ARI E. KAHN

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EDUCATION

University of Pennsylvania	*2013 - Current*
Ph.D. Candidate, Neuroscience	Philadelphia, PA

Advisor: Danielle S. Bassett, Ph.D.
Expected Date of Completion: Fall 2018

Washington University in St. Louis	*2007-2011*
B.S. in Computer Science & Chinese	St. Louis, MO

Minor in Physics
Graduated with Engineering Honors, Cum Laude

RESEARCH EXPERIENCE

Tel Aviv University	*2012*
Research Assistant	Tel Aviv, Israel

Advisor: Matti Mintz, Ph.D.
Computational modeling of the cerebellar microcircuit for sequential learning

Tel Aviv University	*Winter 2011*
Research Assistant	Tel Aviv, Israel

Advisor: Ehud Gazit, Ph.D.
Implemented and refined a protocol for self-assembling nanospheres

Technion University	*Summer 2010*
Research Assistant	Haifa, Israel

Advisor: Nahum Shimkin, Ph.D.
Implemented a machine learning based multilayer flight simulator framework

Washington University in St. Louis	*2008 - 2009*
Research Assistant	St. Louis, MO

Advisor: William Smart, Ph.D.
Designed framework for BCI-based control of simulated robotic prostheses

PUBLICATIONS

Modular Segregation of Structural Brain Networks Supports the Development of Executive Function in Youth
Baum, Graham L., Rastko Ciric, David R. Roalf, Richard F. Betzel, Tyler M. Moore, Russell T. Shinohara, **Ari E. Kahn**, Simon N. Vandekar, Petra E. Rupert, Megan Quarmley, Philip A. Cook, Mark A. Elliott, Kosha Ruparel, Raquel E. Gur, Ruben C. Gur, Danielle S. Bassett, and Theodore D. Satterthwaite. In: Current Biology 27.11, p. 1561 (2017).

Network constraints on learnability of probabilistic motor sequences
Kahn, Ari E., Elisabeth A. Karuza, Jean M. Vettel, and Danielle S. Bassett. In: arXiv (2017).

Structural Pathways Supporting Swift Acquisition of New Visuomotor Skills
Kahn, Ari E., Marcelo G. Mattar, Jean M. Vettel, Nicholas F. Wymbs, Scott T. Grafton, and Danielle S. Bassett In: Cerebral Cortex 27.1, pp. 173184 (2017).

Process reveals structure: How a network is traversed mediates expectations about its architecture
Karuza, Elisabeth A., **Ari E. Kahn**, Sharon L. Thompson-Schill, and Danielle S. Bassett. In: Scientific Reports 7.1, p. 12733 (2017).

Role of graph architecture in controlling dynamical networks with applications to neural systems
Kim, Jason Z., Jonathan M. Soffer, **Ari E. Kahn**, Jean M. Vettel, Fabio Pasqualetti, and Danielle S. Bassett. In: Nature Physics (2017).

Cliques and cavities in the human connectome
Sizemore, Ann E., Chad Giusti, **Ari Kahn**, Jean M. Vettel, Richard F. Betzel, and Danielle S. Bassett. In: Journal of Computational Neuroscience, pp. 131 (2017).

Individual Differences in Learning Social and Non-Social Network Structures
Tompson, Steven H., **Ari E. Kahn**, Emily B. Falk, Jean M. Vettel, and Danielle S. Bassett. In: arXiv (2017).

Developmental increases in white matter network controllability support a growing diversity of brain dynamics
Tang, Evelyn, Chad Giusti, Graham L. Baum, Shi Gu, Eli Pollock, **Ari E. Kahn**, David R. Roalf, Tyler M. Moore, Kosha Ruparel, Ruben C. Gur, Raquel E. Gur, Theodore D. Satterthwaite, and Danielle S. Bassett. In: Nature Communications 8.1, p. 1252 (2017).

Inter-regional ECoG correlations predicted by communication dynamics, geometry, and correlated gene expression
Betzel, Richard F., John D. Medaglia, **Ari E. Kahn**, Jonathan Soffer, Daniel R. Schonhaut, and Danielle S. Bassett. In: arXiv (2015).

Controllability of structural brain networks
Gu, Shi, Fabio Pasqualetti, Matthew Cieslak, Qawi K. Telesford, Alfred B. Yu, **Ari E. Kahn**, John D. Medaglia, Jean M. Vettel, Michael B. Miller, Scott T. Grafton, and Danielle S. Bassett. In: Nature Communications 6 (2015).

POSTERS

Beyond graph topology: Walk structure influences cluster-level surprisal effects in an online learning task
Elisabeth A. Karuza, **Ari E. Kahn**, Sharon L. Thompson-Schill, Danielle S. Bassett. Psychonomics. November 17-20, 2016, Boston, Massachusetts, USA.

Structural Correlates of Individual Differences in Motor Sequence Learning
Ari E. Kahn, Marcelo G. Mattar, Jean M. Vettel, Nicholas F. Wymbs, Scott T. Grafton, Danielle S. Bassett. Society for Neuroscience, November 12-16, 2016, San Deigo, California, USA.

A model of sequential learning in the cerebellum
Ari E. Kahn, Ari Magal, Roni Hogri and Matti Mintz. Society for Neuroscience, October 13-17, 2012, New Orleans, Louisiana, USA.

AWARDS

Jameson-Hurvich Travel Award *Fall 2016*

TEACHING AND MENTORING

Teaching Assistant
Introduction to Brain and Behavior   *Spring 2016*
Led weekly undergraduate recitation section and wrote testing material

OUTREACH

Upward Bound
Summer Neuroscience Elective
Head Coordinator   *Summer 2016*
Instructor   *2014 - 2015*

Penn Neuroscience Public Lecture Series
Committee Member   *2014 - 2017*

Neuroscience Elementary School Outreach Program
Instructor   *2013 - Present*

PROFESSIONAL AFFILIATIONS

Society for Neuroscience

SIAM

SKILLS

Programming   Python, R, Matlab, JavaScript, C, C++, LaTeX
Image Processing   FSL, ANTs, FreeSurfer, DTI Studio