Postdoctoral Research Fellowship in
Diffusion Microstructural MRI for Investigating Normal and Abnormal Brain Tissue

A postdoctoral research fellowship in diffusion MRI acquisition, analysis and modeling is available at the University of Iowa Microstructural Imaging Lab under the supervision of Dr. Merry Mani, in the Department of Radiology. The successful candidate will work to develop, validate and translate cutting-edge diffusion MRI acquisition and analysis techniques for tissue microstructural imaging in the healthy human brain, with further applications in neurodegenerative disorders such as Huntington’s Disease, Parkinson’s and Alzheimer’s disease. The ultimate goal is to develop new imaging methodologies with high sensitivity and specificity to study the tissue microstructure, by synergistically combining advanced acquisition, reconstruction and analysis methods. Machine learning will be a crucial component and will be used in all stages of development. The position comes with the potential for further growth opportunities including promotion into Research Track Faculty or Research Scientist Track positions based on performance and funding.

MRI researchers at the University of Iowa enjoys the benefits of a dedicated Magnetic Resonance Research Facility, with 3 research dedicated MRI scanners with an additional scanner to be added. These include a GE 3T Premier system, GE Signa 7T scanner, and a GE MR901 7T small animal imaging system. A brand-new GE MAGNUS head-only system will be installed in 2022. The high-performance gradients and the high slew-rate scanners uniquely equip the facility for pushing diffusion MRI to its limits and its translation across animal models and human studies. The facility also maintains close collaboration with GE scientists.

The Carver College of Medicine at the University of Iowa is one of the highly ranked research-oriented medical school in the United States with over 100 research faculty, post-doctoral fellows and graduate students, in a small-town setting. This position provides a valuable opportunity to work and collaborate with a multi-disciplinary research team dedicated to developing, validating and translating the latest MRI technology that will benefit the neuroscience and clinical research communities as well as the diverse patient population served by the Carver College of Medicine. Close collaboration exists with scientists and medical practitioners in the departments of Neuroscience, Neurology, Neurosurgery, Psychiatry and Pharmacology, offering several research avenues.

A Ph.D. (or equivalent) in electrical engineering, biomedical engineering, computer science, medical physics, or a related field is required; however, strong candidates with other scientific backgrounds will also be considered. The ideal candidate should have a strong analytical background while displaying a high level of creativity. First-hand experience with pulse sequence programming and/or analysis of diffusion MRI data is highly desired. Candidates should be highly motivated and interested in working in an interdisciplinary environment with an emphasis on translational research.

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 Merry Mani, Ph.D., by e-mail: merry-mani@uiowa.edu. Questions regarding this position and informal inquiries should be directed to merry-mani@uiowa.edu. The position is full-time with benefits and available starting November 1, 2021. A two-year time commitment is required. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.