The Advanced MRI Section (AMRI) in the Intramural Research Program of the National Institute of Neurological Disorders and Stroke at the National Institutes of Health (NIH) in Bethesda, Maryland is seeking a postdoctoral fellow for the development of high resolution MRI methods to study iron and myelin distributions in the brain. Candidates interested in other projects in the Section will also be considered.

Recent hardware and pulse sequence developments in AMRI have improved resolution, robustness to head motion, and sensitivity to the unique effects of iron and myelin on image contrast. Novel methods are being developed to combine various MRI contrasts to improve the separation between iron and myelin. In part, this is based on detailed analysis of $T_2^*$ and $T_2$ signal decays in the various brain tissue types. AMRI maintains active collaborations with other research groups that have interest in applying novel methods to the study of neurodegenerative disorders and epilepsy. Other research in the group concerns the combined use of EEG and fMRI to characterize the contribution of neuronal and autonomic activity changes across the full range of arousal states during overnight sleep.

As part of the NIH intramural program, AMRI has access to unique imaging and computational resources, including access to four 3T and three 7T MRI scanners, EEG and MEG systems, and a large (currently 107,000-core) computational cluster. A human 11.7T is slated to be (re)energized early 2022. In addition, AMRI has expertise in state-of-the-art MR imaging techniques and data analysis tools, and a dedicated group of researchers including MRI physicists and sleep neuroscientists.

Minimum qualifications:
1) A relevant doctoral degree by the time the appointment begins
2) Strong quantitative data analysis skills in advanced statistics, signal processing, and scientific computer programming
3) Interest in developing novel MRI research avenues and/or methods

The start date is flexible. Applicants are requested to send their curriculum vitae to Jeff Duyn, PhD (jeff.duyn@nih.gov). The applicant is encouraged to include contact information for three references from mentors and/or colleagues.

For more information on the laboratory, see: https://amri.ninds.nih.gov
For more information on the NIH Postdoctoral Intramural Research Training Award Program, see: https://www.training.nih.gov/programs/postdoc_irp

The NIH is dedicated to building a diverse community in its training and employment programs.