POSTDOCTORAL RESEARCH FELLOW — ADVANCED ULTRA HIGH-FIELD IMAGING AND ANALYSIS OF BRAIN VASCULATURE

Athinoula A. Martinos Center for Biomedical Imaging
Massachusetts General Hospital (MGH)
Harvard Medical School

A post-doctoral research fellowship in Ultra-High Field MRI data analysis and acquisition is available at the Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital (MGH). The successful candidate will be working in the High-Resolution and Ultra-High-Field Functional Imaging Group led by Dr. Jonathan Polimeni to both develop and apply advanced methods for imaging brain vasculature. This NIH-funded project seeks to improve segmentation accuracy of fine-scale features of the neurovasculature, including mesoscale blood vessels and regional capillary density. The focus of this fellowship will be to build upon existing analytic methods developed in our laboratory, however there will be opportunities to improve upon high-resolution, quantitative in vivo vascular imaging acquisition methods as well. The vascular imaging data will mainly be based on MRI, however there will be opportunities for applying these tools to microscopy and histology data. These vascular data will be utilized to characterize the basic anatomy of brain vasculature, to compare the vascular anatomy across patient groups, and to use these data to help interpret high-resolution functional MRI. Thus, candidates with an interest in developing clinical applications of vascular imaging using Ultra-High-Field MRI, and in integrating multi-modal neuroimaging data, are strongly encouraged to apply.

The successful candidate will be a highly motivated researcher with a desire to begin an independent career related to or involving advanced human neuroimaging. The ideal candidate would have a strong analytical background and a high level of creativity. The ideal candidate would also hold a Ph.D. degree in Neuroscience, MR Physics, Biomedical Engineering, or a related field; however, strong candidates with other scientific backgrounds will also be considered. First-hand experience with conducting human MRI experiments is highly desired, and skills in image segmentation and training in fMRI data analysis are also desired; knowledge of cerebrovascular anatomy and human neuroscience are also highly desired. Interested candidates with electrical engineering or computer science and a strong background in medical imaging may also apply, and are welcome to inquire about suitability beforehand.

ADDITIONAL SKILLS/ABILITIES/COMPETENCIES
Candidates should be enthusiastic about working in a fast-paced, interdisciplinary environment. The successful candidate will be able to work both independently and collaboratively in a large multi-institutional project. Strong written and oral English communication skills are required.

APPLICATION
Interested applicants should send a cover letter describing research experience, interests, and future research and career goals, as well as an up-to-date curriculum vitae and contact information for three references, to Jonathan Polimeni, Ph.D., by email: jonp@nmr.mgh.harvard.edu.

Questions regarding this position and informal inquiries should be directed to Jonathan Polimeni, Ph.D., by email: jonp@nmr.mgh.harvard.edu.

This position is full-time with benefits and is available immediately. The Massachusetts General Hospital and Harvard Medical School are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law.