Greg Kronberg

PhD Candidate, Biomedical Engineering, The City College of New York
Lab: 212-650-8876   Mobile: 917-880-1370   Email: gregkronberg@gmail.com
Website: parralab.org/people/GregKronberg

Education

PhD Biomedical Engineering, The City College of New York	Expected 2019
MS Biomedical Engineering, The City College of New York	2015
BS Physiology & Neurobiology, University of Maryland College Park	2010

Academic Research

Graduate Research Assistant, City College of New York, Neural Engineering   2013-Present
- Optimizing electrical brain stimulation to enhance synaptic plasticity and associative learning, using computational models and in vitro electrophysiology

Industry Research

Research Scientist I, Soterix Medical   2012-13
- Optimized and patented electrode design for brain stimulation, using FEM modeling

Teaching

Teaching Assistant, City College of New York   2015-Present
- Biomedical signal processing (graduate, 2016-present)
- Biostatistics and research methods (undergraduate, 2015-2016)

MCAT Course Instructor, Kaplan Test Prep   2010-2013
- Taught classes of ~30 students covering undergraduate biology, chemistry, and physics

Technical Skills

Programming languages:	Python, Matlab
Data Analysis:	Biomedical signal processing, machine learning
Computational Neuroscience:	Multi-compartment single neurons (NEURON), recurrent networks (Brian)
Experimental Neuroscience:	In vitro electrophysiology
Medical device design:	Finite element method (COMSOL)

Publications

- Liu A, Voroslakos M, **Kronberg G**, et al. "Immediate neurophysiological effects of transcranial electrical stimulation." *Nature Communications*   2018
- Bikson M, **Kronberg G**, et al. "Synaptic transmission modulates while non-synaptic processes govern the transition from pre-ictal to seizure activity in vitro." *bioRxiv*   2018
- **Kronberg G** et al. "Direct current stimulation modulates LTP and LTD: activity dependence and dendritic effects" *Brain Stimulation*   2017
- Jackson M, **Kronberg G** et al. "Animal models of transcranial direct current stimulation: methods and mechanisms" *Clinical Neurophysiology*   2016
- Bikson M, **Kronberg G** et al. "Safety of transcranial direct current stimulation: evidence based update 2016" *Brain Stimulation*   2016
- **Kronberg G**, Bikson M. "Electrode assembly design for transcranial Direct Current Stimulation: A FEM modeling study," *IEEE Engineering in Medicine and Biology*   2012

Patents

- Electrode Assembly, RF CUNY, US Patent Number 9956395 — 2018

Presentations

- **Society for Neuroscience, *poster***: "A Hebbian framework for predicting modulation of synaptic plasticity with tDCS." San Diego, CA — 2018
- **North American Neuromodulation Society, *invited talk***: "tDCS boosts Hebb: Explaining the sensitivity and selectivity of tDCS." New York NY. — 2018
- **Society for Neuroscience, *poster***: "Direct current stimulation and synaptic plasticity." Washington D.C. — 2017
- **CCNY Works in Progress Seminar, *invited talk***: "Modulating synaptic plasticity with tDCS." New York NY. — 2017
- **NYC Neuromodulation, *poster***: "Direct current stimulation modulates LTP and LTD: activity dependence and dendritic effects." New York NY. — 2017
- **Society for Neuroscience, talk (*nanosymposium)***: "Direct current stimulation modulates LTP and LTD: activity dependence and dendritic effects." San Diego CA. — 2016
- **CCNY Biomedical Engineering Seminar Series, *invited talk***: "Modulating synaptic plasticity with tDCS." New York NY. — 2016
- **Society for Neuroscience, *poster***: "Direct current stimulation modulates bidirectional synaptic plasticity." Chicago IL. — 2015
- **NYC Neuromodulation, *invited talk***: "Electric fields boost LTP in vitro." New York NY. — 2015
- **Society for Neuroscience, *poster***: "Electric fields boost LTP in vitro." Washington D.C. — 2014
- **IEEE Engineering in Medicine and Biology, *poster***: "Electrode assembly design for transcranial Direct Current Stimulation: A FEM modeling study" San Diego CA. — 2012

Fellowships & Awards

- Wallace H. Coulter Award, Graduate Academic Service, City College of New York — 2018
- Wallace H. Coulter Award, Graduate Research Performance, City College of New York — 2017
- NIH Graduate research fellowship: R01 NS095123 — 2015-2018
- Harold Shames Award, Graduate Academic Excellence, City College of New York — 2015
- NYC Neuromodulation Student Research Award — 2015
- NIH graduate research fellowship: R01 MH092926 — 2015
- Neural Engineering Award, City College of New York Biomedical Engineering — 2013
- Wallace H. Coulter foundation graduate research fellowship — 2013

Activities & Memberships

- Abstract Review Committee, North American Neuromodulation Society Summer Series — 2018
- Okinawa Computational Neuroscience Course, Okinawa Institute of Science and Tech. — 2017
- Neural Engineering Seminar Organizer, City College of New York — 2016-2018
- Ad-hoc reviewer: Brain Stimulation, Brain Research, Transactions on Biomedical Engineering, PLoS Computational Biology, Neuropharmacology — 2015-2018
- Society for Neuroscience Member — 2014-2018
- Biomedical Engineering Society Member — 2012-2018