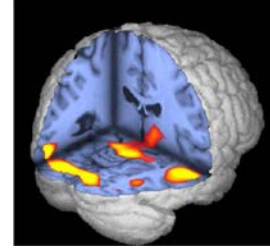


**Summer Educational Program in
Neuropsychiatric Functional Neuroimaging**

July 5, 2017 – August 4, 2017

Functional Neuroimaging Laboratory

Brigham and Women's Hospital, Harvard Medical School



Laboratory Director: Emily Stern, MD Laboratory Co-Director: David Silbersweig, MD
Educational Program Directors: Einat Liebenthal, PhD and Daniel Weisholtz, MD

This program is designed to introduce students at all levels to functional neuroimaging methods and their application to studying systems level neuropathophysiology underlying neuropsychiatric disorders.

Tentative Program Curriculum:

1. Lectures on a selection of the following topics

Neuroimaging Methodology

- Electronic search engines and resources
- Critical reading of scientific papers
- Cerebral blood flow and metabolism
- BOLD-EPI/fMRI
- Basics of fMRI acquisition and analysis for mapping brain circuitry
- Basics of fMRI experiment design
- Designing an experiment in E-prime
- Electrophysiological methods
- EEG demo
- PET neuroimaging
- Deep brain stimulation
- Theoretical and computational neuroscience

Neuropsychiatry and Cognitive Neuroscience

- Introduction to functional imaging of neuropsychiatric disorders
- Neuroanatomy
- Neuropsychiatric signs & symptoms
- Language system - neuroanatomy and neurophysiology
- Language mapping: Clinical application of fMRI and EEG
- Epilepsy and psychosis
- Psychogenic nonepileptic seizures (PNES) and somatoform disorders
- The neurobiology of the basal ganglia
- Neurophilosophy
- Mapping the meditative mind

2. Observation of an fMRI experiment

3. Use of online resources for self-directed learning

4. In depth literature review on a topic of choice. There will be a required short paper or presentation to the other program participants at the end of the program

For further information please contact Emily Stern, MD: estern@bwh.harvard.edu AND Andrea Field: afield1@partners.org
