

# Senior MRI Scientist

## Position Overview

The [Multiscale Imaging and Integrative Biophysics \(MiiB\) Unit](#) at the National Institute on Aging (NIA) in Baltimore, Maryland, is seeking a Senior MRI Scientist. This is a full-time position suited for a PhD-level physicist or engineer to lead independent research and collaborate with a multidisciplinary team of postdocs, PhD students, staff scientists, and MRI experts. The candidate will develop and implement advanced MRI techniques to study neurodegeneration, neuroinflammation, and their connection to dementia.

## Research Focus

The MiiB Unit integrates multidimensional diffusion-relaxation MRI with complementary histological and omics techniques to explore cellular-level processes in normative aging, mild cognitive impairment, and dementia. Areas of emphasis include:

- Brain microstructure, diffusion time dependency and exchange in aging and dementia.
- Longitudinal study of aging using multidimensional MRI.
- Multimodal integration with proteomics, spatial transcriptomics, blood biomarkers, and other imaging modalities.
- Flexible research options across *ex vivo* fixed tissue, viable brain organoids, *in vivo* animal models, and human studies.

## Research Environment

MiiB is embedded in a vibrant MRI research environment at NIA with access to state-of-the-art instrumentation, including 7T and 9.4T Bruker preclinical scanners, a 14T vertical scanner, and 3T and 7T research dedicated systems (Philips MR7700 and Siemens Terra.X). Major NIH studies like the Baltimore Longitudinal Study on Aging (BLSA) and GESTALT offer valuable multimodal datasets.

## Candidate Qualifications

- PhD in engineering, physics, computer science, or a related quantitative discipline
- Strong background in diffusion MRI
- Experience in signal or image processing
- Proficiency in MATLAB, Python, C/C++, or similar tools
- Experience in MRI data acquisition and/or analysis

## Application Instructions

Interested applicants should email Dr. Dan Benjamini at [dan.benjamini@nih.gov](mailto:dan.benjamini@nih.gov) and include a CV with a list of publications.

## Additional Information

Location: Baltimore, Maryland

Salary: Competitive and commensurate with experience

Application Deadline: July 31, 2025, or until the position is filled.

