimaging, human 7T and/or deep learning at Emory University

The Department of Radiology and Imaging Sciences of Emory University is seeking **several** postdoctoral fellows and/or staff scientist to work on **the development and/or application of advanced MRI techniques for neuroimaging including 7T human MRI and/or deep learning methods**. The position holders will join Dr. Qiu's lab (http://randomprogram.net) and participate in several NIH-funded projects including explainable AI and the large-scale NIH-funded Emory Healthy Brain Study, which is developing early predictive biomarkers for Alzheimer's Disease with a target enrollment of 3000 subjects (https://healthyaging.emory.edu/brain-imaging-project). The position provides an excellent opportunity to work in an interdisciplinary environment with close interactions with MR physicists, radiologists, neurologist, neuroscientists, and computer scientists. The Center for Systems Imaging, of which Dr. Qiu serves as Program Director of MRI, at Emory University operates three research-dedicated 3T MRI Siemens Prisma, a dedicated Siemens 7T Terra human scanner, one human PET/MR scanner, and a powerful computer-cluster.

The position holders will work on developing and applying advanced MR imaging methods in studying neurological diseases. Several projects are available ranging from

1. MR pulse sequence development and image reconstruction for fast quantitative imaging at 3T and 7T.
2. High resolution 7T imaging for study Alzheimer's and other neurological diseases
3. Development and application of image analyses and statistical analyses pipelines using deep learning in addition to conventional methodology for studying neurological diseases
4. Analyzing neuroimaging data from multiple sources to study neurological diseases. Experience with analyzing T1w, T2-FLAIR, resting state fMRI, diffusion MR, arterial spin labeling, quantitative susceptibility mapping, MR spectroscopy among others, is beneficial.
5. MR guided robotics for neurosurgery

The exact area of focus for the Postdoctoral Fellow/Staff Scientist will depend on their experience and interest within the research cope of the lab. The qualifications of a successful candidate should include

- A PhD degree in Electrical Engineering, Biomedical Engineering, Physics, Mathematics, Neuroscience or other related fields.
- Strong background in signal processing, image processing and quantitative analysis. Excellent proficiency with Matlab and/or Python programming. Skills in C/C++ programming language is a plus.
- Demonstrated independent research capabilities and good organizational and inter-personal skills.
- Above all, a highly motivated candidate with strong desire to excel regardless their previous field of study is welcome to apply.

Previous experience with medical image processing is desirable; it is a strong plus but not necessary to have existing experiences with MRI scanner operation and pulse sequence programming on any of Siemens, GE or Phillips platforms.

Postdoctoral fellows at Emory University Department of Radiology also receive an additional fund for professional development activities.

Please send your CV and arrange for 3 letters of recommendation be sent to Dr. Deqiang Qiu (deqiang.qiu@emory.edu) and note in the subject line "Postdoctoral Fellow/Staff Scientist Position".