Postdoctoral Research Fellow / Radiology

A position is available in the laboratory of Dr. Samuel Patz at Brigham and Women’s Hospital, Harvard Medical School. Portions of the project will be performed at the Massachusetts Institute of Technology and includes an MIT Research Affiliate appointment. This project includes a collaboration with Ralph Sinkus (INSERM, Paris France and King’s College, London, UK), a pioneer in magnetic resonance elastography (MRE) and with Jon Polimeni from the MGH Martinos Center for Biomedical Imaging.

The fellowship focuses on studies of a novel brain functional imaging technique known as functional Magnetic Resonance Elastography (fMRE). Initial fMRE studies have been performed in mice and published in Science Advances in April 2019. Also see a NIH NIBIB Science Highlight report on this work.

Human studies are the focus of this postdoctoral position. Our aim is to explore, understand and characterize fMRE in humans. fMRE characteristics will be studied with a variety of well understood stimuli, such as visual stimuli, which will serve as a “gold standard”. The high temporal resolution of fMRE will be studied with stimuli that change as fast as tens of milliseconds. To evaluate the fast fMRE response, neuronal activity observed with fMRE will be compared to that measured with magnetoencephalography (MEG). The MEG studies will be performed in collaboration with Dimitrios Pantazis, Director of the MEG lab at the McGovern Institute for Brain Research at MIT.

Requirements:
We are looking for a highly motivated, self-driven, creative, and interactive scientist. The successful candidate should have a graduate degree in one of the physical sciences (Physics, Chemistry, Electrical engineering, mechanical engineering).

Desired: Experience in MRI and/or MEG programming or processing, electronic circuit design and construction, computer programming in Matlab or C, fMRI image analysis, strong math background. Siemens pulse sequence programming experience is a strong positive.

Appointment: Two-year Harvard postdoctoral appointment and two-year MIT research affiliate appointment. Salary is negotiable. Extension of the appointment beyond 2 years is conditional upon performance and funding.

Application: Curriculum Vitae along with 3 reference letters to Dr. Samuel Patz patz@bwh.harvard.edu.

EEO Statement
Brigham and Women’s Hospital is an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, creed, sex, sexual orientation, gender identity, national origin, ancestry, age, veteran status, disability unrelated to job requirements, genetic information, military service, or other protected status.