



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 its all-night EEG-fMRI sleep study.

In addition to developing unique methods for white matter imaging, ultra-low and ultra-high field imaging, and perfusion imaging, the Section is interested in studying the brain with fMRI during sleep. This encompasses the characterization of both neuronal and autonomic activity changes across the full range of arousal states during overnight sleep. After a successful pilot study, AMRI recently started a main study that is currently in full swing. Early analysis of the pilot data has revealed novel interactions between autonomic and neural activity that will be further investigated with advanced analysis techniques. It is anticipated that further development of analysis approaches will be important for proper analysis and interpretation of the data.

As part of the NIH intramural program, AMRI has access to unique imaging and computational resources, including access to 3T and 7T MRI scanners, EEG and MEG systems, and a large (currently 107,000-core) computational cluster. In addition, it has expertise in state-of-the-art MRI 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) Experience in analyzing fMRI data
- 4) Ability to propose novel fMRI research avenues and/or methods

The start date is flexible. Applicants are requested to send their curriculum vitae to Dante Picchioni, PhD (dante.picchioni@nih.gov) and Jeff Duyn, PhD (jeff.duyn@nih.gov). It 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.