

Research Assistant Position in Preschool Developmental Cognitive Neuroscience

Laboratory for Child Brain Development

Department of Psychiatry, Washington University – St. Louis

The Laboratory for Child Brain Development (LCBD-PI: Dr. Susan Perlman) currently has an opening for a Neuroimaging Research Technician to work on NIH funded studies of temperament, the parent-child relationship, and biological stress unfolding during early childhood.

The applicant's main appointment will be in the Laboratory for Child Brain Development (LCBD; <http://www.childbrainlab.com>) in the Department of Psychiatry in the Washington University, School of Medicine, William Greenleaf Eliot Division of Child and Adolescent Psychiatry (<https://childpsychiatry.wustl.edu/>). The LCBD is dedicated to using multi-modal methodology to understand the trajectories of emotional development from infancy to middle childhood (with a strong preschool focus). Currently, the LCBD has several ongoing projects including: 1) Biological changes in children experiencing stressful life events; 2) Longitudinal development of preschool irritability as a predictor for psychopathology; 3) Interpersonal brain synchronization in early childhood psychopathology; 4) The impact of treatment for disruptive behavior on brain development; and 5) Brain development in preschool children who were born dependent on opioids, in addition to several local and national collaborations. The research assistant will mostly be working on two studies. The first is a longitudinal study investigating the biological unfolding of stress and how it predicts the onset of psychopathology in 4-7 year-old children. This study, funded by the National Institute of Mental Health employs intensive, state-of-the-art, multi-modal, neurodevelopmental measurement including functional magnetic resonance imaging (fMRI), functional near-infrared spectroscopy (fNIRS), HPA axis measurement (hair and salivary cortisol), and inflammatory markers. The second is a NIH funded, longitudinal study investigating the transmission of anxiety from parent to child through dyadic interaction and biological synchrony. This study is also multi-modal and includes fNIRS, EEG, RSA, eye-tracking, and behavioral coding. The neuroimaging research technician will also be aiding with data preprocessing and analysis from previously collected studies. Additional, multi-modal studies within the laboratory employ eye tracking, facial expression and behavioral coding, and sleep actigraphy, hair cortisol, and pain measurement.

This is an ideal position for a candidate looking to gain research experience before applying to graduate or medical school or for those pursuing scientific or medical careers. The research assistant will be an integral member of this scientific team and will have potential opportunities to earn authorship on publications and present posters at scientific meetings. Position requires a bachelor's degree in psychology, neuroscience, engineering or a related field. The ideal candidate will demonstrate interest in child development, strong motivation, work ethic, and organizational skills, and will combine collaborative orientation with the ability to function well independently. Flexibility in scheduling during some weekend and evening hours is required. This position requires experience in a research laboratory environment (whether

through previous work experience or during undergraduate studies). Experience with a brain imaging modality (fMRI, EEG, fNIRS) and/or psychophysiology (heart rate, skin conductance, pupillometry) is preferred, along with experience in computer programming languages (R, Matlab, Python). Previous experience with children and families is required.

Position open for immediate start. This is an ideal position for applicants who have recently received their bachelor's degree with college level research experience. We ask that applicants be prepared to spend a minimum of 2 years in the position. There is a possibility of extending the position pending future funding and progress. Applicants will be considered on a rolling basis until the position is filled.

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