



Postdoctoral Research Position at Harvard Medical School/VA Boston Healthcare System

Using behavior, EEG, and fMRI/DTI to characterize developmental prosopagnosia subtypes and examine differential responses to cognitive training treatments

Objectives of the Project: Developmental prosopagnosia (DP) is defined by lifelong face recognition deficits and can be associated with significant social and employment difficulties. DP is a heterogeneous disorder and the cognitive and neural mechanisms underlying DP remain to be characterized. Also, though there have been attempts to enhance face recognition in DP, treatment effects have been modest, and they have yet to be individualized to specific DP deficits. In this innovative cross-disciplinary and translational project, we seek to use converging methods to a) better characterize face perception heterogeneity in DPs using measures of holistic face processing, feature processing, and eye-tracking and b) examine the neural mechanisms of differences within DPs and between DPs/controls using EEG, fMRI, and diffusion tensor imaging. Finally, to enhance the treatment of DP, we seek to test whether novel perceptual and memory training programs matched to individual DP deficits are more effective than applying the same treatment to all DPs.

Description: We are looking for a highly motivated, organized postdoctoral researcher to join our team and be involved in several aspects of this innovative prosopagnosia characterization/training study. In particular, the postdoctoral researcher will perform and analyze EEG recordings as well as help oversee a full-time research assistant that will perform pre/post cognitive assessments as well as fMRI/DTI scans. The postdoctoral researcher will spend the majority of their time acquiring and analyzing pre/post training EEG data. In addition to this main project, the postdoctoral researcher will have several opportunities to perform independent projects in healthy populations, developmental/acquired prosopagnosics, and will also have the opportunity to access several large existing behavioral and neuroimaging datasets. Finally, the postdoctoral researcher will be expected to be a first author and contributing author on several manuscripts, present their work at national/international conferences, and assist with grant preparation. This position will be based at the VA Boston Healthcare System in Jamaica Plain, MA. We are looking for someone who can start in July/August 2022. The position will be for one year with the option of 1-2 additional years. The position will provide an excellent opportunity for training in EEG (Dr. Kevin Spencer), individual differences in face recognition, and cognitive rehabilitation (Dr. Joe DeGutis). Additional training opportunities with team members in structural MRI/DTI (Dr. David Salat) and functional MRI (Dr. Michael Esterman) are available. This position will uniquely prepare the individual for either academic or medical school model career paths.

Our Team: This project involves working with an experienced group of cognitive neuroscientists with expertise in face recognition/prosopagnosia (Joe DeGutis and Brad Duchaine), EEG (Kevin Spencer), and structural and functional MRI (Mike Esterman and David Salat). It also involves being a member of the Boston Attention and Learning Laboratory, an interdisciplinary group of ~10 cognitive neuroscientists and clinical psychologists/neuropsychologists interested in characterizing the cognitive and neural mechanisms underlying deficits in patient populations and developing theoretically motivated, innovative cognitive training, TMS, and pharmacological treatments.

Background required: Ph.D. in experimental psychology, cognitive neuroscience, neuroscience, or related field.

Skills: Technical skills and prior research experience in EEG is required. A background in statistical analysis of behavioral and EEG is also required, and coding experience is preferred.

Salary: based on NIH pay scale for postdoctoral fellows (<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-049.html>)

**We are able to sponsor non-US citizens.

**Our lab values diversity and inclusion and is striving to attract and retain diverse staff. We encourage members of traditionally underrepresented groups, including Race and Ethnicity, Gender, Religion, age, or disability, to apply.

If interested, please email Dr. Joe DeGutis (degutis@hms.harvard.edu) with your CV and cover letter by **April 15, 2022**. Interviews will begin shortly thereafter.