



Post-doctoral Fellowship in Neuroimaging in Obsessive-Compulsive and Related Disorders

Psychiatric NeuroCognition Lab

The Nathan S. Kline Institute for Psychiatric Research

The Psychiatric NeuroCognition laboratory, under the direction of Dr. Emily Stern at the Nathan S. Kline Institute for Psychiatric Research, is seeking a post-doctoral fellow to work on projects investigating brain function and structure in obsessive-compulsive disorder (OCD) using task-based fMRI, resting-state functional connectivity, and diffusion imaging approaches. Broadly speaking, the lab's work uses a cognitive neuroscience approach to investigating brain function in psychiatric disorders, with a focus on using fMRI to tap into core constructs relevant for OCD and related disorders including interoception, rumination, decision-making, and reward processing. The person in this position will primarily work on two ongoing NIMH funded projects using fMRI to investigate neural mechanisms of sensory and other key symptoms in OCD, including a clinical trial in OCD and Tourette's Disorder testing the effects of a novel treatment on symptoms and brain function. In addition to working on these funded studies, there will also be opportunity for the fellow to develop new studies and/or analyses relevant to the lab's work and to obtain pilot research funding offered through the institute.

NKI is a research facility of the New York State Office of Mental Health, one of only two state-funded research institutes in the U.S. dedicated entirely to investigating biological mechanisms and treatments for psychiatric disorders. NKI was founded in 1952 by Dr. Nathan Kline, whose pioneering research into psychopharmacological management of schizophrenia and major depression revolutionized treatments for serious mental illness. The Psychiatric NeuroCognition lab is part of the Clinical Research Department at NKI, which contains several investigators, trainees, and staff working on studies examining treatments and biomarkers in a variety of disorders (depression, schizophrenia, autism spectrum disorder). Research facilities at NKI include a 3T Siemens MRI scanner for human neuroimaging, an MRI-compatible EEG system, and equipment for advanced neuromodulation techniques including transcranial magnetic stimulation and transcranial direct current stimulation. NKI also has an active animal research program with a 7T small animal scanner. For the past 30 years, NKI's academic affiliate has been the New York University School of Medicine (NYUSoM) located in midtown Manhattan, and investigators and trainees at NKI have access to many of NYUSoM's research tools and resources.

Approximately 20 miles north of Manhattan, NKI is located in suburban Rockland County, home to many beautiful hiking and cycling trails overlooking the Hudson River. Although several towns in Rockland County are accessible to Manhattan via public transportation on New Jersey Transit, a driver's license and access to a car is highly recommended for anyone considering this position.

Interested candidates should meet the follow criteria:

Required:

- Ph.D. in experimental psychology, clinical psychology, or cognitive neuroscience
- Moderate or better proficiency with functional MRI data analysis and presentation

Other desirable qualifications:

- Strong interest in psychiatric disorders and applying cognitive neuroscientific techniques to OCD and related disorders



- Track record of publishing and presenting fMRI data
- Experience with 2 or more standard fMRI packages for data processing (SPM, FSL, AFNI, Conn, Freesurfer, DPABI/DPARSF, C-PAC) and/or experience with both task-based and resting-state functional connectivity methods
- Experience with task programming software such as EPrime, Presentation, or PsychoPy
- Good knowledge of basic statistical concepts and approaches
- Experience with (or desire to learn) basic programming in MATLAB, bash, and/or python
- Knowledge or experience in psychiatric/psychological assessment and diagnosis would be a plus but is not required

Duties of the position include:

- Managing and analyzing task-activation and functional connectivity data, programming fMRI and behavioral experiments, running subjects through experimental protocols
- Reading the literature and publishing behavioral and neuroimaging findings in top tier journals
- Presenting results at conferences and seminars
- Developing new studies or analyses relevant for the ongoing work in the lab and applying for pilot and post-doctoral grants to support this work
- Assisting with grant applications, NIH progress reports, and IRB applications
- Assisting in the training of junior lab members including research coordinators and interns

Salary is competitive and commensurate with experience. Fellows would be employed by the Research Foundation for Mental Health (RFMH), which offers a full benefits package with medical and dental benefits. The position is for 1 year initially, with the opportunity to extend based on performance. Applications should be emailed to fmripostdocnki@gmail.com ('fmri' and 'postdoc' and 'nki') and include a cover letter, CV, and the names and contact information for two referees.