

The University of Texas at Austin
Department of Psychology and Population Research Center
Postdoc in Statistical Genetics and Structural Connectomics
PI: Elliot M. Tucker-Drob

Summary: Postdoctoral Research position in Austin, Texas to work under the supervision of Dr. Elliot Tucker-Drob in the development and application of statistical methods for the multivariate analysis of large scale genomic and neuroimaging datasets. This work is currently funded by grants from the National Institutes of Health (R01AG054628) and the Jacobs Foundation. The position is available September, 2018 (earlier and later start dates are negotiable) and includes benefits. The position is for 2 years with the option for renewal.

Additional Information

Purpose of position: The key purpose of position is to develop cutting edge multivariate methods in statistical genetics and neuroscience (connectomics) for the analysis of structural MRI, diffusion MRI, cognitive, and psychiatric data from the UK Biobank and the Lothian Birth Cohort 1936 (LBC1936). This work is funded by grants from the National Institutes of Health (United States) and the Jacobs Foundation (Switzerland), and is conducted in close collaboration with an international team of researchers, including a primary partnership with the researchers at the University of Edinburgh, UK (Drs. Ian Deary, Mark Bastin, Simon Cox, and Stuart Ritchie). The position will be based in Austin, at Dr. Elliot Tucker-Drob's laboratory at the University of Texas, and will include collaborations with Drs. K. Paige Harden and Tal Yarkoni.

Essential functions: Postdoctoral researcher will work with Dr. Tucker-Drob and collaborators to develop and apply multivariate statistical models of brain network connectivity, cognitive function, and psychiatric comorbidity using data obtained from structural and diffusion MRI, genome-wide association studies (GWAS), and an extensive arrange of biomarkers and medical and psychological phenotypes. A major emphasis is on the efficient integration of information across high dimensional datasets for the purposes of explanation and cross-sample prediction with respect to neurocognitive aging and psychiatric comorbidity. We will capitalize on summary data from several meta-analytic consortia, individual-level cross-sectional data from the UK Biobank, and individual-level longitudinal data from the Lothian Birth Cohort 1936. Postdoctoral researcher will analyze data, prepare high impact articles for publication in scientific journals, and present work at academic conferences. Postdoctoral researcher will additionally coordinate activities with research collaborators, including phone and in-person meetings.

Marginal/Incidental functions: Requires a high degree of autonomy and ability to develop tasks and manage time lines. Requires high level of independent judgment in prioritizing and conducting research, particularly the data analytic tasks necessary to complete project goals.

Required qualifications: PhD in neuroscience, genetics, statistics, computer science, psychology or a related field within the last four years; experiencing processing, managing, and analyzing large datasets; ability to work on a research team; strong written and oral communication skills. Must have a strong quantitative background and ability and enthusiasm to independently expand expertise in multivariate statistics and statistical computing. Expertise in one or more of the following areas: (i) neuroscience, (ii) genetics, (iii) differential psychology, (iv) quantitative methods, (v) cognitive aging.

Preferred qualifications: Experience with analysis of large multivariate population-based genetic or brain imaging datasets. Experience conducting analyses and preparing scientific manuscripts as part of a research team. Knowledge in advanced quantitative methods and strong experience with statistical programming.

For further information, please contact Dr. Elliot Tucker-Drob by email (tuckerdrob@utexas.edu).