

Harang Ju

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harangju.github.io

Education

University of Pennsylvania
Ph.D. Neuroscience

August 2017 – Present

Advisor: Dr. Danielle Bassett

Coursework: cell biology, electrophysiology, neuroanatomy, theoretical neuroscience, linear systems theory, machine learning

University of Virginia
B.S. Computer Science
B.A. Cognitive Science

August 2012 – May 2016

Positions

2017 – present **Ph.D. Student** / 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, Jason Z Kim, Danielle S. Bassett. Network topology of neural systems supporting avalanche dynamics predicts stimulus propagation and recovery. [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](#)

William B Levy, **Harang Ju**, Robert A. Baxter, Costa M. Colbert. Controlling information flow and energy use via adaptive synaptogenesis. 2016 Annual Conference on Information Science and Systems. 2016. [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

2016 – 2017 **Teaching Assistant** / BME3636: Neural Network Models / University of Virginia