University of Pennsylvania Postdoctoral Fellowship in Robust Pediatric fMRI and MRS

**Description of Research:**
fMRI and MRS are both established tools for quantifying brain function, but are challenging to apply in pediatric populations due to subject motion. Drs. Allyson Mackey and Dylan Tisdall are recruiting a postdoctoral fellow to develop new motion-robust fMRI and MRS methods, and apply these tools address questions about early childhood development and learning.

The fellow will work with Dr. Tisdall to build on our previous work in motion robust structural imaging and MRS, designing and implementing new motion-robust fMRI and MRS pulse sequences and data reconstruction software. In addition, the fellow will work with Dr. Mackey on these methods’ translation into pediatric neuroscience research. The position will involve collaboration with psychologists, physicists, and computational researchers spanning a variety of research groups.

**Qualifications:**
Applicants must have a PhD in Biomedical Engineering, Computer Science, Electrical Engineering, or a related field. A track record of independent research in the acquisition and analysis of medical imaging data, particularly MRI, is preferred. Experience with fMRI and/or MRS is especially valued. Experience with pulse sequence development and/or MRI reconstruction, particularly in the Siemens IDEA environment, is highly valued but not essential; researchers with strong computer programming backgrounds in C/C++ will receive training and supervision to learn pulse sequence development in IDEA. Experience with Python, Matlab, Mathematica, or other tools for rapid prototyping and data analysis is also desired.

**Neuroimaging Research at Penn:**
The University of Pennsylvania is a leader in both the development and application of neuroimaging methods to understand the developing brain. Penn hosts a diverse research program in neuroscience and neuroimaging, with a strong emphasis on cross-department collaboration. Available MRI instrumentation includes two research-dedicated 3 T Siemens Prisma scanners and a new 7 T Siemens Terra scanner, as well as research-shared 1.5 T and 3 T scanners in the adjacent hospital, and both large and small-bore systems for specimen and animal studies.

**Applying:**
The University of Pennsylvania is an equal opportunity employer and women and applicants of underrepresented minorities are particularly encouraged to apply.

Please contact Dylan Tisdall (mtisdall@pennmedicine.upenn.edu) and provide a brief cover letter outlining research interests, experience, qualifications; CV; and names of two references.