Harang Ju

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harangju.github.io

Education

University of Pennsylvania — August 2017 — Present
Ph.D. Neuroscience
Advisor: Dr. Danielle Bassett
Coursework: cell biology, electrophysiology, neuroanatomy, theoretical neuroscience, linear systems theory, machine learning

University of Virginia — August 2012 — May 2016
B.S. Computer Science
B.A. Cognitive Science

Positions

2017 – present **Ph.D. Candidate** / Neuroscience / University of Pennsylvania
2015 – 2017 **Research Assistant** / Systems Neurodynamics Lab / University of Virginia
Summer 2016 **Research Assistant** / Center for Brain Immunology & Glia / University of Virginia
2013 – 2014 **Research Assistant** / Radiation Oncology / University of Virginia
Summer 2013 **Intern** / iOS Development / WillowTree Inc.
Summer 2010 **Intern** / Technology Center / National Radio Astronomy Observatory

Awards

- 2019 Travel award to attend Sackler Colloquia: Brain Produces Mind by Modeling
- 2018 Fine Science Tools travel award to attend Society for Neuroscience conference
- 2016 Rader Award for Undergraduate Research for Thesis Project, UVA
- 2012 Rodman scholar (top 5% of prospective engineering students), UVA
- 2012 QuestBridge finalist

Peer-reviewed Publications

Harang Ju, Danielle S. Bassett. Dynamic representations in networked neural systems. *Nature Neuroscience* (2020) article

Evelyn Tang, **Harang Ju**, Graham L Baum, David R Roalf, Theodore D Satterthwaite, Fabio Pasqualetti, Danielle S Bassett. Control of brain network dynamics across diverse scales of space and time. *Physical Review E* (2020) article

Pragya Srivastava, Erfan Nozari, Jason Z. Kim, **Harang Ju**, Dale Zhou, Cassiano Becker, Fabio Pasqualetti, Danielle S. Bassett. Models of communication and control for brain networks: distinctions, convergence, and future outlook (2020) arXiv

Harang Ju, Jason Z Kim, Danielle S. Bassett. Network topology of neural systems supporting avalanche dynamics predicts stimulus propagation and recovery (2018) arXiv

Harang Ju, Costa M. Colbert, William B Levy. Limited synapse overproduction can speed development but sometimes with long-term energy and discrimination penalties. *PLOS Computational Biology* (2017) article

Harang Ju, Siyong Kim, Paul Read, Daniel Trifiletti, Andrew Harrell, Bruce Libby, Taeho Kim. Development of a novel remote-controlled and self-contained audiovisual- aided interactive system for immobilizing claustrophobic patients. *Journal of Applied Clinical Medical Physics* (2015) article

Talks

- April 2019 —Flash talk, Sackler Colloquia: Brain Produces Mind by Modeling. Irvine, CA.

Posters

- September 2019 — Cognitive Computational Neuroscience. Berlin, Germany.
- May 2019 — Context and Episodic memory Symposium. Philadelphia, PA.
- May 2019 — Sackler Colloquia: Brain Produces Mind by Modeling. Irvine, CA.
- November 2018 — Society for Neuroscience. San Diego, CA.

Teaching

Fall 2019	**Teaching Assistant** / BBB249: Cognitive Neuroscience / University of Pennsylvania
Fall 2019	**Guest Lecture** / BE566: Network Neuroscience / University of Pennsylvania / *Case Study: Network Structure and Dynamics in Cascading Neural Systems*
2016 – 2017	**Teaching Assistant** / BME3636: Neural Network Models / University of Virginia

Patents

Taeho Kim, **Harang Ju**, Siyong Kim. Intrafractional motion reduction system using audiovisual-aided interactive guidance and related methods thereof. US 2017/0231530 A1, United States Patent and Trademark Office, 17 August 2017.

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