

Position Announcement: Post-Doctoral Research Associate (Biostatistics)

Lab Name: Medical Imaging Informatics & Artificial Intelligence (MedAI) Team

Position Title: Post-Doctoral Research Associate (Biostatistics & Methodology)

Mentorship Team: Dr. Duygu Tosun (UC San Francisco – Radiology), Dr. Oliver Robinson (Imperial College London – Molecular Epidemiology), and Dr. Aaron Wolfe Scheffler (UC San Francisco – Biostatistics)

Location: UCSF (Requires ability to work independently in a remote/virtual collaborative environment)

Description:

Dr. Duygu Tosun (UC San Francisco – Radiology), Dr. Oliver Robinson (Imperial College London – Molecular Epidemiology), and Dr. Aaron Wolfe Scheffler (UC San Francisco – Biostatistics) are seeking a highly motivated Post-Doctoral Research Associate for a collaborative, international research program studying Alzheimer's disease progression. As part of the [ATLAS](#) (Amyloid-to-Tau Latency Assessment Score) Consortium – funded by the [Dementia Frontiers Fund](#) – you will join a highly synergistic, transatlantic team spanning computational neuroimaging, multi-omics, epidemiology, and translational genomics across the US, UK, and Spain.

Our team is developing advanced statistical methods to predict, at the individual level, when cognitively normal people who show early signs of Alzheimer's pathology will progress to symptomatic disease. The motivating data are exceptionally rich, spanning longitudinal imaging, cerebrospinal fluid, blood biomarkers, and high-dimensional proteomic and novel molecular data across large international cohorts.

Given the geographically distributed nature of this consortium, this role requires exceptional independence, self-direction, and the ability to seamlessly integrate into a remote, virtual collaborative environment.

Key Responsibilities

The postdoctoral associate will be responsible for executing large-scale data harmonization and implementing/developing new methodologies related to the following areas:

- **Bayesian Disease Progression Modeling:** Develop and apply Bayesian Biomarker Modelling (BBM) frameworks utilizing longitudinal biomarker data.
- **Survival Analysis & Time-to-Event Modeling:** Build core multivariable survival models, including advanced multi-task learning architectures.
- **Missing Data & Harmonization Methods:** Implement multi-cohort data harmonization strategies and develop robust methods for handling complex, block-missing data across diverse global datasets.

- **Measurement Error:** Apply and develop measurement error methods tailored for high-dimensional, multi-modal integration.
- **Virtual Transatlantic Collaboration:** Work directly and communicate effectively with an international team of leading biostatisticians and neuroscientists across multiple time zones utilizing online collaboration tools.
- **Scientific Dissemination:** Publish high-impact papers in both methodological and applied application, and create open-source software for broad scientific dissemination.

Minimum Qualifications

- **Education:** Doctorate in Biostatistics, Statistics, Computational Biology, or a related field (at the time of appointment).
- **Expertise:** Demonstrated expertise and interest in one or more of the core research areas listed above (Bayesian modeling, survival analysis, missing data, or measurement error).
- **Virtual Work Skills:** Exceptional written and oral communication, organization, and planning skills, with a proven ability to independently manage complex statistical workflows in a virtual/remote setting.

Career Development & Mentorship

The postdoctoral scholar will have the opportunity to work directly with a highly synergistic international team spanning computational neuroimaging, multi-omics, epidemiology, translational genomics.

The position is crafted as a career-building opportunity for a junior scholar with an interest in the interface between biostatistical application and methodological development. The postdoc will be trained in conducting and presenting research, building regular collaboration with leading biostatisticians and neuroscientists, publishing papers in application and methodology, and creating software for dissemination. Furthermore, the postdoc will be offered mentored opportunities to participate in grant writing as desired to foster their trajectory toward independent research leadership.

Working Conditions/Environment:

We offer a casual yet highly professional work environment where attention to detail and the ability to meet deadlines are absolute requirements. The Post-Doctoral Associate must be adaptable and comfortable working closely with a prolific, high-energy Principal Investigator and a globally distributed team with complex scheduling needs. All employees are obligated to meet the highest ethical standards with respect to accuracy, conflicts of interest, intellectual property rights, data confidentiality, and respect for information sources and readers. Work involves sustained posture in a seated position and prolonged use of a computer terminal.

Application Instructions

To apply, please email pamela.thropp@ucsf.edu with the subject line "ATLAS BiostatsPostdoc" and include the following:

- Most recent CV
- A writing sample (e.g., a published or an arXiv paper)
- Contact information for 2–3 references