Post-Doctoral Positions in Functional MRI and MRI Safety

Two post-doctoral positions with competitive salaries are available at the Department of Radiology, Feinberg School of Medicine of Northwestern University, located at the heart of Chicago downtown. We are a dynamic team of physicists, engineers, neuroscientists and neurosurgeons conducting cutting-edge imaging research in a 9,000 square foot center that houses state-of-the-art research-dedicated Prisma 3.0 Tesla, two Tim Trio 3.0 Tesla and 1.5 Tesla Siemens Medical MR scanners and a 7.0 Tesla Bruker scanner. There is also a Siemens C-ARM angiographic system, a Nexstim Transcranial Magnetic Stimulation (TMS) machine and an MR simulator system that can be used to train subjects to the magnet environment. Successful applicants will work on multidisciplinary NIH-funded projects with a close collaboration with the US Food and Drug Administration (FDA).

We invite motivated enthusiastic applicants with a related background to apply for either of the positions below:

**Position 1: Computational methodologies for safety assessment of MRI in patients with conductive implants**

The candidate with develop computational models to characterize the interaction of radiofrequency fields of MRI scanners with human body in the presence of medical devices such as deep brain stimulation and cardiovascular implants. Project activities include development and validation of novel methodologies for safe imaging of patients with brain and cardiac implants through simulation and phantom experiments. The candidate will closely collaborate with the US Food and Drug Administration. The ideal candidate holds a PhD in Electrical Engineering, Biomedical Engineering, Physics, or a related field with a strong background in electromagnetic modeling and simulation and proven track record capacity to drive first author publications.

**Position 2: Investigating modulatory effects of deep brain stimulation through functional magnetic resonance imaging**

The project is focused on analyzing altered patterns of functional connectivity of cortico-striatal loops in advance Parkinson’s patients who are candidates for deep brain stimulation (DBS) surgery before and after operation to assess modulatory effects of DBS. The ideal candidate should hold a PhD in Neuroscience, Psychology, Engineering or a related field with strong proficiency is various neuroimaging analysis platforms, multivariate modeling and connectivity toolboxes. The candidate should have established quantitative and statistical skills, including programing and comfort with diverse computing environments and demonstrated capacity to drive first author publications.

Interested applicants should send a cover letter describing research experience and career goals, an up-to-date curriculum vitae containing contact information for three references, as well as copies of three representative publications to Laleh Golestani Rad, Ph.D., by email: Laleh.rad1@Northwestern.edu.