Mariam Aly

University of California, Berkeley Berkeley, CA 94720 mariamaly@berkeley.edu www.alylab.org

FIELDS OF SPECIALIZATION

Disciplines: Psychology | Cognitive Neuroscience **Topics**: Long-term Memory | Perception | Attention

Methods: Behavior | Functional Neuroimaging | Neuropsychology

ACADEMIC APPOINTMENTS

University of California, Berkeley Acting Associate Professor, Department of Psychology Affiliated Faculty, Cognitive Science		2024 – 2024 –
Columbia University Adjunct Research Scientist, Department of Psychology Assistant Professor, Department of Psychology Affiliated Faculty, Cognitive Science (Barnard College) Affiliate Member, Zuckerman Mind Brain Behavior Institute Training Faculty, Doctoral Program in Neurobiology and Behavior		2024 - 2017 - 2024 2022 - 2024 2019 - 2024 2019 - 2024
EDUCATION & TRAINING		
Postdoctoral Research Associate (Neuroscience)	Princeton University Advisor: Dr. Nicholas Turk-Browne	2013 – 2017
Ph.D. (Psychology)	University of California, Davis Primary advisor: Dr. Andrew Yonelinas Secondary mentor: Dr. Charan Ranganath	2010 – 2013
	Dissertation: Functional Characteristics and Neural Underpinnings of State- and Strength-Based Visual Perception	
	Published as: Aly & Yonelinas, 2012, PLoS ONE Aly, Ranganath, & Yonelinas, 2013, Neuron Aly, Ranganath, & Yonelinas, 2014, Journal of Cognitive Neuroscier	осе
M.A. (Psychology)	University of California, Davis Primary advisor: Dr. Andrew Yonelinas Secondary mentor: Dr. Charan Ranganath	2008 – 2010
H.B.Sc. (Psychology)	University of Toronto Advisors: Dr. Morris Moscovitch and Dr. Ian Spence	2004 – 2008

HONORS, AWARDS, & FELLOWSHIPS

Fellow of the UC Irvine Center for the Neurobiology of Learning and Memory Presidential Award for Outstanding Teaching, Columbia University Rising Star, Association for Psychological Science Psychonomic Society Fellow (FPsyS) Provost's Dissertation Year Fellowship, University of California, Davis Floyd and Mary Schwall Dissertation Year Fellowship, University of California, Davis Don Owings Memorial Prize, University of California, Davis	2023 2022 2019 since 2018 2012 – 2013 2012 – 2013 2012
for 1st place talk at the Department of Psychology Spring Conference	2000
University College Medal for Best Degree in Science, <i>University of Toronto</i>	2008
Rose Sheinin Award, University of Toronto	2008
for most outstanding female student graduating in a science program	2000
McNab Scholarship in Psychology, University of Toronto	2008
Reuben Wells Leonard Open Scholarship, <i>University of Toronto</i>	2007
John Davidson Ketchum Memorial Scholarship in Psychology, <i>University of Toronto</i>	2007
Natural Sciences and Engineering Research Council of Canada	2006
Undergraduate Student Research Award; \$4,500 CAD	
Dr. James A. & Connie P. Dickson Scholarship in the Sciences and Mathematics, University of Toronto	2006
Department of Psychology Student Award, University of Toronto	2006
Vincent Bladen In-Course Scholarship, University of Toronto	2005
Queen Elizabeth Scholarship	2004 - 2008
University of Toronto Scholar	2004 - 2008
Dean's List Scholar, University of Toronto	2004 - 2008
Entrance Scholarship, University of Toronto	2004
First Year Honor's List, <i>University of Toronto</i>	2004
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FUNDING

Principal Investigator or Co-Investigator

National Institutes	of Health Research	Project Gra	ant (R01FY03443	36)
National institutes	oi i lealui nesealci	i ribiett dia	1111 (NO 1 L 1 U 3 4 4 3	וטנ

2023 - 2028

National Eye Institute

Title: Hierarchies of spatiotemporal anticipation in the human brain

Role: PI

MPI: Dr. Christopher Baldassano

Award Amount Including Supplement: \$2,106,300 (total direct + indirect costs; direct costs = \$1,295,563)

Award Amount Excluding Supplement: \$2,034,841.00 (total direct + indirect costs; direct costs = \$1,250,000)

Supplement Amount: \$71,459 (direct + indirect costs; direct costs = \$45,563)

National Science Foundation CAREER Award (BCS-1844241, BCS-2435322)

2019 - 2026

Division of Behavioral and Cognitive Sciences

Title: How Memory Contributes to Goal-Directed Attention

Role: PI

Amount: \$889,840 (total direct + indirect costs; direct costs = \$583,509)

National Science Foundation Innovations in Graduate Education Grant (DGE-2224777; DGE-2436430)

2022 - 2026

Division of Graduate Education Title: Reviewer Zero: Changing the culture of peer review to increase diversity, equity, & inclusion Role: PI Other Pls: Dr. Amanda Diekman; Dr. Pablo Gomez Total Award Amount: \$498,860 (total direct + indirect costs; direct costs = \$318,038) PI Aly's Award Amount: \$107,709 (total direct + indirect costs; direct costs = \$65,477) Canadian Institutes of Health Research Project Grant 2020 - 2025Institute of Neurosciences, Mental Health, and Addiction Title: Investigating the Dynamics of Thought using Brain Connectivity and Experience Sampling Role: Co-Investigator Principal Investigator: Dr. Kalina Christoff; Other Co-Investigators: Dr. Jessica Andrews-Hanna; Dr. Caitlin Mills Amount: \$795,600 CAD (direct costs) NARSAD Young Investigator Grant (Brain & Behavior Research Foundation, Grant #27893) 2020 - 2022Title: Balancing Internally- and Externally-Focused Thought in the Brain Role: PI Amount: \$69,454 (direct costs) Zuckerman Institute Seed Grant for MR Studies (CU-ZI-MR-S-0016) 2019 - 2021Title: Multiple Timescales of Prediction in the Brain During Naturalistic Perception Role: PI Co-PI: Dr. Christopher Baldassano 60 scanning hours = \$36,000 in scanning costs Provost's Grant for Junior Faculty who Contribute to the Diversity Goals of the University 2018 - 2019Title: Complementary Forms of Goal-Directed Behavior Role: PI Amount: \$25,000 (direct costs) Zuckerman Institute Seed Grant for MR Studies (CU-ZI-MR-S-0001) 2018 - 2019Title: Modulation of Representational Connectivity by Memory-Guided Attention Role: PI 64 scanning hours = \$38,400 in scanning costs Lenfest Junior Faculty Development Grant 2018 - 2019Title: Guidance of Attention and Visual Exploration by the Hippocampus Role: PI Amount: \$11,000 (direct costs) Natural Sciences and Engineering Research Council of Canada PGS-D (NSERC-433638) 2009 - 2012

Title: The Role of the Perirhinal Cortex in Associative Memory

Doctoral Postgraduate Scholarship (Foreign)

Amount: \$63,000 CAD (direct costs)

Role: PI

Natural Sciences and Engineering Research Council of Canada PGS-M (NSERC-405293)

2008 - 2009

Master's Postgraduate Scholarship (Foreign)

Title: Episodic and Procedural Memory Consolidation in Older and Younger Adults

Role: PI

Amount: \$17, 500 CAD (direct costs)

Other Grants (Non-PI / Non-Co-I Role)

APA Commission on Ethnic Minority Recruitment, Retention, and Training Grant

2020 - 2022

Title: Reviewer Zero: Evaluating and Improving the Peer Review Experience for Ethnic Minority Psychologists
Role: Member of the Reviewer Zero Organizing Committee; Key role in running Reviewer Zero; Wrote letter of support
Pls: Dr. Molly Crockett and Dr. Anna Fisher

Amount: \$10,000 (direct costs)

PUBLICATIONS

Conventions in the field for authorship of publications: Senior author (lead Principal Investigator) is listed last. First and last authors have the largest roles. * indicates individuals with equal contributions.

Preprints (under review/revision)

Poskanzer C*, Tarder-Stoll H*, Javid R, Spolaore E, **Aly M**. (under review). Successful prediction is associated with enhanced encoding. *PsyArXiv*. https://osf.io/preprints/psyarxiv/scrxq_v1 *These authors contributed equally

Jayakumar M, Tsegai Moore A, Nemeth C, **Aly M**. (under revision). Pupil size at encoding predicts the temporal structure of memory. *PsyArXiv*. https://doi.org/10.31234/osf.io/bzqfu

Favila SE, **Aly M**. (under revision). Hippocampal mechanisms resolve competition in memory and perception. *bioRxiv*. https://doi.org/10.1101/2023.10.09.561548

Peer-Reviewed Publications

38. Wakeland-Hart C, **Aly M**. (2025). Predicting image memorability from evoked feelings. *Behavior Research Methods*, 57:58, 1-13. https://doi.org/10.3758/s13428-024-02510-4

37. Kathios N, Bloom PA, Singh A, Bartlett E, Algharazi S, Siegelman M, Shen F, Beresford L, DiMaggio-Potter ME, Bennett S, Natarajan N, Ou Y, Loui P, **Aly M***, Tottenham N*. (2025). On the role of familiarity and developmental exposure in music-evoked autobiographical memories. *Memory*, 33, 178-192. https://doi.org/10.1080/09658211.2024.2420973

*These authors are co-PIs of this work

36. Tarder-Stoll H, Baldassano C*, **Aly M***. (2024). The brain hierarchically represents the past and future during multistep anticipation. *Nature Communications*, 15, 9094. https://doi.org/10.1038/s41467-024-53293-3 *These authors are co-Pls of this work

Featured by Nature Neuroscience: https://www.nature.com/articles/s41593-024-01840-y

35. Tarder-Stoll H, Baldassano C*, **Aly M***. (2024). Consolidation enhances sequential multistep anticipation but diminishes access to perceptual features. *Psychological Science*, 35, 1178-1199.

https://doi.org/10.1177/09567976241256617

*These authors are co-PIs of this work

34. Cohanpour M, **Aly M***, Gottlieb J*. (2024). Neural representations of sensory uncertainty and confidence are associated with perceptual curiosity. *Journal of Neuroscience*, 44(33):e0974232024. https://doi.org/10.1523/JNEUROSCI.0974-23.2024

*These authors are co-PIs of this work

33. Thieu M, Wilkins L, **Aly M**. (2024). Episodic-semantic linkage for \$1000: New semantic knowledge is more strongly coupled with episodic memory in trivia experts. *Psychonomic Bulletin & Review*, 31, 1867–1879. https://doi.org/10.3758/s13423-024-02469-5

Featured by *Scientific American*: https://www.scientificamerican.com/article/jeopardy-winner-reveals-entwined-memory-systems-make-a-trivia-champion/

Featured by Science Friday (WNYC Studios and NPR):

https://www.sciencefriday.com/segments/jeopardy-winner-memory-recall/

Featured by NPR's Weekend Edition:

 $\frac{https://www.npr.org/2024/02/18/1232301993/a-new-study-finds-the-memory-systems-that-give-trivia-champions-an-edge}{} \\$

- 32. Yonelinas A, Hawkins C, Abovian A, **Aly M**. (2024). The role of recollection, familiarity, and the hippocampus in episodic and working memory. *Neuropsychologia*, 193, 108777. https://doi.org/10.1016/j.neuropsychologia.2023.108777
- 31. **Aly M**, Colunga E, Crockett MJ, Goldrick M, Gomez P, Kung FYH, McKee PC, Pérez M, Stilwell SM, Diekman AB. (2023). Changing the culture of peer review for a more inclusive and equitable psychological science. *Journal of Experimental Psychology: General*, 152, 3546–3565. https://doi.org/10.1037/xge0001461
- 30. Poskanzer C, **Aly M**. (2023). Switching between external and internal attention in hippocampal networks. *Journal of Neuroscience*, 43, 6538–6552. https://doi.org/10.1523/JNEUROSCI.0029-23.2023
- 29. Silston B, Ochsner KN, **Aly M**. (2023). Threat impairs flexible use of a cognitive map. *Motivation and Emotion*, 47, 908-927. https://doi.org/10.1007/s11031-023-10036-z
- 28. Bornstein AM, **Aly M**, Feng SF, Turk-Browne NB, Norman KA, Cohen JD. (2023). Associative memory retrieval resolves anticipated uncertainty of upcoming perceptual decisions. *Cognitive, Affective, and Behavioral Neuroscience*, 23, 645–665. https://doi.org/10.3758/s13415-023-01092-6

Featured by the Psychonomic Society:

https://featuredcontent.psychonomic.org/when-looks-are-deceiving-our-memory-can-help/

- 27. Jayakumar M, Balusu C, **Aly M**. (2023). Attentional fluctuations and the temporal organization of memory. *Cognition*, 235, 105408, 1-32. https://doi.org/10.1016/j.cognition.2023.105408
- 26. Bloom PA, Bartlett E, Kathios N, Algharazi S, Siegelman M, Shen F, Beresford L, DiMaggio-Potter M, Singh A, Bennett S, Natarajan N, Lee H, Sajid S, Joyce E, Fischman R, Hutchinson SJ, Pan S, Tottenham N*, **Aly M***. (2023). Effects of familiar music exposure on deliberate retrieval of remote episodic and semantic memories in healthy aging adults. *Memory*, 31, 428-456. https://doi.org/10.1080/09658211.2023.2166078

*These authors are co-PIs of this work

- 25. Hirschstein Z, **Aly M**. (2023). Long-term memory and working memory compete and cooperate to guide attention. *Attention, Perception, & Psychophysics*, 85, 1517-1549. https://doi.org/10.3758/s13414-022-02593-1
- 24. Bloom PA, VanTieghem M, Gabard-Durnam L, Gee DG, Flannery J, Caldera C, Goff B, Telzer EH, Humphreys KL, Fareri DS, Shapiro M, Algharazi S, Bolger N, **Aly M**, Tottenham N. (2022). Age-related change in task-evoked amygdala-prefrontal circuitry: A multiverse approach with an accelerated longitudinal cohort aged 4-22 years. *Human Brain Mapping*, 43, 3221-3244. https://doi.org/10.1002/hbm.25847
- 23. Lee CS, **Aly M**, Baldassano C. (2021). Anticipation of temporally structured events in the brain. *eLife*. 10:e64972. https://doi.org/10.7554/eLife.64972 (reviewed and accepted prior to publication model change in 2023)

Featured in a Journal Club article in *PNAS*: https://www.pnas.org/post/journal-club/several-brain-regions-help-us-anticipate-whats-going-to-happen-next

- 22. Ruiz NA*, Thieu MK*, **Aly M**. (2021). Cholinergic modulation of hippocampally mediated attention and perception. *Behavioral Neuroscience*, 135, 51-70. https://doi.org/10.1037/bne0000405 *These authors contributed equally
- 21. Ruiz NA, Meager MR, Agarwal S, **Aly M**. (2020). The medial temporal lobe is critical for spatial relational perception. *Journal of Cognitive Neuroscience*, 32, 1780-1795. https://doi.org/10.1162/jocn_a_01583
- 20. Schaumberg AJ, Juarez-Nicanor W, Choudhury SJ, Pastrián LG, Pritt BS, Prieto Pozuelo M, Sotillo Sánchez R, Ho K, Zahra N, Sener BD, Yip S, Xu B, Rao Annavarapu S, Morini A, Jones KA, Rosado-Orozco K, Mukhopadhyay S, Miguel C, Yang H, Rosen Y, Ali RH, Folaranmi OO, Gardner JM, Rusu C, Stayerman C, Gross J, Suleiman DE, Sirintrapun SJ, **Aly M***, Fuchs TJ*. (2020). Interpretable multimodal deep learning for real-time pan-tissue pan-disease pathology search on social media. *Modern Pathology*, 33, 2169-2185. https://doi.org/10.1038/s41379-020-0540-1
 *These authors are co-Pls of this work
- 19. Günseli E, **Aly M**. (2020). Preparation for upcoming attentional states in the hippocampus and medial prefrontal cortex. *eLife*. 9:e53191. http://doi.org/10.7554/eLife.53191 (reviewed and accepted prior to publication model change in 2023)
- 18. Tarder-Stoll H*, Jayakumar M*, Dimsdale-Zucker HR, Günseli E, **Aly M**. (2020). Dynamic internal states shape memory retrieval. *Neuropsychologia*, 138, 107328. http://doi.org/10.1016/j.neuropsychologia.2019.107328 *These authors contributed equally
- 17. Córdova NI, Turk-Browne NB, **Aly M**. (2019). Focusing on what matters: Modulation of the human hippocampus by relational attention. *Hippocampus*, 29, 1025-1037. https://doi.org/10.1002/hipo.23082
- 16. **Aly M**, Turk-Browne NB. (2018). Flexible weighting of diverse inputs makes hippocampal function malleable. *Neuroscience Letters*, 680, 13-22. http://doi.org/10.1016/j.neulet.2017.05.063
- 15. **Aly M**, Chen J, Turk-Browne NB, Hasson U. (2018). Learning naturalistic temporal structure in the posterior medial network. *Journal of Cognitive Neuroscience*, 30, 1345–1365. https://doi.org/10.1162/jocn_a_01308

- 14. Borders AA, **Aly M**, Parks CM, Yonelinas AP. (2017). The hippocampus is particularly important for building associations across stimulus domains. *Neuropsychologia*, 99, 335-342. https://doi.org/10.1016/j.neuropsychologia.2017.03.032
- 13. **Aly M**, Turk-Browne NB. (2017). How hippocampal memory shapes, and is shaped by, attention. In *The Hippocampus from Cells to Systems*. (Eds. Deborah E. Hannula and Melissa C. Duff). Springer International Publishing AG: Switzerland. pp. 369-403. https://doi.org/10.1007/978-3-319-50406-3 12
- 12. **Aly M**, Turk-Browne NB. (2016). Attention promotes episodic encoding by stabilizing hippocampal representations. *Proceedings of the National Academy of Sciences*, 113, E420-E429. https://doi.org/10.1073/pnas.1518931113
- 11. **Aly M**, Turk-Browne NB. (2016). Attention stabilizes representations in the human hippocampus. *Cerebral Cortex*, 26, 783-796. http://doi.org/10.1093/cercor/bhv041
- 10. **Aly M**, Wansard M, Segovia F, Yonelinas AP, Bastin C. (2014). Cortical and subcortical contributions to state-and strength-based perceptual judgments. *Neuropsychologia*, 64, 145-156. https://doi.org/10.1016/j.neuropsychologia.2014.09.025
- 9. Elfman KW, **Aly M**, Yonelinas AP. (2014). Neurocomputational account of memory and perception: Thresholded and graded signals in the hippocampus. *Hippocampus*, 24, 1672-1686. https://doi.org/10.1002/hipo.22345
- 8. **Aly M**, Ranganath C, Yonelinas AP. (2014). Neural correlates of state- and strength-based perception. *Journal of Cognitive Neuroscience*, 26, 792-809. https://doi.org/10.1162/jocn-a-00532
- 7. Koen JD, **Aly M**, Wang WC, Yonelinas AP. (2013). Examining the causes of memory strength variability: Recollection, attention failure, or encoding variability? *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 39, 1726-41. http://doi.org/10.1037/a0033671
- 6. **Aly M**, Ranganath C, Yonelinas AP. (2013). Detecting changes in scenes: The hippocampus is critical for strength-based perception. *Neuron*, 78, 1127-37. [Selected for journal cover] https://doi.org/10.1016/j.neuron.2013.04.018
- 5. **Aly M**, Yonelinas AP. (2012). Bridging consciousness and cognition in memory and perception: Evidence for both state and strength processes. *PLoS ONE*, 7(1):e30231, 1-16. https://doi.org/10.1371/journal.pone.0030231
- 4. **Aly M**, Yonelinas AP, Kishiyama M, Knight RT. (2011). Damage to the lateral prefrontal cortex impairs familiarity but not recollection. *Behavioral Brain Research*, 225, 297-304. https://doi.org/10.1016/j.bbr.2011.07.043
- 3. Yonelinas AP, **Aly M**, Wang W, Koen JD. (2010). Recollection and familiarity: Examining controversial assumptions and new directions. *Hippocampus*, 20, 1178-94. http://doi.org/10.1002/hipo.20864
- 2. **Aly M**, Knight RT, Yonelinas AP. (2010). Faces are special but not too special: Spared face recognition in amnesia is based on familiarity. *Neuropsychologia*, 48, 3941-8. https://doi.org/10.1016/j.neuropsychologia.2010.09.005
- 1. **Aly M**, Moscovitch M. (2010). The effects of sleep on episodic memory in older and younger adults. *Memory*, 18, 327-34. https://doi.org/10.1080/09658211003601548

Editorials, Commentaries, & Perspectives

- 7. Aly M. (in press). Dying to live. In Growing Up in Science. (Ed. Weiji Ma). Princeton University Press.
- 6. **Aly M**, Ansari S, Colunga E, Crockett MJ, Diekman AB, Goldrick M, Gomez P, Kung FYH, McKee PC, Pérez M, Stilwell SM. (2024). Mentorship practices that improve the culture of peer review. *Nature Reviews Psychology*, 3, 2-3. https://doi.org/10.1038/s44159-023-00261-1
- 5. **Aly M**. (2020). Brain dynamics underlying memory for lifetime experiences. *Trends in Cognitive Sciences*, 24, 780-781. https://doi.org/10.1016/j.tics.2020.06.010
- 4. **Aly M**. (2019). Studying and experiencing mental illness. *Journal of Science Stories*. https://storiesinscience.org/2019/06/12/studying-and-experiencing-mental-illness/

Featured in Nature's daily briefing: https://www.nature.com/articles/d41586-019-01898-w

3. Aly M. (2018). The key to a happy lab life is in the manual. *Nature*, 561, 7.

https://doi.org/10.1038/d41586-018-06167-w

My lab manual is publicly available and has been used all over the world to inspire other lab manuals. https://github.com/alylab/labmanual

- 2. **Aly M**, Ranganath C. (2018). New perspectives on the hippocampus and memory. *Neuroscience Letters*, 680, 1-3. https://doi.org/10.1016/j.neulet.2018.05.047
- 1. Aly M. (2018). In sight, in mind. eLife, 7:e35663, 1-3. http://doi.org/10.7554/eLife.35663

CONFERENCE PRESENTATIONS

Lee C, Villamin DLC, Bertilsson PM, **Aly M**, Baldassano C. (Aug 2025). Human predictions of event sequences for novel videos. Poster at the 8th Annual Conference on Cognitive Computational Neuroscience. Amsterdam, The Netherlands.

Favila SE, **Aly M**. (Nov 2024). Resolving competition in long-term memory-guided visual attention. Talk by S. Favila at the Psychonomic Society Meeting. New York, NY.

Al-Zahli N, **Aly M***, Baldassano C*. (Oct 2024). Investigating timescale changes in the brain during repeated film viewing. Nanosymposium talk at the Society for Neuroscience Meeting. Chicago, IL.

Hirschstein Z, **Aly M***, Baldassano C*. (Oct 2024). Decoupling feature and timescale hierarchies in visual cortex. Poster at the Society for Neuroscience Meeting. Chicago, IL.

Poskanzer C, Javid R, Tarder-Stoll H, **Aly M**. (Oct 2024). Cooperation vs. competition between encoding and retrieval in behavior and in the hippocampus. Poster at the Society for Neuroscience Meeting. Chicago, IL.

Poskanzer C, Tarder-Stoll H, Javid R, **Aly M**. (April 2024). Do encoding and prediction compete or cooperate? Poster at the Cognitive Neuroscience Society Meeting. Toronto, ON.

Tarder-Stoll, Baldassano C*, **Aly M***. (April 2024). Flexible updating of hippocampal representations guides multi-step prediction. Poster at the Cognitive Neuroscience Society Meeting. Toronto, ON.

Wakeland-Hart C, **Aly M**. (April 2024). Predicting image memorability from evoked feelings. Poster at the Cognitive Neuroscience Society Meeting. Toronto, ON.

Yonelinas A, Hawkins C, Abovian A, **Aly M**. (April 2024). How Does the Hippocampus Support Subjective Reports of Confidence in Episodic and Working Memory? Talk by A. Yonelinas at the Cognitive Neuroscience Society Meeting. Symposium: Subjectivity: Who cares? Toronto, ON.

Tarder-Stoll, Baldassano C*, **Aly M***. (Nov 2023). Prospective and retrospective representations of temporal structure across hippocampal and visual regions. Poster at the Society for Neuroscience Meeting. Washington, DC.

Javid R, Poskanzer C, Tarder-Stoll H, **Aly M**. (Nov 2023). Predicting the future comes at a cost to encoding the present. Poster at the Annual Biomedical Research Conference for Minoritized Scientists. Phoenix, AZ.

Jayakumar M, Tsegai-Moore AS, Nemeth C, Khine M, **Aly M**. (Nov 2023). Pupil size at encoding predicts the temporal organization of memory. Poster at the Psychonomic Society Annual Meeting. San Francisco, CA.

Favila SE, **Aly M**. (Sept 2023). Resolving competition in memory-guided attention. Talk by M. Aly at the Memory Disorders Research Society Meeting. Los Angeles, CA.

Tarder-Stoll H, Baldassano C*, **Aly M***. (May 2023). Multistep anticipation improves with consolidation but loses perceptual detail. Data blitz at the Context and Episodic Memory Symposium. Walt Disney World, Florida. *co-Pls

Favila SE, **Aly M**. (May 2023). Hippocampal and visual cortex contributions to resolving competition during memory-guided attention. Poster at the Vision Sciences Society Meeting. St. Pete Beach, FL.

Favila SE, **Aly M**. (March 2023). Hippocampal differentiation and visual cortex anticipation resolve competition during memory-quided attention. Poster at the Cognitive Neuroscience Society Meeting. San Francisco, CA.

Poskanzer C, **Aly M**. (March 2023). Switching between external and internal attention in hippocampal networks. Poster at the Cognitive Neuroscience Society Meeting. San Francisco, CA.

Thieu MK, Wilkins L, **Aly M**. (March 2023). Episodic-Semantic Linkage for \$1000: Episodic memory bolsters acquisition of new semantic knowledge in trivia experts. Poster at the Cognitive Neuroscience Society Meeting. San Francisco, CA.

Favila SE, **Aly M**. (Sept 2022). Resolving competition during memory-guided visual attention. Talk at the Manhattan Area Memory Meeting. New York, NY.

Hirschstein Z, **Aly M**. (Sept 2022). Cooperation and competition in memory-guided attention. Talk at the Manhattan Area Memory Meeting. New York, NY.

Tarder-Stoll H, Baldassano C*, **Aly M***. (Sept 2022). Top-down modulation of multi-step anticipation in changing environments. Talk at the Manhattan Area Memory Meeting. New York, NY. *co-Pls

Cohanpour M, **Aly M***, Gottlieb J*. (April 2022). Towards a mechanistic account of perceptual curiosity. Poster at the Cognitive Neuroscience Society Meeting. San Francisco, CA.

*co-Pls

Favila SE, **Aly M**. (April 2022). Resolving competition during memory-guided visual attention. Poster at the Cognitive Neuroscience Society Meeting. San Francisco, CA.

Hirschstein Z, **Aly M**. (April 2022). Cooperation and competition in memory-guided attention. Poster at the Cognitive Neuroscience Society Meeting. San Francisco, CA.

Tarder-Stoll H, Baldassano C*, **Aly M***. (April 2022). Top-down modulation of multi-step anticipation in changing environments. Poster at the Cognitive Neuroscience Society Meeting. San Francisco, CA. *co-Pls

Cohanpour M, **Aly M***, Gottlieb J*. (Nov 2021). Towards a mechanistic account of perceptual curiosity. Poster at the Society for Neuroscience (Virtual) Meeting. *co-Pls

Singh A, Bloom PA, Bartlett E, Kathios N, Algharazi S, Tottenham N*, **Aly M***. (Nov 2021). Temporal structure of episodic and semantic details within autobiographical memory recall. Data Blitz presented at the Harvard Women in Psychology Trends in Psychology Summit.

*co-PIs

Kathios N, Bloom PA, Bartlett E, Algharazi S, **Aly M** * , Tottenham N * . (Nov 2021). Self-reported emotion valence evoked by popular music in healthy aging. Poster presented at the International Conference of Students of Systematic Musicology.

*co-PIs

Singh A, Bloom PA, Bartlett E, Kathios N, Algharazi S, Tottenham N*, **Aly M***. (Oct 2021). Temporal structure of episodic and semantic details within autobiographical memory recall. Poster presented at the 11th Annual oSTEM (Virtual) Conference.

*co-PIs

Silston B, Ochsner K, **Aly M**. (Oct 2021). Threat impairs flexible use of a cognitive map. Talk by M. Aly at the Memory Disorders Research Society (Virtual) Meeting.

Jayakumar M, Balusu C, **Aly M**. (Aug 2021). Spontaneous attentional fluctuations and the temporal organization of recall. Poster at the Context and Episodic Memory Symposium. Philadelphia, PA.

Bloom PA, VanTieghem M, Gabard-Durnam L, Gee D, Flannery J, Caldera C, Telzer E, Humphreys KL, Fareri D, Shapiro M, Bolger N, **Aly M**, Tottenham N. (April 2021). Age-related change in stimulus-elicited amygdala-prefrontal circuitry: A longitudinal multiverse approach. Flash talk at the Society for Research in Child Development Biennial Meeting, Virtual.

Bloom PA, Bartlett E, Kathios N, Algharazi S, Siegelman M, Shen F, Beresford L, DiMaggio-Potter M, Tottenham N*, **Aly M***. (March 2021). Effects of familiar music exposure on retrieval of remote episodic and semantic memories in healthy aging adults. Poster at the Cognitive Neuroscience Society Virtual Meeting. *co-Pls

Cohanpour M, **Aly M***, Gottlieb J*. (March 2021). Towards a mechanistic account of perceptual curiosity. Poster at the Cognitive Neuroscience Society Virtual Meeting. *co-Pls

Dimsdale-Zucker HR, **Aly M***, Baldassano C*. (March 2021). Using contexts defined by temporal structure to guide memory. Poster at the Cognitive Neuroscience Society Virtual Meeting. *co-Pls

Favila SE, **Aly M**. (March 2021). Resolving competition during memory-guided visual exploration. Poster at the Cognitive Neuroscience Society Virtual Meeting.

Jayakumar M, Balusu C, **Aly M**. (March 2021). Spontaneous attentional fluctuations and the temporal organization of recall. Poster at the Cognitive Neuroscience Society Virtual Meeting.

Schaumberg AJ, Stayerman C, Yip S, Mukhopadhyay S, Pastrián LG, Prieto Pozuelo M, Sener BD, Rao Annavarapu S, Morini A, Jones KA, Rosado-Orozco K, Miguel Ruiz C, Yang H, Rosen Y, Folaranmi OO, Gardner JM, Gross J, Suleiman DE, Takashi, F, Riddle N, Ong M, Cecchini M, Gibier JB, Pijuan L, Lu MY, Fuchs TJ, **Aly M***, Mahmood F*. (Oct 2020). Deep learning of attention-guided multimodal histopathology search on social media. Poster at Pathology Visions. [awarded Best Poster by a Trainee]

Extended abstract published in J Pathol Inform. 2021; 12: 37. PMCID: PMC8546358 *co-Pls

Bloom PA, VanTieghem M, Gabard-Durnam L, Gee D, Flannery J, Caldera C, Goff B, Telzer E, Humphreys K, Shapiro M, Bolger N, **Aly M**, Tottenham N. (Aug 2020). Age-related change in stimulus-elicited amygdala-prefrontal circuitry: a longitudinal multiverse approach. Poster at the Flux 2020 Virtual Congress.

Tarder-Stoll H, Baldassano C, **Aly M**. (May 2020). Multi-step prediction and integration in naturalistic environments. Poster presented at the Cognitive Neuroscience Society meeting. Physical meeting canceled because of the COVID-19 pandemic. Poster presented virtually.

Günseli E, **Aly M**. (Oct 2019). Memory-guided attentional states are established by the hippocampus and medial prefrontal cortex. Poster at the Society for Neuroscience Meeting. Chicago, IL.

Lee C, **Aly M**, Baldassano C. (Oct 2019). Anticipation of temporally structured events in the brain. Poster at the Society for Neuroscience Meeting. Chicago, IL.

Ruiz N, **Aly M**. (Oct 2019). Cholinergic modulation enhances hippocampally-dependent spatial relational attention. Poster at the Society for Neuroscience Meeting. Chicago, IL.

Schaumberg AJ, Juarez W, Choudhury SJ, Pastrián LG, Pritt BS, Prieto Pozuelo M, Sotillo Sánchez R, Ho K, Zahra N, Sener BD, Yip S, Xu B, Rao Annavarapu S, Morini A, Jones KA, Rosado-Orozco K, Mukhopadhyay S, Miguel C, Yang H, Rosen Y, Ali RH, Folaranmi O, Gardner JM, Rusu C, Stayerman C, Gross J, Suleiman D, Sirintrapun SJ, **Aly M***, Fuchs TJ*. (Oct 2019). Machine learning for real-time search and prediction of disease state to aid pathologist collaboration on social media. Poster at Pathology Visions. Orlando, FL. [awarded Best Image Analysis poster] Extended abstract published in J Pathol Inform. 2020; 11: 1. PMCID: PMC7003557

Günseli E, **Aly M**. (May 2019). Memory-guided attentional states are established by the hippocampus and medial prefrontal cortex. Talk by E. Günseli at the Manhattan Area Memory Meeting. Princeton, NJ.

Silston B, Ochsner K, **Aly M**. (May 2019). Threat impairs flexible use of a cognitive map. Talk by B. Silston at the Manhattan Area Memory Meeting. Princeton, NJ.

Aly M. (May 2019). Beyond memory and perception: Operations and representations in the brain. Discussion talk at the Context and Episodic Memory Symposium. Philadelphia, PA.

Günseli E, **Aly M**. (May 2019). Establishing memory-driven attentional goals via hippocampus and medial prefrontal cortex. Poster at the Context and Episodic Memory Symposium. Philadelphia, PA.

Lee C, **Aly M**, Baldassano C. (May 2019). Anticipation of temporally structured events in the brain. Poster at the Context and Episodic Memory Symposium. Philadelphia, PA.

Ruiz N, **Aly M**. (May 2019). Cholinergic modulation enhances hippocampally-dependent spatial relational attention. Poster at the Context and Episodic Memory Symposium. Philadelphia, PA.

Silston B, Ochsner K, **Aly M**. (May 2019). Threat impairs flexible use of a cognitive map. Poster at the Context and Episodic Memory Symposium. Philadelphia, PA.

Günseli E, **Aly M**. (March 2019). Switching between attention and memory in the hippocampus and medial prefrontal cortex. Poster at the Cognitive Neuroscience Society meeting. San Francisco, CA.

Ruiz N, **Aly M**. (March 2019). Cholinergic modulation enhances hippocampally-dependent spatial relational attention. Poster at the Cognitive Neuroscience Society meeting. San Francisco, CA.

Silston B, Ochsner K, **Aly M**. (March 2019). Threat impairs flexible use of a cognitive map. Poster at the Cognitive Neuroscience Society meeting. San Francisco, CA.

Schaumberg AJ, Juarez W, Choudhury SJ, Pastrian LG, Pritt BS, Pozuelo MP, Sanchez RS, Ho K, Zahra N, Sener BD, Yip S, Xu B, Annavarapu SR, Morini A, Jones KA, Rosado-Orozco K, Sirintrapun SJ, **Aly M***, Fuchs TJ*. (Sept 2018). Large-scale annotation of histopathology images from social media. Poster at the Memorial Sloan-Kettering Cancer Center csBio Annual Retreat. Skytop, PA, USA. [awarded best poster]
*co-Pls

Schaumberg AJ, Juarez W, Choudhury SJ, Pastrian LG, Pritt BS, Pozuelo MP, Sanchez RS, Ho K, Zahra N, Sener BD, Yip S, Xu B, Annavarapu SR, Morini A, Jones KA, Rosado-Orozco K, Sirintrapun SJ, **Aly M***, Fuchs TJ*. (Aug 2018). Large-scale annotation of histopathology images from social media. Poster presented by high school students W. Juarez and S. Choudhury, with graduate student A. Schaumberg advising, at the Weill Cornell High School Science Immersion Program Poster Session. New York, NY, USA. [awarded best poster]
*co-Pls

Schaumberg AJ, Juarez W, Choudhury SJ, Pastrian LG, Pritt BS, Pozuelo MP, Sanchez RS, Ho K, Zahra N, Sener BD, Yip S, Xu B, Annavarapu SR, Morini A, Jones KA, Rosado-Orozco K, Sirintrapun SJ, **Aly M***, Fuchs TJ*. (Aug 2018). Large-scale annotation of histopathology images from social media. Poster at the 11th Annual Computational Biology and Medicine Symposium. Delaware, PA, USA. *co-Pls

Ruiz N, **Aly M**. (May 2018). The hippocampus is necessary for spatial relational attention. Talk by N. Ruiz at the Manhattan Area Memory Meeting. New York, NY.

Aly M. (Jan 2018). Attentional state as a context in hippocampal memory. Talk at the Winter Conference on the Neurobiology of Learning and Memory. Park City, Utah.

Aly M, Chen J, Turk-Browne NB, Hasson U. (Nov 2016). Narrative coherence and temporal structure in the posterior medial network. Poster at the Society for Neuroscience Meeting. San Diego, CA.

Antony J, Baldassano C, **Aly M**, Norman KA, Turk-Browne NB. (Nov 2016). Using an inverted encoding model to reconstruct spatial position and forward planning in a virtual reality environment. Poster at the Society for Neuroscience Meeting. San Diego, CA.

Bornstein AM, **Aly M**, Feng SF, Turk-Browne NB, Norman KA, Cohen JD. (Nov 2016). First you remember, then you see: Dynamic sampling from learned associations biases perceptual inference. Poster at the Society for Neuroscience Meeting. San Diego, CA.

Aly M, Chen J, Turk-Browne NB, Hasson U. (May 2016). Narrative coherence and temporal structure in the posterior medial network. Talk at the Manhattan Area Memory Meeting. New York, NY.

Aly M, Turk-Browne NB. (Oct 2015). Attention promotes episodic encoding by stabilizing hippocampal representations. Talk at the Society for Neuroscience Meeting, Chicago, IL.

Bornstein AM, **Aly M**, Feng SF, Turk-Browne NB, Norman KA, Cohen JD. (Oct 2015). Memory-guided perception: Sampling from past experience during perceptual inference. Poster at the Society for Neuroscience Meeting. Chicago, IL.

Aly M, Turk-Browne NB. (May 2015). Attention promotes episodic encoding by stabilizing hippocampal representations. Talk at the Manhattan Area Memory Meeting. Princeton, NJ.

Aly M, Turk-Browne NB. (May 2015). Hippocampal representations of attentional state predict the formation of visual memories. Talk at the Vision Sciences Society Meeting. St. Pete Beach, FL.

Aly M, Turk-Browne NB. (May 2015). Hippocampal representations of attentional state predict the formation of episodic memory. Poster at the Context and Episodic Memory Symposium. Philadelphia, PA.

Córdova NI, **Aly M**, Turk-Browne NB. (Nov 2014). Focusing on what matters: Modulation of the human hippocampus by relational attention. Poster at the Society for Neuroscience Meeting. Washington, DC.

Aly M, Turk-Browne NB. (June 2014). Attention stabilizes representations in the human hippocampus. Talk at the Manhattan Area Memory Meeting. New York, NY.

Aly M, Turk-Browne NB. (May 2014). Top-down attention modulates representational stability in the medial temporal lobe. Poster at the Vision Sciences Society Meeting. Abstract published in *J Vision*, *14*, 631. St. Pete Beach, FL.

Aly M, Turk-Browne NB. (May 2014). Attention stabilizes representations in the human hippocampus. Data blitz talk at the Context and Episodic Memory Symposium. Philadelphia, PA.

Aly M. (May 2014). Putting attention in context: Behavioral and neural modulation of mnemonic representations. Discussion talk at the Context and Episodic Memory Symposium. Philadelphia, PA.

Aly M, Turk-Browne NB. (Nov 2013). Attentional states in the medial temporal lobe. Poster at the Learning to Attend, Attending to Learn Conference. San Diego, CA.

Aly M, Yonelinas AP, Ranganath C. (April 2013). A critical role for the hippocampus in assessing the strength of perception. Poster at the Cognitive Neuroscience Society meeting. San Francisco, CA.

Borders A, **Aly M**, Yonelinas AP. (April 2013). Associative recognition in amnesia: Crossing stimulus domains matters, temporal separation does not. Poster at the Cognitive Neuroscience Society meeting. San Francisco, CA.

Yonelinas AP, **Aly M**. (Nov 2012). From memory to perception: The medial temporal lobe and visual discrimination. Talk by A.P. Yonelinas at the Psychonomic Society Meeting. Minneapolis, MN.

Aly M, Yonelinas AP, Ranganath C. (Oct 2012). Separating state and strength processes in the detection of visual change: Neural correlates of perceiving and knowing. Talk at the Society for Neuroscience Meeting. New Orleans, LA.

Aly M, Yonelinas AP, Ranganath C. (Aug 2012). A critical role for the medial temporal lobe in assessing the varying strength of perception. Poster at the Bay Area Memory Meeting. Davis, CA.

Aly M, Yonelinas AP, Ranganath C. (May 2012). Investigating conscious awareness based on state and strength processes. Talk at the Department of Psychology Conference, UC Davis. Davis, CA.

Koen JD, **Aly M**, Wang WC, Kroll NEA, Yonelinas AP. (Nov 2011). The necessity of theoretical validation in signal-detection models of recognition memory. Poster at the Psychonomic Society Meeting. Seattle, WA.

Aly M, Yonelinas AP. (Aug 2011). Watching perception (and memory) unfold: Step functions and gradual transitions. Talk at the Bay Area Memory Meeting. Berkeley, CA.

Aly M, Yonelinas AP. (Nov 2010). Recollection and familiarity in long-term memory, perception, and everything in between. Poster at the Psychonomic Society Meeting. St. Louis, MO.

Aly M, Yonelinas AP. (Aug 2010). Recollection and familiarity in long-term memory, perception, and everything in between. Talk at the Bay Area Memory Meeting. Stanford, CA.

Koen JD, Yonelinas AP, Parks CM, **Aly M**, Ranganath C. (Aug 2010). The neural correlates supporting recognition memory of temporally continuous and discontinuous associations: An fMRI study. Talk by J.D. Koen at the Bay Area Memory Meeting. Stanford, CA.

Yonelinas AP, **Aly M**. (July 2010). Memory, perception, and everything in between. Talk by A.P. Yonelinas at the Cognitive Sciences Association for Interdisciplinary Learning. Hood River, OR.

Koen JD, Yonelinas AP, Ranganath C, Parks CM, **Aly M**. (Nov 2010). Medial-temporal lobe contributions to encoding novel across-domain associations: An examination of temporal discontinuity. Talk by J.D. Koen at the Society for Neuroscience Meeting. San Diego, CA.

INVITED TALKS

Invited Seminars & Colloquia

University of Waterloo (Psychology Seminar)	March 2025
Goethe University Frankfurt (Psychology Seminar)	Jan 2025
University of Michigan (Cognition & Cognitive Neuroscience Forum)	Jan 2024
Carnegie Mellon University (Psychology & Neuroscience Colloquium)	Jan 2024
University of California, Berkeley (Cognition Colloquium)	Nov 2023
Purdue University (Cognitive & Mathematical and Computational Psychology Colloquium)	Nov 2023
University of Minnesota (Neuroscience Seminar Series)	Oct 2023
Rotman Research Institute (Rounds Series)	Oct 2023
Washington University in St. Louis (Psychological & Brain Sciences Distinguished Visiting Speaker Ser	ies) Sept 2023
Leibniz Research Centre for Working Environment and Human Factors (Neurocognition & Work Serie	s) June 2023
University of Pennsylvania (MindCORE Seminar Series)	Jan 2023
Brown University (Social-Cognitive Seminar Series)	Dec 2022
University of British Columbia (Psychology Colloquium)	Oct 2022
University of Arizona (Careers in Cognitive Neuroscience)	Sept 2022
Lehigh University (Cognitive Area Group Meeting)	Sept 2021
Vanderbilt University (Cognitive Science/Cognitive Neuroscience Seminar)	Sept 2021
Innovators in Cognitive Neuroscience	Aug 2021
(joint seminar: Dartmouth, Penn, Yale, MIT, Princeton, Harvard, Columbia, Gallaudet)	
University of Cambridge (MRC Cognition and Brain Sciences Unit, Chaucer Club)	May 2021
Cornell University (Annual Neisser Lecture, Students' Choice Speaker, Depts. Psych. & Human Dev.)	May 2021
University of Chicago (Cognitive Workshop)	May 2021
University of California, Riverside (Cognition and Cognitive Neuroscience Brown Bag)	April 2021
University of Texas at Dallas (Center for Vital Longevity Science Series)	April 2021
Queen's University (Cognitive Neuroscience Brown Bag)	April 2021
Vrije Universiteit Amsterdam (Cognitive Psychology Colloquium)	April 2021

University of California, Davis (Perception, Cognition, & Cognitive Neuroscience Brownbag) Ludwig Maximilian University of Munich (Experimental / Neuro-Cognitive Psychology Colloquium) Royal Holloway, University of London (Psychology Seminar) University of California, Los Angeles (Cognitive Psychology Forum) New York University (Cognition and Perception Colloquium) University of Oxford (Behavioral and Cognitive Neuroscience Seminar) University of Notre Dame (Cognition, Brain, and Behavior Seminar) Northwestern University (Cognitive Brain Mapping Group) York University (Clinical Neuropsychology Series)	Jan 2021 Nov 2020 Nov 2020 Oct 2020 Oct 2020 Oct 2020 Oct 2020 Oct 2020 Oct 2020
University College London (Brain Meeting Seminar, Wellcome Centre for Human Neuroimaging)	Sept 2020
Georgia Tech (Neuro Seminar Series)	Sept 2020
University of Oslo (Cognitive Neuroscience Seminar)	Sept 2020
Rotman Research Institute (Rounds Series)	Nov 2019
Dartmouth College (Cognitive Brown Bag)	Oct 2019
Max Planck Institute for Cognitive and Brain Sciences (Mind Meeting Seminar Series)	Aug 2019
New York State Psychiatric Institute (Clinical, Cognitive, and Computational Neuroscience Seminar)	Aug 2019
Duke University (Cognitive & Cognitive Neuroscience Colloquium Series)	Nov 2018
Columbia University (Theoretical Neuroscience Seminar)	Sep 2018
New York University (Cognition and Perception Seminar)	Sep 2018
Boston University (Brain, Behavior, and Cognition Seminar)	May 2018
University of Waterloo (Theoretical Neuroscience Seminar)	Nov 2017
SUNY Downstate Medical Center (Neural and Behavioral Science Seminar)	Oct 2017
Columbia University Medical Center (Movement Disorders Seminar)	Aug 2017
Columbia University Medical Center (Cognitive Neuroscience Seminar)	May 2017
Baylor College of Medicine (Core for Advanced MRI [CAMRI] Seminar)	April 2017
University of Massachusetts, Amherst (Neuroscience and Behavior Colloquium Series)	March 2017
Icahn School of Medicine at Mount Sinai (Cognition Club)	Feb 2017
University of Arizona (Cognitive Science Colloquium Series)	Oct 2016
University of Oregon (Department of Psychology talk)	Feb 2016
Columbia University (Department of Psychology talk)	Dec 2015
University of Toronto (Psychology Department talk)	July 2011
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Invited Symposia, Workshops, Discussions, & Panels	
Berkeley Research Development Office: Annual NSF CAREER Award Information Session	April 2025
Served on panel of current NSF CAREER Awardees; Q&A for prospective CAREER applicants	
Diversifying CNS at the University of Minnesota: Peer Review 101	March 2025
Reviewer Zero Workshop illuminating the hidden curriculum of peer review	
Bay Area Open Science Group	March 2025
Using the Open Science Framework for Lab Wikis	
So You Want to Participate in Peer Review: How to Write Inclusive and Equitable Reviews	Dec 2024
Black in Neuro x Reviewer Zero Workshop providing peer review training	
Hippocampal Predictions Link Perception and Memory	April 2024
Cognitive Neuroscience Society Meeting (Organized Symposium); Toronto, Ontario	·
Peer Review 101	Nov 2023
Black in Neuro x Reviewer Zero Workshop illuminating the hidden curriculum of peer review	
Diversity Salon, Northwestern University	May 2023
Diversity, Equity, and Inclusion series for Psychology graduate students	,
Topic: Reviewer Zero: Changing the culture of peer review	
Grants and External Funding Panel: NSF, NIH, DoD, VA, Acts of Congress, and other funding sources	Feb 2023
- writing, reviewing, and committees	
Brigham and Women's Hospital Postdoc Association Career Development Series	
Developing a Leadership Vision: Best Practices for Developing and Implementing Lab Manuals American Society for Biochemistry and Molecular Biology	Nov 2022
	

Effective Teaching and Mentoring in the Classroom and the Lab	Oct 2022
Brigham and Women's Hospital Postdoc Association Career Development Series	
Open Science Room Table Talk: Lab Culture	June 2022
Organization for Human Brain Mapping, Open Science Special Interest Group	
From Post-Doc to Tenure-Track Faculty: What's the Process Like? Brigham and Women's Hospital Postdoc Association Career Development Series	March 2022
Academic Application Boot Camp, Columbia University	Sept 2021
Office of Postdoctoral Affairs and the Zuckerman Institute Programs Office	3cpt 2021
Topic: Establishing positive lab culture with a lab manual	
Navigating a Career in Academia	June 2021
Organization for Human Brain Mapping, Student and Postdoc Special Interest Group	
McDonnel Academy International Symposium, Washington University	canceled
Workshop: Memory, Culture, and Brain	
Session: Inside the Head	
Originally scheduled for Oct 2020; canceled due to COVID-19	Oct 2020
Candid Conversations with Faculty, Northwestern University Columbia University Career Panel Series: Academic Careers	Oct 2020 June 2020
Office of Postdoctoral Affairs	Julie 2020
Pursuing Academic Research Following Graduate School, Association for Psychological Science	canceled
Originally scheduled for May 2020; canceled because of COVID-19	
Professional Development Panel, Cognitive Neuroscience Society Trainee Association	May 2020
Stories in Science Journal Club, Columbia Neuroscience Society	Nov 2019
The Ubiquitous and Adaptive Function of Episodic Memory	Oct 2019
Memory Disorders Research Society Annual Meeting (Organized Symposium); New York, NY	
Creating a Lab Manual	Oct 2019
Office of Research Compliance & Training, and Zuckerman Mind Brain Behavior Institute, Columb Social Media for Early Career Researchers, Columbia University Postdoctoral Society	May 2019
Creating a Course, Center for Teaching and Learning, Columbia University	April 2019
Communicating Science, Women in Science at Columbia: After Hours Series, Columbia University	Jan 2019
Science of Understanding, <i>Madison</i> , <i>WI</i>	July 2018
Women in Science at Columbia: Research Symposium, Columbia University	April 2018
Facing forward: Effective science communication	·
Research Methods Symposium, Teachers College, Columbia University	April 2017
Brain and being: Subjectivity in the age of neuroimaging	
The Lapsing Brain: How Attentional Fluctuations Impact Cognition	March 2017
Cognitive Neuroscience Society Meeting (Invited Symposium); San Francisco, CA	
INVITED SOCIETY MEMBERSHIPS NOTICE DE L'ARREST DE L'A	al han lan lan lan lan lan lan lan lan lan l
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Memory Disorders Research Society	2017 –
Executive Committee Member (Chair for 2024-2025)	2023 – 2021 – 2023
Justice, Equity, Diversity, & Inclusion Committee Member	2021 - 2023
TEACHING	
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Topical Seminars in Cognitive Psychology: Memory – Brain to Behavior, UC Berkeley	2025
Course instructor (undergraduate seminar)	
Honors Seminar, UC Berkeley	2025
Guest lecturer (undergraduate Honors Seminar; course instructor: Dr. Richard Ivry)	

Lecture: Publishing Journal Articles: Peer Review 101

Seminars: Cognition – Memory Systems in Cognition, UC Berkeley Course instructor (graduate seminar)	2024
Cognitive Neuroscience, UC Berkeley Guest lecturer (undergraduate lecture; course instructor: Dr. Richard Ivry) Lecture: Memory for Real-Life Events	2024
Introduction to the Profession of Psychology, UC Berkeley Guest lecturer (graduate seminar; course instructor: Dr. Ozlem Ayduk) Lecture: From Manhattan to Berkeley: Struggles and successes in life and science	2024
Computational Neuroscience: Vision, Cold Spring Harbor Lab Lecturer (summer school; lectures: Vision from the Retina to the Hippocampus; Attention and Perception in Memory Systems)	2024
Non-mnemonic Functions of Memory Systems, Columbia University Course instructor (graduate & advanced undergraduate seminar; one semester a year)	2018 – 2024
The Brain & Memory, Columbia University Course instructor (undergraduate seminar; one semester a year)	2017 – 2024
Cognitive Neuroscience, Columbia University Course instructor (undergraduate lecture course; one semester a year)	2019 – 2023
Research Seminar in Cognition, Columbia University Guest lecturer (graduate seminar; course instructor: Dr. Lila Davachi)	2021
Mind, Brain, & Behavior, Columbia University Course instructor (undergraduate lecture course)	2018
Communicating Science, Columbia University Guest lecturer (graduate seminar; course instructor: Dr. Rae Silver)	2018
Communicating Science, Columbia University Guest lecturer (graduate seminar; course instructor: Dr. Rae Silver)	2017
Human Learning, University of California, Davis Teaching assistant & lab instructor (undergraduate lecture course; course instructor: Dr. Andrew Yonelina)	2012
Cognitive Neuroscience, University of California, Davis Teaching assistant (undergraduate lecture course; course instructor: Dr. George R. Mangun)	2011
Introduction to Cognitive Psychology, University of California, Davis Teaching assistant & guest lecturer (undergraduate lecture course; course instructor: Dr. Steven J. Luck)	2010
Introduction to Cognitive Psychology, University of California, Davis Teaching assistant (undergraduate lecture course; course instructor: Dr. Katherine Gibbs)	2008

MENTORING

Postdoctoral Researchers	
Melisa Gumus, University of California, Berkeley	2025 –
Serra Favila, Columbia University (NIH D-SPAN F99/K00 Award)	2019 – 2024
(now faculty at Brown University)	
Halle Dimsdale-Zucker, Columbia University (NIH NRSA Postdoctoral Fellowship [F32])	2019 – 2021
(now faculty at UC Riverside)	
Eren Günseli, Columbia University	2017 – 2019
(now faculty at Sabancı University)	
PhD Students (Primary advisor or co-advisor)	
Jennifer Park, University of California, Berkeley	2025 –
Zall Hirschstein, Columbia University	2023 –
Craig Poskanzer, Columbia University	2021 –
Cheyenne Wakeland-Hart, Columbia University (NSF GRFP award)	2021 –
Manasi Jayakumar, Columbia University (now faculty at Oberlin College)	2018 – 2024
Michael Cohanpour, Columbia University (NIH NRSA Predoctoral Fellowship [F31]; now in industry)	2019 – 2023
Hannah Tarder-Stoll, Columbia University (now post-doc at Rotman Research Institute)	2018 – 2023
PhD Students (Secondary advisor)	
Jorge Mallea, Columbia University	2020 – 2024
Celia Durkin, Columbia University	2018 – 2023
Jonathan Nicholas, Columbia University	2018 – 2023
Paul Bloom, Columbia University (NSF GRFP Award)	2018 – 2022
Monica Thieu, Columbia University (NSF GRFP Honorable Mention)	2018 – 2022
Brian Silston, Columbia University	2019 – 2021
Ellen Tedeschi, Columbia University	2017 – 2020
Erin Kendall Braun, Columbia University	2016 – 2018
PhD Students (Outside project supervisor)	
Nick Hoang, University of Toronto	2021 – 2024
Lab Staff	
Narjes Al-Zahli, Columbia University & UC Berkeley (starting 2026: PhD student at Princeton)	2023 – 2025
Raheema Javid, Columbia University (in Fall 2025: Master's at KAUST; awarded [but declined] NSF GRFP)	
Aria Tsegai-Moore, Columbia University, Bridge to PhD Scholar (now in industry)	2021 – 2023
Zall Hirschstein, Columbia University (now PhD Student at Columbia University)	2020 – 2023
Nicholas Ruiz, Columbia University (now PhD Student at Temple University)	2017 – 2020
Undergraduate Students	
Kaylee Wang, Columbia University (Honors student)	2020 – 2022
Edoardo Spolaore, Columbia University (Honors student)	2019 – 2021
Tamar Mosulishvili, Columbia University (Honors student)	2018 – 2020
Nikita Datta, Columbia University (Honors student)	2017 – 2019
Sahiba Singh, Princeton University (Honors student)	2015 – 2016
Cathy Li, University of California, Davis	2012 – 2013
Sara Fraser, University of California, Davis	2012
Michelle Dylla, University of California, Davis	2011 – 2012
Garrett Kronland, University of California, Davis	2011
Rita Kao, University of California, Davis	2010 – 2011
Ashna Singh, University of California, Davis	2010 – 2011
Elyse Wallash, University of California, Davis	2008 – 2010

COMMITTEES FOR GRADUATE STUDENTS

Master's Degree Committees	
Craig Poskanzer, Psychology, Columbia University	2023
Title: Switching between external and internal attention in hippocampal networks	
Character William Developer Colombia University	2022
Cheyenne Wakeland-Hart, Psychology, Columbia University Title: Predicting image memorability from evoked feelings	2023
Title. I realicting image memorability from evoked reenings	
Manasi Jayakumar, Psychology, Columbia University	2020
Title: The influence of attentional fluctuations on temporal organization of memory	
Jorge Mallea, Psychology, Columbia University	2020
Title: Probability, uncertainty, and reward rate affect different aspects of anticipatory behavior	2020
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Hannah Tarder-Stoll, Psychology, Columbia University	2020
Title: Multi-step prediction and integration in naturalistic environments	
Paul Bloom, Psychology, Columbia University	2019
Title: Longitudinal growth charts for amygdala reactivity to emotional faces: A multiverse approach	2017
Celia Durkin, Psychology, Columbia University	2019
Title: The temporal dynamics of abstraction	
Jonathan Nicholas, Psychology, Columbia University	2019
Title: Uncertainty-based arbitration between incremental and episodic control over decisions	
Monica Thieu, Psychology, Columbia University	2019
Title: Emotion expression and categorial perception	
Brian Silston, Psychology, Columbia University	2017
Title: Effects of threat on ongoing cognition and behavior in dynamic virtual environments	
Ellan Tadasshi, Devehalagu, Calumhia University	2017
Ellen Tedeschi, Psychology, Columbia University Title: The effects of aging on curiosity and memory	2017
That the enects of aging on earlosity and memory	
Dissertation Proposal & Qualifying Exam Committees	
Carolyn Irving, Neuroscience, University of California, Berkeley	2025
Jack Burgess, Neuroscience Institute, Carnegie Mellon University	2024
Ani Abovian, Psychology, University of California, Davis	2024
Jorge Mallea, Psychology, Columbia University	2023
Manasi Jayakumar, Psychology, Columbia University Matthow Signalman, Psychology, Columbia University	2022 2022
Matthew Siegelman, Psychology, Columbia University Hannah Tarder-Stoll, Psychology, Columbia University	2022
Paul Bloom, Psychology, Columbia University	2021
Celia Durkin, Psychology, Columbia University	2021
Jonathan Nicholas, Psychology, Columbia University	2021
Monica Thieu, Psychology, Columbia University Prinn Sileton, Psychology, Columbia University	2021 2019
Brian Silston, Psychology, Columbia University Nicholas Singletary, Neurobiology & Behavior, Columbia University	2019
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Ellen Tedeschi, Psychology, Columbia University Zachary Bucknoff, Psychology, Columbia University Matti Vuorre, Psychology, Columbia University Judy Xu, Psychology, Columbia University	2019 2018 2017 2017
Dissertation Defense Committees	
Jack Burgess, Neuroscience Institute, Carnegie Mellon University Title: Imagination boosts strategy learning in artificial and human agents	2025
Manasi Jayakumar, Psychology, Columbia University Title: Attentional fluctuations and the temporal organization of memory: Insights from behavioral and pupillometry measures	2024
Jorge Mallea, Psychology, Columbia University Title: Exploring the effects of the probability and rate of reward on goal- and sign-tracking behavior	2024
Hannah Tarder-Stoll, Psychology, Columbia University Title: Flexible representations of temporal structure guide multistep prediction	2023
Michael Cohanpour, Neurobiology & Behavior, Columbia University Title: The cognitive and neural mechanisms of curiosity	2023
Matthew Siegelman, Psychology, Columbia University Title: Generating structured stimuli for investigations of human behavior and brain activity with computational models	2023
Celia Durkin, Psychology, Columbia University Title: The Beholder's Share: Bridging art and neuroscience to study subjective experience	2023
Nicholas Singletary, Neurobiology & Behavior, Columbia University Title: How we know when we don't know enough: Neural representations of probabilistic inference and information demand	2023
Jonathan Nicholas, Psychology, Columbia University Title: Hindsight for foresight: Adaptive uses of memory in value-based decision making	2023
Dara Huggins-James, Psychology, Columbia University Title: A diversity-conflict model of inclusion	2022
Paul Bloom, Psychology, Columbia University Title: Into the multiverse: Methods for studying developmental neuroscience	2022
Monica Thieu, Psychology, Columbia University Title: Exploring perception and categorization of social and affective stimuli	2022
Brian Silston, Psychology, Columbia University Title: Motivational influences on environmental and information exploration, cognition, memory and behavior	2021
Nora Rouast, Experimental Psychology, University of Oxford Title: Mutual influences between memory and attention	2021
Zachary Bucknoff, Psychology, Columbia University Title: Motivator and moralizer: How agency shapes choice and judgment	2020

Ellen Tedeschi, Psychology, Columbia University	2020
Title: Knowledge for the sake of knowledge: Understanding the relationship between curiosity, exploration	on and reward
Linbi Hong , <i>Electrical Engineering</i> , <i>Columbia University Title: Mapping the spatiotemporal interactions of the human brain's attention reorienting and arousal systems using multimodal recording techniques</i>	2019
Emily Cowan, Cognitive Neuroscience, New York University Title: The effect of sleep on the neural organization of memory traces	2019
Raphael Gerraty, Psychology, Columbia University Title: Brain network mechanisms in learning behavior	2018
Erin Kendall Braun, Psychology, Columbia University Title: Brain Mechanisms of adaptive memory: Neuromodulation and behavior in humans	2018
Judy Xu, Psychology, Columbia University Title: Understanding the behavioral and neurocognitive relation between mind wandering and learning	2018
Matti Vuorre, Psychology, Columbia University Title: Using visual illusions to examine action-related perceptual changes	2018
Hongmi Lee, Cognitive Neuroscience, New York University Title: Mnemonic content representations in human posterior parietal cortex	2018
Andrew Heusser, Cognitive Neuroscience, New York University Title: The role of neural oscillations in the encoding and organization of sequential events	2016
UNIVERSITY SERVICE	
UC Berkeley Psychology Department Service	
Diversity, Equity, Inclusion, Belonging, and Justice Committee	2024 –
UC Berkeley Service Beyond the Department	
Interviewer for Fiat Lux Scholarships	2025
Interviewer for Regents' & Chancellor's Scholarships	2025
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Columbia University Psychology Department Service	
Colloquium Committee, organizing departmental colloquia	2020 – 2023
(Co-chairs: Dr. Rae Silver & Dr. Nim Tottenham)	2017 – 2023
Faculty advisor for Columbia University's Psi Chi Honor Society	2017 – 2023
Faculty mentor for Psychology Department post-docs, career development sessions for post-docs	
Summer Internship Program in Psychological Science, faculty mentor	2022
Graduate Funding Committee, financial planning related to graduate student costs Exculty Sourch Committee, for tonure, track assistant professors joint search with Zuckerman Institute.	2018 – 2019 2018 – 2019
Faculty Search Committee, for tenure-track assistant professor; joint search with Zuckerman Institute	
Space Committee, to evaluate space needs of the department and plan for its future	2017 – 2019
Faculty Search Committee, for lecturer positions Edward E. Smith Memorial Award Committee, selecting outstanding graduate students for an award	2017 – 2018 2017
Columbia University Service Beyond the Department	

Faculty advisor for Columbia's chapter of Synapse, social support for individuals with brain injuries	2019 – 2024
Selection Committee for the Presidential Awards for Outstanding Teaching	2023
Faculty Search Committee, for tenure-track assistant professor at Barnard Psychology	2022 – 2023
Junior Faculty Advisory Board	2019 – 2021
Chair of the Cognitive and Behavioral Neuroscience University Seminar (Co-chair: Dr. Herb Terrace)	2017 – 2020
Presidential Scholars in Society and Neuroscience, application reviewer	2020
Faculty panel for Bridge to Ph.D. participants, graduate admissions advice for under-represented group	os 2020
Faculty panel of awardees of the Lenfest Junior Faculty Development Grant	2019
Faculty panel for Bridge to Ph.D. participants, graduate admissions advice for under-represented group	os 2017

SERVICE TO THE DISCIPLINE

Reviewer — Funding Agencies

Banting Postdoctoral Fellowships Program

Medical Research Council

National Institutes of Health

Human Complex Mental Function Study Section (temporary member)

National Science Foundation

Division of Behavioral and Cognitive Sciences

Cognitive Neuroscience Panel

Science of Learning and Augmented Intelligence Panel

Ad-hoc reviewer for Cognitive Neuroscience

Ad-hoc reviewer for Perception, Action, & Cognition

Netherlands Organisation for Scientific Research

Reviewer — Journals

Attention, Perception, & Psychophysics Memory & Cognition
Behavioural Neurology Nature Communications
Brain Nature Reviews Neuroscience
Brain Research Neurobiology of Aging

Neuronology of Aging

Cerebral Cortex Neurobiology of Learning and Memory

Cerebral Cortex Communications Neuron

Cognitive Neuroscience Neuropsychologia

Cortex Neuroscience & Biobehavioral Reviews

Current Biology PLoS ONE

eLife Psychological Science

eNeuro Psychonomic Bulletin & Review

Journal of Cognitive Psychology Psychological Review

Journal of Cognitive Neuroscience Quarterly Journal of Experimental Psychology

Journal of Experimental Psychology: Learning, Trends in Cognitive Sciences

Memory, & Cognition Visual Cognition

Journal of Neuroscience

NeurIPS Workshop Program Committee

Reviewer — Other

"Memory", 4th Edition by Alan Baddeley, Michael Eysenck, and Michael C. Anderson

2024

reviewed and provided endorsement for this book

https://www.routledge.com/Memory/Baddeley-Eysenck-Anderson/p/book/9781032592084

reviewed submissions for workshop on "Memory in Artificial and Real Intelligence"

JoCN and CNS Travel Fellowship Reviews

2022 – 2024

2022

reviewed applications for travel fellowships to the annual Cognitive Neuroscience Society meeting; fellowships were provided by the Journal of Cognitive Neuroscience This fellowship aims to promote geographic diversity at the CNS meeting by providing travel funding for trainees from Oceania and Southeast Asia, South Asia, Africa, and the Western Hemisphere (minus US and Canada) **Editorial Roles** Philosophical Transactions of the Royal Society B, Guest Editor 2025 -Journal of Cognitive Neuroscience, Consulting Editor 2020 -Neuroscience Letters, Guest Editor 2016 - 2018 **Edited Volumes** New Perspectives on the Hippocampus and Memory, Neuroscience Letters 2018 https://www.sciencedirect.com/journal/neuroscience-letters/vol/680/suppl/C **Organized Conferences** Memory Disorders Research Society, Annual Meeting October 2019 with Dr. Daphna Shohamy & Dr. Lila Davachi **DEI & Outreach Activities** Trainee Coordinator for Reviewer Zero 2020 pre-review mentorship network to illuminate hidden curriculum of peer review Mentor for Cientifico Latino Graduate Student Mentorship Initiative 2024 - 2025mentorship for Latino graduate school applicant in Psychology; https://www.cientificolatino.com/ Mock Interviews for Cientifico Latino 2022 - 2025mock interviews for Latino graduate school applicants in Psychology; https://www.cientificolatino.com/ International Online Mentoring Program, Organization for Human Brain Mapping 2025 paired with a trainee based at an international university, to provide career advice and feedback Researcher Catalysts Interview 2024 interview for organization that exposes high school students to researchers in STEM Black in Neuro Week Sponsor 2022 - 2023monetary contributions and in-kind services (career / grad school mentorship) Justice, Equity, Diversity, and Inclusion (JEDI) Committee 2021 - 2023 DEI for the Memory Disorders Research Society Information and advice for prospective graduate students at SACNAS 2021 Columbia Psychology booth at the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) National Diversity in STEM Digital Conference Mock Interviews for Black in Neuro 2021 mock interviews for Black graduate school applicants in Neuroscience; https://www.blackinneuro.com/ 2020 - 2021Let's Talk Grad School

2020 - 2021

graduate school advice for under-represented minoritized trainees; organized by Dr. Margaret Echelbarger

Women in Learning mentor

paired with a trainee to provide career advice and feedback

Career development sessions for under-represented minoritized trainees

2020

6 virtual sessions on academic jobs for students and post-docs who come from groups under-represented in STEM; sessions were attended by 100+ trainees all over the world

Participant in the World Science Festival's Lab Tours for Girls event

2018

MEDIA

Framework for Open and Reproducible Research Training (FORRT), May 2024

https://forrt.org/educators-corner/016-reviewer-zero/

Co-written blog post by the Reviewer Zero team, discussing our work to increase equity and fairness in peer review

Science Friday (WNYC Studios and NPR), February 2024

https://www.sciencefriday.com/segments/jeopardy-winner-memory-recall/

Interviewed about our paper showing enhanced episodic-semantic coupling in trivia experts (Thieu, Wilkins, & Aly, 2024)

Scientific American, February 2024

https://www.scientificamerican.com/article/jeopardy-winner-reveals-entwined-memory-systems-make-a-trivia-champion/

Interviewed about our paper showing enhanced episodic-semantic coupling in trivia experts (Thieu, Wilkins, & Aly, 2024)

The Transmitter, February 2024

Interviewed about the challenges to the traditional view of the medial temporal lobe as a memory system

Researcher Catalysts, February 2024

https://researchercatalyst.wixsite.com/researcher-catalysts/general-8

Interview for organization that exposes high school students to researchers in STEM

The Transmitter, January 2024

https://www.thetransmitter.org/cognition/cognition-in-brainless-organisms-is-redefining-what-it-means-to-learn/

Interviewed about learning and cognition in organisms without a central nervous system

Psychonomic Society Featured Content, October 2023

https://featuredcontent.psychonomic.org/when-looks-are-deceiving-our-memory-can-help/

Feature about our research showing how memory helps perceptual decision making (Bornstein, Aly, Feng, Turk-Browne, Norman, & Cohen, 2023)

Brain Inspired, December 2022

https://braininspired.co/podcast/156/

Interviewed about my research for a podcast by Paul Middlebrooks, which explores the relationship between natural and artificial intelligence

Brain Banter Podcast, Grey Matters CU, March 2022

https://open.spotify.com/episode/324j048T8uZEifnLncBW5Z?si=I0K0e3peSP-0mOzQvImVCg&nd=1 Interviewed for a podcast about Columbia faculty's research and experience in academia

CBC Radio (CBC Newfoundland Morning), January 2022

Interviewed about how the COVID-19 pandemic has affected people's sense of time and memory for life details

The Washington Post, January 2022

https://www.washingtonpost.com/lifestyle/2022/01/20/pandemic-memory-covid-2020-2021-2022/ Interviewed about how the COVID-19 pandemic has affected memory and sense of time

The Pathologist, November 2021

https://thepathologist.com/diagnostics/pathobot-deep-learning-for-humans-and-machines
Interviewed for my role in a large multi-institution, international collaboration that integrates deep learning techniques and social media to help pathologists worldwide seek second opinions

Grey Matters, Columbia's Undergraduate Neuroscience Journal, October 2021

https://www.greymattersjournalcu.org/post/mind-the-migraine

Interviewed about my experience as a migraine sufferer

National Public Radio, August 2021

https://www.npr.org/2021/08/27/1031255390/reports-of-cheating-at-colleges-soar-during-the-pandemic Interviewed about academic misconduct in online courses during the COVID-19 pandemic

Proceedings of the National Academy of Sciences, Journal Club, April 2021

https://www.pnas.org/post/journal-club/several-brain-regions-help-us-anticipate-whats-going-to-happen-next *Feature about our research showing anticipatory hierarchies in the brain (Baldassano, Aly, & Lee, 2021)*

American Psychological Association, Monitor, April 2021

https://www.apa.org/monitor/2021/04/cover-dismantle-racism

Interviewed with other members of Reviewer Zero for the article, "Psychology's urgent need to dismantle racism"

The Brain Made Plain, January 2021

Interviewed for a cognitive neuroscience podcast by Dr. Jonathan Peelle; aimed at undergraduate students and a lay audience

Harvard Women in Psychology, September 2020

Featured in the 'By the Brain' section of a monthly newsletter that presents interviews of women in psychology

Simply Neuroscience Podcast, College Neuro Network Series, August 2020

https://open.spotify.com/episode/67WsZZRTldbS261sXi116S?si=d1417868965b4026

Interviewed for podcast about Psychology/Neuroscience programs, for interested high school students

Wonder Media Network's Memory Booster Podcast, June 2020

Interviewed for podcasts about working memory & visual memory

ASBMB Today, November 2018

https://www.asbmb.org/asbmb-today/careers/110118/tweeting-for-rules

Interviewed about my lab manual, which was featured in Nature (see Editorials, Commentaries, & Perspectives)

Women's Health Magazine, October 2017

https://www.lesliegoldmanwrites.com/pdfs/who.pdf

Interviewed about memory and how to improve it