

Postdoctoral Research Position: Intracranial Recordings to Study Language

Two postdoctoral research positions are available at the NeuroImaging and Electrophysiology Lab (www.tandonlab.org) in the Department of Neurosurgery at the University of Texas Medical School in Houston. This unparalleled opportunity is funded by a recently awarded BRAIN Initiative U01 grant for which Dr. Tandon is the PI. The project uses electrocorticographic (ECoG) recordings on a very large cohort (n=80) to evaluate psycho-linguistic models of reading and speech production with the goal being to create network level representation of language. Collaborators on the project with whom the post-doc will work closely are Nathan Crone (Hopkins), Greg Hickok (UC Irvine), Stanislas Dehaene (College de France) and Xaq Pitkow (Baylor)

Project Description:

This is a close multi center collaboration that brings together investigators with established track records in intracranial EEG (iEEG) recordings, neuroscience of language and computational neuroscience to better understand the uniquely human behavior of reading and producing language. More details about the U01 grant are online at NIH Reporter. The post-doc will benefit from a close interaction with several experts in the fields of reading, semantics, and speech production.

Post-doc Responsibilities:

The selected individuals are expected to be highly motivated, team players who have the passion to study cognitive processes using direct recordings in humans. They will be responsible for 1) optimizing and refining paradigms for use in the project, 2) data collection in the epilepsy monitoring unit and in the MRI scanner, 3) ECoG data analysis using a analysis pipelines existent in the lab and via the development of innovative strategies, and 4) data presentation at conferences, manuscript and grant writing.

Requirements:

The selected individuals must have a Ph.D. in one or more of the following - neuroscience, psychology, cognitive science, mathematics, electrical engineering or computer science. Previous experience in neural time series data analysis or functional imaging studies of reading or speech production is desirable but not essential. Crucial is the ability to independently code in one or more of the following – MATLAB, R or Python. Given the multiple unpredictable variables and privacy issues around data collection in human patients, the individual must possess high ethical and professionalism standards, be able to adapt to a changing environment, reorganize schedules dynamically, and work with tight deadlines. The individual must possess the ability to work effectively independently, yet collaborate effectively on a project with multiple investigators. Candidates with a strong publication record and excellent prior academic credentials will be given preference.

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