POSTDOCTORAL RESEARCH FELLOW — ADVANCED PULSE SEQUENCE DEVELOPMENT FOR FUNCTIONAL MRI AT ULTRA HIGH-FIELD

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

A postdoctoral research fellowship in pulse sequence development and Ultra-High Field functional MRI acquisition is available at the Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital (MGH). The successful candidate will be working to develop cutting-edge acquisition and analysis techniques for high spatiotemporal resolution functional MRI in humans. This fellowship is supported by two recently awarded NIH BRAIN Initiative grants, one focused on improving human fMRI through modeling and imaging microvascular dynamics (https://projectreporter.nih.gov/project_info_description.cfm?aid=9205860), and the other on developing next-generation acquisition methods and instrumentation for high-resolution fMRI at 7 Tesla (https://projectreporter.nih.gov/project_info_description.cfm?aid=9421501). The postdoctoral fellow will be primarily responsible for both developing new fMRI acquisition techniques and implementing pulse sequences in the Siemens programming environment. This research will be carried out on the human 7 Tesla MRI scanner at the Martinos Center and at the Brain Imaging Center at UC Berkeley under the joint supervision of Dr. Polimeni of MGH and Dr. David Feinberg of UC Berkeley, and in close collaboration with the MR acquisition group of Dr. Kawin Setsompop and the MR physics and instrumentation group of Prof. Larry Wald. These techniques will be used on the Berkeley NexGen 7 Tesla scanner (http://news.berkeley.edu/2017/10/06/13-4-million-to-build-next-gen-mri-brain-scanner-at-uc-berkeley/).

The successful candidate will be a highly motivated researcher with a desire to begin an independent career related to or involving advanced human functional MRI. The ideal candidate would have a strong background in MR physics and pulse sequence design and have a high level of creativity. The ideal candidate would also hold a Ph.D. degree in Computer Science, MR Physics, Electrical Engineering, or a related field; however, strong candidates with other scientific backgrounds will also be considered. First-hand experience with pulse sequence development for the Siemens platform and/or fMRI acquisition is highly desired, as are skills in software engineering and C/C++ programming. Interested candidates with pulse sequence development experience with other vendor platforms 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. A 2-year commitment is required. The Massachusetts General Hospital and Harvard Medical School are equal opportunity and affirmative action employers.

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