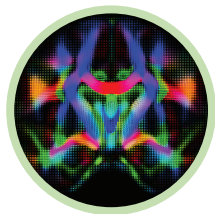









Vatché George Baboyan

Cognitive Neuroscientist



 [vbaboyan.github.io](https://github.com/vbaboyan)  
 Los Angeles, CA  
 [vbaboyan@uci.edu](mailto:vbaboyan@uci.edu)

Programming Skills

R  Excellent  
UNIX  Excellent  
Matlab  Above average  
Python  Intermediate

Languages

English  Native  
Spanish  Conversational  
Armenian  Native  
Arabic  Conversational

References

Available upon request

Summary of Qualifications

Self-motivated and results oriented PhD candidate in neuroscience with demonstrated expertise in the analysis of diffusion magnetic resonance imaging and tractography data to study brain connections for both research and presurgical brain mapping purposes.

Professional Experience

Graduate Student Research Fellow

Auditory & Language Neuroscience Research Lab | UC Irvine 2015-Present ●

- Implemented machine learning and statistical models on diffusion MRI datasets gathered from a variety of different clinical and research institutions.
- Authored manuscripts, presented findings at international conferences, and guest-lectured undergraduate courses.

Staff Research Associate / Project Specialist

Mark & Mary Stevens Neuroimaging and Informatics Institute | USC 2014 - 2015 ●

- Served as the designated neuroanatomy and tractography expert by generating segmented white matter atlases for faculty research scientists.
- Automated brain imaging pipelines using a variety of scripting languages (Matlab/UNIX/R) within a high performance computing environment (SGE).
- Presented research findings on white matter disruptions in traumatic brain injury at international conferences (see next page).
- Trained faculty and staff on neuroimaging data analysis and connectonal anatomy.

Clinical Specialist / Research Assistant

Mischer Neuroscience Institute & Department of Neurosurgery 2012 - 2014 ●

- Collected and analyzed multimodal (DTI, fMRI, CT, ECoG) brain imaging data (NIFTI/DICOM) as part of the presurgical evaluation in patients with epilepsy or brain tumors.
- Acted as the liason between clinical and research activities within the neurosurgery department by providing advanced brain mapping and intracranial electrode localization to assist with surgical interventions.
- Provided intraoperative technical support with image-guided surgical navigation products to facilitate the display of critical and patient-specific brain structures (e.g., fiber bundles, surface landmarks, fMRI activations) while collecting data for awake craniotomy surgery.

Awards

Recipient of the prestigious National Science Foundation Graduate Research Fellowship (GRFP) - a 3-year \$100,000 research fellowship to support promising graduate students in Science, Technology, Engineering, and Math (STEM) fields.

Education

Doctor of Philosophy (Ph.D) - Cognitive Neuroscience 2019 (Expected) ●  
University of California, Irvine

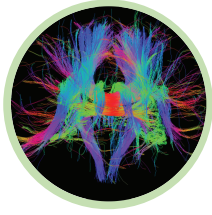
Master of Science (M.S) - Cognitive Neuroscience 2018 ●  
University of California, Irvine

Bachelor of Arts (B.A) - Neuropsychology & Global Studies 2011 ●  
University of California, Santa Barbara

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## Publications

Baboyan VG, Hickok G, and Tandon N. "Data-Driven Inter-Hemispheric White Matter Comparison in Wada-Tested Patients Reveals and Validates Pathways Critical for Language Laterality". In: Review: Brain (Journal of Neurology).

Guadalupe T et al. (2017). "Human subcortical brain asymmetries in 15,847 people worldwide reveal effects of age and sex". In: Brain imaging and behavior 11.5, pp. 1497–1514.

Kadipasaoglu CM, Conner CR, Baboyan VG, et al. (2017). "Network dynamics of human face perception". In: PloS one 12.11, e0188834.

Daianu M, Mendez M, Baboyan VG, ... Thompson PM. (2016). "An advanced white matter tract analysis in frontotemporal dementia and early-onset Alzheimer's disease". In: Brain imaging and behavior 10.4, pp. 1038–1053.

Kadipasaoglu CM, Conner CR, Meagan Lee Whaley, et al. (2016). "Category-selectivity in human visual cortex follows cortical topology: a grouped icEEG study". In: PloS one 11.6, e0157109.

Kadipasaoglu CM, Forseth K, et al. (2015). "Development of grouped icEEG for the study of cognitive processing". In: Frontiers in psychology 6, p. 1008.

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## Conference Presentations

VG Baboyan and G Hickok (2019). "Mapping the eloquent transcortical pathways to the ventrolateral prefrontal cortex using data from the Human Connectome Project." Society for the Neurobiology of Language (SNL).

VG Baboyan, G Hickok and N Tandon (2018). "Quantification and parcellation of posterior inferior frontal structural connections to auditory and supplementary motor area targets: A diffusion imaging study in neurosurgical patients." Society for the Neurobiology of Language (SNL).

VG Baboyan and PM Thompson (2016). "Disruptions to White Matter Microstructure of the Default Mode Network in Pediatric Traumatic Brain Injury." Society for Neuroscience (SFN).

VG Baboyan, EL Dennis and PM Thompson (2015). "An Analysis of Temporal Lobe Association Fibers in Post-Acute Traumatic Brain Injury: A HARDI study." Cognitive Neuroscience Society (CNS).

VG Baboyan, MA DiSano and N Tandon (2014). "Language Laterality estimated using Tract Based Spatial Statistics: A Correlation with the Wada Test." American Association of Neurological Surgeons (AANS).