

Xi He Xie

CONTACT INFORMATION	Brain Networks Laboratory (Raj Lab) Department of Neuroscience Weill Cornell Graduate School of Medical Sciences	+1 (917) 584-2108 axiezai@gmail.com xix2007@med.cornell.edu
WEBSITE	link (https://axiezai.github.io)	
RESEARCH INTERESTS	Computational Neuroscience, Connectomics, Neurodegenerative Diseases, Data-Driven Methods, Machine Learning, Bayesian Inference, Network theoretics.	
RESEARCH	Dept. of Radiology, University of California San Francisco, CA. Visiting Graduate Researcher, May 2018 – Present <ul style="list-style-type: none">• Mentors: Dr. Ashish Raj and Dr. Srikantan Nagarajan Dept. of Neuroscience & Brain and Mind Research Institute, Weill Cornell Graduate School of Medical Sciences, Cornell University, New York, NY. Ph.D Candidate, June 2015 – Present <ul style="list-style-type: none">• Doctoral Mentor: Dr. Ashish Raj Dept. of Biomedical engineering, Grove School of Engineering at CCNY (CUNY), New York, NY. Undergraduate Researcher, June 2011 – June 2013 <ul style="list-style-type: none">• Mentors: Dr. Jacek Dmochowski, Dr. Lucas Parra, and Dr. Marom Bikson	
EDUCATION	Dept. of Neuroscience, Weill Cornell Graduate School of Medical Sciences, New York, NY. Ph.D Candidate, Computational Neuroscience, June 2015 - Present. <ul style="list-style-type: none">• Dissertation: <i>Emergence of neuronal dynamics from brain structure in resting-state human brain imaging</i>• Advisor: Dr. Ashish Raj Dept. of Biomedical Engineering, The City College of New York (CUNY), New York, NY. B.S. in Biomedical Engineering, May 2013. <ul style="list-style-type: none">• Final Project: <i>Pressure-regulated tourniquet for intravenous interventions</i>• Research Project: <i>Clinician accessible tools for GUI computational models of transcranial electrical stimulation: BONSAI and SPHERES</i>• Advisor: Dr. Jacek Dmochowski, Dr. Lucas Parra, and Dr. Marom Bikson	
STUDENT MENTORING	<i>(joint mentoring with Dr. A. Raj)</i> <ol style="list-style-type: none">1. Akanksha (2020 - Present, USF Masters student in data science)2. Qingyi Sun (2020 - Present, USF Masters student in data science)3. Areez Malik (2019 - Present, High School Volunteer)4. Xiao Gao (2018, MS student in Biomedical Imaging)	

PUBLICATIONS

In preparation (to be submitted in 2020)

- X. Xie, C. Cai, P. Damasceno, S. Nagarajan, and A. Raj, *Emergence of canonical functional networks from complex Laplacian of structural connectome*.

Preprints (manuscripts currently under review)

- X. Xie, A. Kuceyeski, S. A. Shah, N. D. Schiff, S. Nagarajan, and A. Raj *Parameter Identifiability and Non-Uniqueness in connectome based neural mass models*, under review. [link](#)

Peer Reviewed Journals

- A. Raj, C. Cai, X. Xie, E. Palacios, J. Owen, P. Mukherjee, and S. Nagarajan, *Spectral graph theory of brain oscillations*, Accepted at Human Brain Mapping on Feb 18th, 2020. [link](#)
- D. Q. Truong, M. Huber, X. Xie, A. Datta, A. Rahman, L. C. Parra, J. Dmochowski, M. Bikson, *Clinician accessible tools for GUI computational models of transcranial electrical stimulation: BONSAI and SPHERES*, Brain Stimulation (2014), pp. 1-16. [link](#)

SELECTED
CONFERENCES:
HACKATHONS

- *Progress in Neuroscience Seminar*, Weill Cornell Graduate School, New York, NY (2020).
- *UCSF Radiology China Basin Colloquium*, UCSF, San Francisco, CA (2019).
- *Teaching Assistant at Bay Area WiMLDS Scikit-Learn Sprint*, San Francisco, CA (2019).
- *Society for Neuroscience*, Annual Meeting, San Diego, CA (2018).
- *Neurohackademy*, University of Washington, Seattle, WA (2018).
- *Mathematical Physics and Harmonic Analysis Seminar*, CUNY Graduate Center, New York, NY (2016).
- *Brainhack Los Angeles*, Los Angeles, CA (2016).

SCHOLARSHIPS,
TRAVEL GRANTS,
AND AWARDS

- 2018 Travel grant, invitation to participate in Neurohackademy, a 2-week conference focusing on reproducibility, open source sharing, and software practices in neuroimaging, including a poster presentation and a final presentation of hackathon project.
- 2016 Travel grant, invitation to participate in Brainhack L.A. as a junior investigator and present on neural mass modeling of human electroencephalography data.
- 2013 Lionel Malamed Award for Academic Achievement of a student athlete, from The City College of New York.
- 2013 Tau Beta Pi, Engineering Honor Society
- 2009 4-Year Undergraduate Tuition Scholarship, from The City University of New York to pursue a degree in biomedical engineering at The City College of New York.

INDUSTRY
EXPERIENCE**GE Healthcare, NJ.** Junior Engineer, September 2014 - May 2015**Fuji Medical Systems, CT.** Quality Assurance Engineer, July 2013 - June 2014RELEVANT
SKILLS

Languages: English, Mandarin Chinese
 Coding: MATLAB, Python, Bash, Git, HTML, SQL, Java
 Technical: FreeSurfer, FSL, Dipy, Mrtrix3, Docker, Solidworks, Bluebeam, Latex