KIRSTEN ZIMAN

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ACADEMIC APPOINTMENTS

Princeton University   *1/2025 - Present*
Lecturer
Princeton Neuroscience Institute

University of Pennsylvania   *6/2025 - 8/2025*
Lecturer
College of Liberal and Professional Studies

Princeton University   *2022 - 2025*
Postdoctoral Researcher
Princeton Neuroscience Institute
Advisor: Michael Graziano

EDUCATION

Dartmouth College   *2022*
Ph.D., Cognitive Neuroscience
Psychological and Brain Sciences
Advisor: Jeremy Manning

University of Southern California   *2014*
B.S., Neuroscience
Brain and Creativity Institute
Advisors: Antonio Damasio, Assal Habibi

FUNDING & ACCOLADES

Data Driven Social Science Grant, Princeton University   *2025*
Principal Investigator

NIH Institutional Training Grant (T32MH065214)   *2022-2024*
Postdoctoral Research Fellow

NSF Established Program to Stimulate Competitive Research (Award #1632738)   *2017-2022*
Graduate Student

Graduate Travel Award, Dartmouth Graduate Studies	*2021*
Neukom Prize for Outstanding Graduate Research in Computational Science	*2020*
Tau Sigma Honors Society, University of Southern California	*2013*
Phi Theta Kappa Honors Society, Beta Kappa Delta Chapter	*2012*

PUBLICATIONS

Undergraduate trainees are underlined

10. Premakumar V. N., Vaiana M., Pop F., Rosenblatt J., Scwerz de Lucena, D., **Ziman K.**, Graziano M. S. A. (In press). Unexpected benefits of self-modeling in neural systems. *Philosophical Transactions of the Royal Society B: Biological Sciences.*

9. Farrell K. T., **Ziman K.**, Graziano M. S. A. (Preprint, arXiv:2411.00983). Improving how agents cooperate: attention schemas in artificial neural networks.

8. **Ziman K.**, Kimmel S. C., Christian I., Farrell K. T., Graziano M. S. A. (2025). Cortical networks active when modeling the attention of others. *Cerebral Cortex, 35*(9), bhaf266.

7. Christian I., Samuel A. Nastase, Mindy Yu, **Ziman K.**, Graziano M. S. A. (2025). Monitoring attentional state in self and others. *Journal of Cognitive Neuroscience*, 1-11.

6. **Ziman K.**, Kimmel S. C., Farrell K. T., Graziano M. S. A. (2023). Predicting the attention of others. *Proceedings of the National Academy of Sciences, 120*(42), e2307584120.

5. Saleki, S., **Ziman, K.**, Hartstein, K. C., Cavanagh, P., Peter, U. T. (2022). Endogenous attention biases transformational apparent motion based on high-level shape representations. *Journal of Vision, 22*(12), 16-16.

4. Hartstein K. C., Saleki S., **Ziman K.**, Cavanagh P., Tse P. U. (2021). First- and second-order transformational apparent motion rely on common shape representations. *Vision Research, 188,* 246-250

3. **Ziman K.**, Heusser A. C., Fitzpatrick P. C., Field C. E., & Manning J. R. (2018). Is automatic speech-to-text transcription ready for use in psychological experiments? *Behavior Research Methods, 50*(6), 2597-2605.

2. Heusser A. C.*, **Ziman K.*** , Owen L. L. W., & Manning J. R. (2018). HyperTools: A Python toolbox for gaining geometric insights into high-dimensional data. *Journal of Machine Learning Research. 18*(152), 1-6. * Indicates equal first authorship

1. Heusser A. C., Fitzpatrick C. P., Field C. E., **Ziman K.**, & Manning J. R. (2017). Quail: A Python toolbox for analyzing and plotting free recall data. *The Journal of Open Source Software, 2*(18).

TALKS

Modeling the Attention of Others, *Rutgers-Princeton Center for Computational Cognitive NeuroPsychiatry*, 3/26/2025, Virtual.

Predicting the Attention of Others, *Barnard Vision Lab*, 9/25/2024, New York, NY.

Attention Modeling and Social Cognition. *Princeton Neuroscience Institute Seminar Series*, 3/21/2024, Princeton, NJ.

Attentional modeling in the Brain. *Society for Neuroscience*, 11/11/2023, Washington, DC.

Modeling and Predicting the Attention of Others, *Association for the Scientific Study of Consciousness*, 6/22/2023, New York, NY.

Pupil dilation increases when participants report familiarity for images of faces they have not seen before, *Association for the Scientific Study of Consciousness*, 6/16/2021, Virtual.

First & Second-order Transformational Apparent Motion Rely on Common Shape Representations, *Barnard Vision Lab*, 11/15/2021, Virtual.

Cognitive Markers of Psychiatric Traits, *Dartmouth College Cognitive Brown Bag Series*, 2020, Hanover, NH.

Attention and Memory, *Dartmouth College Specialist Presentation*, 2019, Hanover, NH.

Volitional Attention Modulates Encoding and Retrieval, *Dartmouth College Cognitive Brown Bag Series*, 2018, Hanover, NH.

Speaker at EPSCoR Attention Consortium Talk Series, *Montana State University*, 2017, Bozeman, Montana.

POSTERS & ABSTRACTS

Undergraduate trainees are underlined

Kimmel S. C., **Ziman K.**, Christian I., Thompson J., Graziano M. S. A. (2024). Predictive modeling of others' attention in the brain: Increased activity when expectations are violated. *Society for Neuroscience.* Chicago, IL.

Farrell K. T., **Ziman K.**, Graziano M. S. A. (2024). The attention schema theory in machine learning: training agents to classify the attention patterns of others. *Society for Neuroscience.* Chicago, IL.

Ziman K., Kimmel S. C., Farrell K. T., Graziano M. S. A. (2024). Neural activity when predicting the attention of others. *Princeton Neuroscience Retreat.* Atlantic City, NJ.

Kimmel S. C., Farrell K. T., **Ziman K.**, Graziano M. S. A. (2023). Modeling and Predicting the Attention of Others. *Association for the Scientific Study of Consciousness.* New York, NY.

Ziman K., Kimmel S. C., Farrell K. T., Graziano M. S. A. (2023). Predicting the Attention of Others. *Princeton Neuroscience Retreat.* Philadelphia, PA.

Ziman K., Manning J. R. (2021). Increased pupil dilations are associated with unexpected false familiarity for faces. *Society for Neuroscience.* Chicago, IL.

Ziman K., Manning J. R. (2021). Pupil dilation increases when participants report familiarity for images of faces they have not seen before. *Association for the Scientific Study of Consciousness.* Virtual from Tel-Aviv, Israel.

Ziman K., Lee M. R., Martinez A. R., Manning J. R. (2019). Volitional attention modulates memory encoding and retrieval. *Society for Neuroscience Conference.* Chicago, IL.

Ziman K., Heusser A. C., Fitzpatrick P. C., Field C. E., & Manning J. R. (2018). Is automatic speech-to-text transcription ready for use in psychological experiments? *Context and Episodic Memory Symposium.* Philadelphia, PA.

Fitzpatrick P. C., **Ziman K.**, Heusser A. C., Field C. E., Manning J. R. (2018) The utility of speech-to-text software for transcription of verbal response data. *Wetterhan Science Symposium.* Hanover, NH.

Pak E.K., **Ziman K**, Manning JR (2018) How does attention affect memory? *Wetterhan Science Symposium.* Hanover, NH.

Lee M. R., Chacko RS, Whitaker EC, Fitzpatrick P. C., Field C. E., **Ziman K**, Bollinger BJ, Heusser AC, Manning JR (2018) Adaptive Free Recall: Enhancing (Or Diminishing) Memory. *Wetterhan Science Symposium.* Hanover, NH.

Ziman K., Heusser A.C., Manning J.R. (2017). Effects of Study Context on Recall Organization. *Society for Neuroscience Conference.* Washington, DC.

Ziman K., Heusser A.C., Manning J.R. (2017). Harnessing the power of mnemonic fingerprints: Maximizing learning potential by personalizing stimulus organization during adaptive list learning. *Context and Episodic Memory Symposium.* Philadelphia, PA.

Heusser A.C., **Ziman, K.**, Manning J.R. (2017). HyperTools: A Python toolbox for visualizing and manipulating high-dimensional data. *Context and Episodic Memory Symposium.* Philadelphia, PA.

Manning JR, **Ziman, K**, Heusser AC (2017) Efficient Learning: Manipulating context to enhance (or diminish) memory. *Society for Neuroscience.* Washington, DC.

Ziman, K., Familiar, A.M., Shim, W.M. (2016). Positive affect worsens ensemble coding performance. *Vision Science Society Conference.* Saint Pete Beach, Florida.

Deirdre B., Lennon J., **Ziman K.** (2016). Content of Sleep-talking Transcripts versus Dream Accounts and Waking Language. *International Association for the Study of Dreams Conference.* Virginia Beach, Florida.

Wong, W.O., Suthana, N.A., Pourshaban, D., **Ziman, K.**, Bookheimer, S., Fried, I., Knowlton, B. (2012). Comparison of Medial Temporal Subregional Thickness and Overall Brain Volume to Episodic Memory Performance in Humans. *UCLA Undergraduate Poster Session.* Los Angeles, California.

SOFTWARE DEVELOPMENT

HyperTools toolbox for analyzing & visualizing high-dimensional data (Python, open-source)
featured in Kaggle "No Free Hunch" blog and over 1,500 stars on GitHub

AutoFR toolbox to automatically transcribe verbal free recall data (Python, open-source)

Quail   toolbox for analyzing and plotting free recall data (Python, open-source)

AD HOC REVIEWER

Journal of Open Source Software
Frontiers Open Access Research Journal
Journal of Experimental Psychology: General
Cognition

TEACHING

Functional Neuroanatomy, Princeton University   *Fall 2025*
Head Preceptor with Professor Michael Graziano

Introduction to Experimental Psychology, University of Pennsylvania   *Fall 2025*
Lecturer

Introduction to Cognitive Neuroscience, Princeton University   *Spring 2025*
Head preceptor with Professor Jesse Gomez

From Molecules to Systems to Behavior (Graduate), Princeton University   *Spring 2025*
Preceptor with Professor Jonathan Cohen

Quantitative Methods, Princeton University   *Spring 2025*
Preceptor with Lecturer Justin Junge

Functional Neuroanatomy, Princeton University   *Fall 2024*
Preceptor with Professor Michael Graziano

Introduction to Programming in Python, Princeton University   *Summer 2024*
Course designer and instructor; six-week undergraduate workshop

Laboratory in Principles of Neuroscience, Princeton University   *Spring 2023*
Preceptor with Lecturer Anthony Ambrosini

Functional Neuroanatomy, Princeton University   *Fall 2022*
Preceptor with Professor Michael Graziano

Laboratory in Psychological Science, Dartmouth College   *Winter 2020*
Teaching Assistant to Professor Keilah Worth

Experiment Design, Methodology & Data Analysis, Dartmouth College   *Spring 2019*
Teaching Assistant to Professor Catherine Cramer

Principles of Human Brain Mapping with MRI, Dartmouth College   *Fall 2019*
Teaching Assistant to Professor Jeremy Huckins

Principles of Human Brain Mapping with MRI, Dartmouth College   *Fall 2018*
Teaching Assistant to Professor Jeremy Huckins

MENTORSHIP

GRADUATE MENTEES:

1. Yeo Bi Choi, *graduate student in the Robertson Laboratory at Dartmouth College*

2. Byeol Kim, *graduate student in the Wager Laboratory at Dartmouth College*

UNDERGRADUATE MENTEES:

1. Jack Thompson, *recipient of ReMatch+ research funding, Princeton University*

2. Sarah Kimmel, *recipient of Lenfest Scholar Foundation Special Education Expenses Fund*

3. Paxton Fitzpatrick, *current graduate student at Dartmouth College*

4. Ethan Adner, *recipient of Neukom undergraduate research fellowship at Dartmouth College*

5. Natalie Schroeder, *recipient of David C. Hodgson Endowment at Dartmouth College*

6. Darren Gu, *recipient of David C. Hodgson Endowment at Dartmouth College*

7. Madeline Lee, *Sophomore Research Scholar at Dartmouth College*

8. Kathryn Farrell
9. Campbell Field
10. Sarah Park
11. Chelsea Uddenberg
12. Alex Chivers
13. Marisol Tracy
14. William Chen
15. Swestha Jain
16. Eowyn Pak
17. Alejandro Martinez
18. Chetan Pavuluri
19. Christina Lu

PROFESSIONAL ACTIVITIES

Association for the Scientific Study of Consciousness Student Committee Chair, 2023-2024
Princeton Neuroscience Institute Social Committee, 2023
Association for Women in Science member, 2022
Association for the Scientific Study of Consciousness Student Committee Member, 2022
National Center for Faculty Development & Diversity Member, 2022
National Postdoctoral Association Member, 2022
Interviewer for Dartmouth College graduate recruitment, 2021
Dartmouth College representative at Society for Neuroscience, 2021
Leader of Graduate Student Roundtable weekly meetings (one academic year), 2018
Methods in Neuroscience at Dartmouth Workshop Attendee, 2017
Leader of Attention Consortium (EPSCoR) Graduate Student Journal Club, 2017

EDUCATIONAL OUTREACH

The Science of Meditation and Yoga guided meditation for undergraduate students, 12/12/24
HomeWork residential student visit to Princeton Neuroscience Institute, 2/5/24
Re-Match+ undergraduate mentorship program at Princeton University, 2023 - 2024
Scientific Reviewer for Mass STEM Hub, 2023 (reviewing high school research proposals)
Mill Hill student laboratory tour and science activity, 2023
Association for the Scientific Study of Consciousness Panelist, Career Panel, 2023
Letters to a Pre-Scientist STEM professional letter writer, 2020
Guest Speaker at Brain Speaker Series, Richmond Middle School 2017, 2019-2020
Presenter at Dartmouth College Brain Bee, 2018

EMPLOYMENT HISTORY

Contextual Dynamics Laboratory, Dartmouth College   *2016-2017*
Laboratory Manager

Perception and Cognition Laboratory, Dartmouth College   *2015-2016*
Laboratory Manager

Brain and Creativity Institute, University of Southern California   *2013-2014*
Research Assistant

Cognitive Neurophysiology Lab, University of California, Los Angeles   *2011-2012*
Research Assistant

CLINICAL EXPERIENCE

Children's Hospital Los Angeles, Medical Preceptorship Program   *2013*
UCLA Orthopedic Hospital, Child Life Volunteer   *2011*