Harang Ju

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Positions

2022 – present	**Postdoctoral associate**	IT & Marketing	MIT Sloan School of Management
2024 – present	**Advisory board member**	Token Design	Moku
2017 – 2022	**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

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Education

University of Pennsylvania   August 2017 — August 2022
Ph.D. Neuroscience
Advisor: Dr. Danielle Bassett

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

Awards

2023	Workshop on Information Systems and Economics: Best Paper Award Nominee
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

Publications

Harang Ju, Madhav Kumar, Ehsan Valavi, Sinan Aral. Explaining Sustained Blockchain Decentralization with Quasi-Experiments: Resource Flexibility of Consensus Mechanisms. *In prep*

Harang Ju, Michael Zhao, Sinan Aral. Do Paid Ads Complement Organic Traffic for Long Tail Brands? A Large-Scale Mobile Field Experiment. *Under review at Management Science*

Shubhankar Patankar, Dale Zhou, Christopher W Lynn, Jason Z Kim, Mathieu Ouellet, **Harang Ju**, Perry Zurn, David M Lydon-Staley, Dani S Bassett. Curiosity as filling, compressing, and reconfiguring knowledge networks. *Collective Intelligence* (2022) article

Harang Ju, Dale Zhou, Ann S. Blevins, David M. Lydon-Staley, Judith Kaplan, Julio R. Tuma, Danielle S. Bassett. Historical growth of concept networks in Wikipedia. *Collective Intelligence* (2022) article

Harang Ju, Jason Z Kim, Danielle S. Bassett. Network structure of cascading neural systems predicts stimulus propagation and recovery. *Journal of Neural Engineering* (2020) [article](#)

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) [article](#)

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](#)

Invited Talks

November 2020	*The network structure of scientific revolutions*. Center for Science of Science and Innovation. Kellogg School of Management, Northwestern University.

Conferences

April 2024	Talk, 2024 NSF/CEME Decentralization Conference, Vanderbilt, Nashville, TN.
December 2023	Talk, Workshop on Information Systems and Economics, Hyderabad, India.
November 2023	Poster, Conference on Digital Experimentation @ MIT, Cambridge, MA.
December 2022	Talk, Crypto-Marketing Conference. Columbia Business School, New York.
March 2021	Poster, American Physical Society March Meeting. Virtual.
September 2019	Poster, Cognitive Computational Neuroscience. Berlin, Germany.
May 2019	Poster, Context and Episodic memory Symposium. Philadelphia, PA.
May 2019	Talk & poster, Sackler Colloquia: Brain Produces Mind by Modeling. Irvine, CA.
November 2018	Poster, Society for Neuroscience. San Diego, CA.

Teaching

Fall 2022-2023	**Mentor**	Analytics Lab – Action Learning seminar	MIT Sloan
Fall 2020	**Guest Lecture**	BE566: Network Neuroscience	University of Pennsylvania	*Case Study: The network structure of scientific revolutions*
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.

Consulting

Spring 2019   Biotech Consulting Project | Penn Biomedical Group Healthcare Consulting

Skills

Programming: python, pandas, plotly, web (NextJS, React, Vue), R, MATLAB, java, bash, iOS, C++, git
Languages: English (native), Korean (fluent)
Office: Excel, VBA, Alteryx Designer Core certified