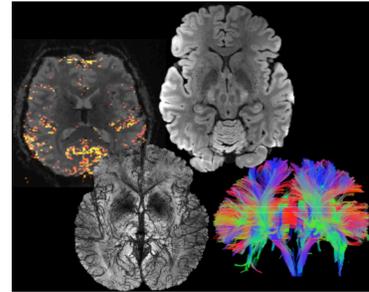


RESEARCH FELLOW/RAPID BRAIN MRI ACQUISITION

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



Two post-doctoral positions to develop rapid brain MRI acquisitions are available at the Athinoula A. Martinos Center for Biomedical Imaging, under the supervision of Dr. Kawin Setsompop. The aim for these positions is to develop cutting-edge efficient acquisition methods that can dramatically improve the speed, sensitivity and specificity of *in vivo* brain imaging for both neuroscientific and clinical applications. Some of the techniques to be explored include Simultaneous Multi-Slice imaging, parallel imaging, Compressed Sensing, Magnetic Resonance Fingerprinting, and constrained reconstruction schemes. This work will be carried out using state-of-the-art hardware systems available at the Martinos Center, which include multiple 3 Tesla MRI scanners, a 7 Tesla system, the “Connectom” MRI scanner with ultra high gradient performance, and large-channel-count receive arrays. The technologies being developed should enable highly detailed brain data at unprecedented temporal and spatial resolutions, with a wealth of quantitative information about brain structure and physiology.

The Athinoula A. Martinos Center for Biomedical Imaging is a world-renowned brain-imaging center, home to more than 200 research faculty, post-doctoral fellows and graduate students. This position provides a valuable opportunity to work and collaborate with a diverse group of researchers developing cutting edge technology that will impact both the neuroscience and clinical research communities. This role will also provides an opportunity for a strong academic-industrial partnership with Siemens Healthcare in translating new technologies into commercial products. An example of technology that has been successfully translated is in the Simultaneous Multi-Slice (SMS) imaging technique, which we have developed and distributed to a large number of research and clinical sites worldwide (<http://www.nmr.mgh.harvard.edu/software/c2p/sms>), and is now a Siemens clinical product on their MRI scanners. Such technology is now changing how diffusion and functional MRI are being performed today. More information on some of our recent rapid brain MRI acquisition technologies/developments can be found in the following presentation: <http://goo.gl/66xLLj>

A Ph.D. in electrical engineering, physics, biomedical, or a related field is required. Ideal candidate should have a strong analytical background while displaying a high level of creativity. The candidate should have first-hand experience in MR physics, and image reconstruction algorithms and/or pulse sequence programming. Experience with the MATLAB programming environment is expected. It is also desirable, but not required, that the candidate has had experience with the Siemens IDEA/ICE environment or equivalent on other platforms. Candidates should be highly motivated and interested in working in an interdisciplinary environment.

APPLICATION

Informal enquiries may be directed to Dr. Kawin Setsompop (kawin@nmr.mgh.harvard.edu). Interested applicants should send a full C.V., cover letter and contact information of three referees.

The position is full-time with benefits and is available immediately. A two-year time commitment is required. The Massachusetts General Hospital is an Equal Opportunity/Affirmative Action Employer.

