Postdoctoral Fellowship in Cardiovascular Imaging/Fluid Dynamics at Emory University

The Department of Radiology and Imaging Sciences of Emory University is seeking a postdoctoral fellow to work on the development of advanced MRI techniques and/or hemodynamic modeling of coronary artery flow. The position will center on development of acquisition strategies for coronary artery imaging and measuring coronary flow, as well as fluid dynamics based modeling to provide clinical metrics such as fractional flow reserve.

The position provides an excellent opportunity to work in a highly collaborative interdisciplinary translational environment with close interactions with MR physicists, radiologists, cardiologists, biomedical engineers, mechanical engineers, mathematicians, and computer scientists. Accesses is available to three research-dedicated 3T MRI systems (Siemens PRISMA platform), a 9.4T animal scanner, and a computer-cluster. Established collaborations with the clinical services at Emory University Hospital, where six MR scanners and a PET/MRI system are located, facilitates translation of technical developments to clinical settings. The department has close collaborations with the joint Emory/Georgia Tech Biomedical Engineering Department and there are opportunities to teach and advise graduate students in that program. Close collaborations with industry are facilitated by the on-site presence of industry collaborators. Qualifications for the successful candidate include:

- A PhD degree in Engineering, Physics, Computer Science or other related field
- Strong background in signal processing, image processing, or computational fluid dynamics
- Demonstrated quantitative analysis with excellent proficiency with Matlab and/or C/C++ programming
- Demonstrated record of independent research, and good organizational and inter-personal skills.
- Previous experience with medical image processing is desirable; experiences with MRI scan operation and MRI pulse sequence programming, or are a plus but not necessary.

The candidate is expected to work on projects involving image acquisition, reconstruction and processing by using and expanding existing tools and development of new methodologies. Potential research projects beyond the coronary artery imaging and modelling project depend on the mutual interests of the candidate and the PI. The lab has active projects in 4D flow MRI, DENSE MRI, and interventional MRI.

Postdoctoral fellows at Emory receive funds for professional development activities (conference attendance and society fees) and can participate in a range of University-sponsored academic development programs.

To apply, please send your CV and the email address of references to John Oshinski, PhD (joshin@emory.edu). Please note in the subject line “Postdoctoral Fellow Position”. 