

EDUCATION	HARVARD UNIVERSITY , CAMBRIDGE, MA	2018 –
	Ph.D. in Neuroscience	
	RICE UNIVERSITY , HOUSTON, TX	2014 – 2018
	B.A. in Cognitive Sciences with Honors	
	Minors in Neuroscience, Computational and Applied Mathematics	
	Distinction in Research and Creative Work Thesis: <i>Multisensory context warps time perception</i>	
AWARDS & HONORS	Center for Brains, Minds, and Machines (CBMM) Summer School	2019
	National Science Foundation Graduate Research Fellowship	2018 – 2023
	Phi Beta Kappa National Honor Society	2018
	Rice University Student-Taught Course (STC) Teaching Award	2017
	Cognitive Computational Neuroscience student travel award	2017
	Janelia Undergraduate Scholars Program Fellowship	2017
	Barry M. Goldwater Scholarship honorable mention	2017
	Center for Sensorimotor Neural Engineering (CSNE) NSF-REU Fellowship	2016
	Computational and Systems Neuroscience (Cosyne) undergraduate travel award	2016
	Rice Undergraduate Scholars Program thesis grant	2016 – 2018
RESEARCH	HARVARD UNIVERSITY , CAMBRIDGE, MA	JUN 2019 –
	<i>Department of Psychology</i>	
	Advisor: Samuel Gershman	
	<ul style="list-style-type: none"> Developing computational models and designing experiments to understand the behavioral and neural origins of habit formation. 	
	MARINE BIOLOGICAL LABORATORY , WOODS HOLE, MA	AUG 2019
	<i>CBMM Summer School</i>	
	<ul style="list-style-type: none"> Investigating the emergence of representational specificity during continual learning in multi-layer convolutional neural networks. 	
	BAYLOR COLLEGE OF MEDICINE , HOUSTON, TX	JAN 2015 – JUN 2018
	<i>Department of Neuroscience</i>	
	Advisor: Jeffrey Yau	
	<ul style="list-style-type: none"> Designed behavioral experiments and built computational models to understand how context influences time perception across the senses. 	
	JANELIA RESEARCH CAMPUS , ASHBURN, VA	JUN 2017 – AUG 2017
	<i>Janelia Undergraduate Scholars Program</i>	
	Advisor: Joshua Dudman	
	<ul style="list-style-type: none"> Used <i>in-vivo</i> neural recordings to understand how the motor cortex and striatum represent the kinematics of motor behaviors during reward-seeking actions. 	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY , CAMBRIDGE, MA	JUN 2016 – AUG 2016
	<i>Center for Sensorimotor Neural Engineering NSF-REU, McGovern Institute for Brain Research</i>	
	Advisor: Mehrdad Jazayeri	
	<ul style="list-style-type: none"> Designed behavioral experiments and built Bayesian inference models to understand the role of memory in sensorimotor control. 	

PUBLICATIONS & PRESENTATIONS

Lai, L., Magnotti, JF., Yau, JM. *Conditioned inference through evidence filtering explains multisensory time warping*. Manuscript in preparation.

Lai, L., Pho, GN., Ölveczky, BP., Gershman, SJ. *A computational division of labor for motor skill learning*. From Neuroscience to Artificially Intelligent Systems (NAISys) meeting, Cold Spring Harbor, NY. Accepted as a talk, conference postponed due to COVID-19.

Mikhael, JG, **Lai, L.**, Gershman, SJ. *Rational inattention and tonic dopamine*. Manuscript in revision.

Lai, L., Magnotti, JF., Yau, JM. *Multisensory context warps time perception*. Cognitive Computational Neuroscience (CCN) meeting, New York, NY. Conference paper & poster: September 7, 2017.

Lai, L., Dudman, JT. *Neural correlates of action kinematics in the dorsal striatum*. Janelia Undergraduate Scholars symposium, Ashburn, VA. Poster: August 3, 2017.

Lai, L., Magnotti, JF., Yau, JM. *Contextual determinants of cue binding or separation in multisensory time perception*. International Multisensory Research Forum (IMRF) annual meeting, Nashville, TN. Poster: May 21, 2017.

Lai, L., Yau, JM. *Attractive and repulsive multisensory interactions in time perception*. Society for Neuroscience (SfN) annual meeting, San Diego, CA. Poster: November 14, 2016.

Lai, L., Jazayeri, M. *Characterizing variability in memory recall of time intervals*. Center for Sensorimotor Neural Engineering (CSNE) REU Symposium, Seattle, WA. Poster: August 17, 2016.

TEACHING | Course Design

Courses that I have personally designed (curriculum, problem sets, etc.) and taught from scratch.

NB314QC: MATH TOOLS FOR NEUROSCIENCE

JAN 2020

Department of Neurobiology, Harvard Medical School

- o Designed and taught a new J-term course for the Neuroscience Ph.D. program curriculum. Topics include fundamentals of linear algebra, probability theory, statistical estimation and inference in neural circuits, and analysis of neural population data.

COLL158: HOW MUSIC PLAYS THE BRAIN

S 2017, F 2017, S 2018

Rice University

- o Designed and taught a seminar course on the intersection of music and neuroscience. Topics include the neurobiology of music perception and cognition, music therapy, AI and music, etc. Recipient of the 2017 Rice Student-Taught Course Award!

Teaching Assistantships

Roles in which I helped design/grade problem sets, held office hours, led recitations, and/or proctored exams.

TEACHING FELLOW

F 2019

Department of Neurobiology, Harvard Medical School

- o NB316QC: Helped write problem sets for a new graduate course on the probabilistic modeling of neural data.

TEACHING ASSISTANT

MAR 2019

Computational and Systems Neuroscience Conference Tutorial

- o Helped design and teach computational exercises at the 2019 Cosyne conference tutorial on Bayesian modeling of behavior.

TEACHING ASSISTANT

Departments of Psychology, Statistics, Biosciences, Rice University

- o NEUR/PSYC 362: Cognitive Neuroscience S 2016, S 2017, S 2018
- o NEUR/CAAM 416: Neural Computation S 2018
- o NEUR/BIOC 385: Cellular and Molecular Neuroscience F 2016
- o STAT 310: Probability and Statistics F 2016
- o PSYC 203: Cognitive Psychology F 2015

**OUTREACH
&SERVICE****STEM Education Outreach**

Roles where I have helped with curriculum development, mentoring, and teaching for (often underserved) city-area high school students.

HPREP Curriculum and Teaching Team, Harvard Medical School 2018 –

BrainSTEM, KIPP Sunnyside High School, Houston, TX 2015 – 2017

Splash, Rice University 2017

Academic Mentorship

Roles where I have tutored or mentored students within an academic institution. Includes planning 4-year course curricula, helping with research internship/graduate school/fellowship applications, etc.

Mind, Brain, Behavior (MBB) Graduate Student Mentor, Harvard University 2019 –

Alumni Externship Advisor, Rice University 2018 –

Head Academic Fellow, Lovett College, Rice University 2016 – 2018

Curriculum Advisor, Rice Neuroscience Society, Rice University 2015 – 2018

Orientation Week Advisor, Lovett College, Rice University 2015

Peer Reviewing

NeurIPS Biological and Artificial Reinforcement Learning Workshop, Vancouver, BC 2019

**LEADERSHIP
&PROFESSIONAL**

Alumni Interviewer, Rice University 2018 –

Head Academic Fellow, Lovett College, Rice University 2016 – 2018

Catalyst Executive Editor, Rice Undergraduate Science Research Journal 2014 - 2016

Conference Organizer, Exploring the Mind through Music Conference, Rice University 2016

Alumni Week Coordinator, Lovett College, Rice University 2016

Urban Immersion Coordinator, Center for Civic Leadership, Rice University 2014 – 2015

Tour Guide, Welcome Center, Rice University 2014 – 2015

**SKILLS
&OTHER**

Programming: MATLAB, Python, PyTorch, Tensorflow, Javascript, HTML/CSS

Lab: psychophysics, Amazon MTurk, *In-vivo* electrophysiology, rodent behavior

Interests: classical music, philosophy of science and religion, poetry, long-distance running, coffee