Tomer D. Ullman

CONTACT INFORMATION

Harvard University
Department of Psychology
Northwest Building Room 190.02
52 Oxford St., Cambridge, MA 02138 USA

tullman@fas.harvard.edu
http://www.tomerullman.org

POSITION

Assistant Professor, Harvard Department of Psychology. Member of the Center for Brains, Minds, and Machines. Co-PI of the Science of Intelligence group at Harvard.

RESEARCH INTERESTS

Computational cognitive modeling, intuitive theories, cognitive development, probabilistic programming, intuitive physics, intuitive psychology, common sense, machine learning, imagination, theory-of-self.

EDUCATION

Massachusetts Institute of Technology and Harvard University

Postdoctoral associate at the Center for Brains, Minds & Machines (2016-2019)

Massachusetts Institute of Technology

Ph.D. in Brain and Cognitive Sciences (2008-2015)

- Dissertation Topic: On the Nature and Origin of Intuitive Theories

Hebrew University of Jerusalem

B.S. in Physics and Cognitive Science (double major, 2004-2008)

- *Magna Cum Laude*

Grants and Funding

Jacobs Foundation Research Fellowship – September 2022 – September 2024, $177,273.

NSF Science of Learning, September 2021 – September 2023, $662,693,
"Collaborative Research: Loopholes as a window into the learning of meaning", joint project with Harvard and MIT, Harvard component $372,241.

DARPA MCS (Machine Common Sense), June 2019 – July 2023, $12,100,000,
"Building machine common sense the human way", Co-PI with six other investigators from IBM, MIT, Stanford, and Harvard. Harvard component, supporting Ullman, Spelke, and several RAs and postdoctoral researchers, is $1,079,976.

Dean's Competitive Fund for Promising Scholarship, Spring 2021, $39,449,
"Learning from People Who Aren't There".

John Templeton Foundation, February 2020 – October 2022, $234,000,
"Play, a computational perspective".

Director of Science Education Lab Kit Funding, Spring 2021, Competitive proposal to fund novel at-home experiment kits as part of Harvard Class on Decision Making (PSY1322).

Templeton Experience Project, June 2015 – June 2017, $90,000,
"Computational models of the intuitive theory of transformative experiences", with

Josh Tenenbaum (PI).

(Trainee grant) NSF, September 2023 – September 2025, $338,170, postdoctoral fellowship studying the rote pedagogy and its downstream effects awarded to Dr. Ilona Bass, Post-doctoral Fellow advised by Ullman and Bonawitz.

(Trainee grant) Simons Center for the Social Brain, October 2020 – October 2022, $134,912, postdoctoral fellowship studying loopholes and ASD awarded to Dr. Sophie Bridgers, Post-doctoral Fellow advised by Ullman and Schulz (MIT).

(Trainee grant) MBB Fellowship, July 2021 – July 2023, $150,600,
postdoctoral fellowship studying pedagogy, learning, and detecting automatic behavior, Dr. Ilona Bass, Post-doctoral Fellow adviced by Ullman and Bonawitz (Harvard Graduate School of Education).

Publications

Submitted Manuscripts and Under Review

Bass, I, Espinoza, C., Bonawitz, E, and Ullman, T. Negative evaluations of rote teaching.

Balaban, Smith, Ullman, Tenenbaum, and Ullman. Using EEG to uncover the dynamics of physical expectation violation and resolution.

Bridgers, S., Taliaferro, M., Parece, K., Schulz, L.E., and Ullman, T.D. Loopholes: a Window into Value Alignment and the Learning of Meaning.

Qian, P., Bridgers, S. E. C., Taliaferro, M., Parece, K., and Ullman, T. Ambivalence by Design: A Computational Account of Loopholes.

Wang, Y., and Ullman, T.D. Resource bounds on mental simulations: Evidence from a fluid-reasoning task

Rule, J., Goddu, M., Chu, J., Pinter, V., Reagan, E. R., Bonawitz, E., Gopnik, A., and Ullman, T. Fun isn't easy: Children choose more difficult options when "playing for fun" vs. "trying to win".

Paul, De Freitas, Ullman, and Tenenbaum. Towards a Computational Self.

De Freitas, Uguralp, Uguralp, Kim, and Ullman. Summarizing the Mental Customer Journey.

Journal articles

Jonusaite, I. and Ullman, T. (to appear) The Invisible Hand as an Intuitive Sociological Explanation. *Journal of Experimental Sociel Psychology*

De Freitas, J., Uguralp, A. K., Oguz-Uguralp, Z., Paul, L. A., Tenenbaum, J., and Ullman, T. D. (2023). Self-orienting in human and machine learning. Nature Human Behaviour, 1-14.

Li, Y., Wang Y., Boger, T., Smith, K., Gershman S.J., and Ullman T.D. (2023). An approximate representation of objects underlies physical reasoning. *JEP: General*.

Bigelow, E., McCoy, J.P., and Ullman, T.D., (2023). Non-commitment in mental

imagery. *Cognition*.

Boger, T. and Ullman, T.D., (2023) What is 'Where'? Physics and Attention Modulate Object Representations. *Open Mind*.

Gershman, S. and Ullman, T.D., (2023). Causal Implicatures from Correlational Statements. *PLOS ONE*.

Burnell, R., Schellaert, W., Burden, J., Ullman, T.D., Martinez-Plumed, F., Tenenbaum, J.B., Rutar, D., Cheke, L.G., Sohl-Dickstein, J., Mitchell, M. and Kiela, D. (2023). Rethink reporting of evaluation results in AI. *Science*.

Bass, I., Smith, K. A., Bonawitz, E., and Ullman, T. D. (2022). Partial mental simulation explains fallacies in physical reasoning. *Cognitive Neuropsychology*.

Gjata, N. N., Ullman, T. D., Spelke, E. S., and Liu, S. (2022). What could go wrong: adults and children calibrate predictions and explanations of others' actions based on relative reward and danger. *Cognitive Science*.

Liu, S., Ullman T.D., Tenenbaum, J., and Spelke, E. (2022). Dangerous ground: Thirteen-month-old infants are sensitive to peril in other people's actions. *Open Mind*.

Kryven, M., Ullman, T.D., Cowan, W., and Tenenbaum, J.B., (2021) Plans or Outcomes: How do we attribute intelligence to others? *Cognitive Science*

Sosa, F. A., T. D. Ullman, J. B. Tenenbaum, S. J. Gershman, and T. Gerstenberg (2021), Moral dynamics: Grounding moral judgment in intuitive physics and intuitive psychology. *Cognition*.

Ullman, T.D. (2021). What are you talking about. *Nature Human Behaviour*.

Ullman, T.D. and Tenenenbaum, J.B. (2020), Bayesian models of conceptual development: Learning as building models of the world. *Annual Review of Developmental Psychology*.

Ullman, T.D. (2020) Heroes of our own story: Self-image and rationalizing in thought experiments. *Behavioral and Brain Sciences* 43.

McCoy, J. and Ullman, T. (2019) Transformative Decisions and Their Discontents. Part of a symposium on L.A. Paul's "Transformative Experience". *Rivista Internazionale di Filosofia e Psicologia*, 10(3), 339 - 345.

Bonawitz E., Ullman, T.D., Gopnik, A., and Tenenbaum, J.B. (2019), Sticking to the evidence? A Computational and behavioral case Study of micro-theory change in the domain of magnetism, *Cognitive Science*, 43(8), e12765.

Ullman, T.D. and McCoy, J.P. (2019), Judgments of effort for magical violations of intuitive physics. (2019) *PloS one*, 14(5), e0217513.

McCoy, J.P., and Ullman, T.D., A Minimal Turing Test. (2018). A Minimal Turing Test. *Journal of Experimental Social Psychology*, 79, 1-8.

Gerstenberg, T., Ullman, T.D., Nagel, J., Kleiman-Weiner, M., Lagnado, D., and Tenenbaum, J.B. (2018), Lucky or clever? From changed expectations to attributions

of responsibility. *Cognition.*

Liu, S., Ullman, T.D., Tenenbaum J.B., and Spelke, E. (In press) 10-month-olds infer the value of goals from the costs of actions. *Science*, *358*(6366), 1038-1041.

Ullman, T. D., Spelke, E. S., Battaglia, P., and Tenenbaum, J. B. (2017), Mind Games: Game Engines as an Architecture for Intuitive Physics. *Trends in Cognitive Science, 21*(9), 649–665.

Ullman, T. D., Stuhlmüller, A., Goodman, N.D., and Tenenbaum, J. B. (2017), Learning physical parameters from dynamic scenes. *Cognitive Psychology.*

Lake, B. M., Ullman, T. D., Tenenbaum, J. B., and Gershman, S. J. (2017), Building machines that learn and think like people. *Behavioral and Brain Sciences,* 1–101.

Hamlin, J. K., Ullman, T. D., Tenenbaum, J. B., Goodman, N. D., and Baker, C. L. (2013), The mentalistic basis of core social cognition: Experiments in preverbal infants and a computational model. *Developmental Science 16*(2), 209-226.

Ullman, T. D., Goodman, N. D., and Tenenbaum, J. B. (2012), Theory learning as stochastic search in the language of thought. *Cognitive Development 27*(4), 455–480.

Goodman, N. D., Ullman, T. D., and Tenenbaum, J. B. (2012), Learning a theory of causality. *Psychological Review, 118*(1), 110.

Book Chapters

Ullman, T.D. and Zimmerman, S., Models of transformative decision making, (2020) in Becoming Someone New: Essays on Transformative Experience, Choice, and Change, eds. Enoch Lambert and John Schwenkler, Oxford University Press.

Ullman, T. D., McCoy, J. P., and Paul, L. A., (2019), Modal Prospection. Metaphysics and Cognitive Science, eds. Alvin Goldman and Brian McLaughlin. Oxford University Press (US).

Conference Proceedings and Preprints

Ullman, T.D. (2023). Large Language Models Fail on Trivial Alterations to Theory-of-Mind Tasks. *arXiv preprint.*

Qian, P., and Ullman, T.D. (2023). Human Visual Pretense is Constrained Primarily by Shape. In *Society for Philosophy and Psychology (SPP).*

Bass, I., Bonawitz, E., and Ullman, T. D. (2023). Negative Evaluations of Rote Teaching in Adults and Children. In *Society for Philosophy and Psychology (SPP).*

Parece, K., Bridgers, S., Schulz, L., and Ullman, T. D. (2023). Skirting the Sacred: Moral Violations Make Intentional Misunderstandings Worse. In *Proceedings of the 44th Annual Meeting of the Cognitive Science Society.*

Sosa, F., and Ullman, T.D. (2022). Type theory in human-like learning and inference. *arXiv preprint.*

Conwell, C., and Ullman, T. D. (2022). Testing Relational Understanding in Text-Guided Image Generation. *arXiv preprint.*

Bigelow, E. and Ullman, T. D. (2022). Opening the Black Box: People Evaluate

Agents Based on the Algorithms that Drive their Behavior. In *Society for Philosophy and Psychology (SPP).*

Jonusaite, I. and Ullman, T. D. (2022). The Invisible Hand as an Intuitive Sociological Explanation. In *Society for Philosophy and Psychology (SPP).*

Bass, I., Bonawitz, E., and Ullman, T. D. (2022). Adults' Evaluations of Rote and Reflective Teachers. *Proceedings of the Annual Meeting of the Cognitive Science Society.*

Bass, I., Smith, I., Bonawitz, E., and Ullman, T. (2021). Efficient partial simulation quantitatively explains deviations from optimal physical predictions. *Presentation at refereed workshop as part of the 35th Annual Conference on Neural Information Processing Systems: Physical Reasoning and Inductive Biases for the Real World.*

Bridgers, S., Glassman, E., Schulz, L.E., and Ullman, T.D. (2021). Loopholes: a Window into Value Alignment and the Learning of Meaning. *Presentation at refereed workshop as part of the 35th Annual Conference on Neural Information Processing Systems: Physical Reasoning and Inductive Biases for the Real World.*

Xu, K., Srivastava, A., Gutfreund, D., Sosa, F., Ullman, T., Tenenbaum, J. B., abd Sutton, C. (2021). A Bayesian-Symbolic Approach to Learning and Reasoning for Intuitive Physics. In *Advances in Neural Information Processing Systems (NeurIPS).*

Bridgers, S., Schulz, L.E., and Ullman, T.D. (2021). Loopholes, a Window into Value Alignment and the Learning of Meaning. *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society.*

Kim, P., De Freitas, J., and Ullman, T.D. (2021), Lifelines: Summarizing the Pattern of a Meaningful Life. In *Society for Philosophy and Psychology (SPP).*

Mao, J., Luo, Z., Gan, C., Tenenbaum, J.B., Wu, J.,Kaelbling, J.P., and Ullman, T.D. (2021) Temporal and Object Quantification Networks. In *Thirtieth International Joint Conference on Artificial Intelligence (IJCAI).*

Shu, T., Bhandwaldar, A., Gan, C., Smith, K.A., Liu, S., Gutfreund, D., Spelke, E., Tenenbaum, J.B. and Ullman, T.D. (2021). AGENT: A Benchmark for Core Psychological Reasoning. In *Thirty-eighth International Conference on Machine Learning (ICML).*

Du, Y., Smith, K., Ullman, T.D., Tenenbaum, J.B., and Wu, J. (2021). Unsupervised Discovery of 3D Physical Objects From Video. In *International Conference on Learning Representations (ICLR).*

Smith, K. A., Mei, L., Yao, S., Wu, J., Spelke, E., Tenenbaum, J. B., and Ullman, T. D. (2020). The fine structure of surprise in intuitive physics: when, why, and how much?. In *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society.*

Gjata, N., Ullman, T. D., Spelke, E. S., and Liu, S. (2020). Look before you leap: Quantitative tradeoffs between peril and reward in action understanding. In *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society.*

Shu, T., Kryven, M., Ullman, T.D., and Tenenbaum, J.B. (2020). Adventures in Flatland: Perceiving Social Interactions Under Physical Dynamics In *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society.*

Smith, K.*, Mei, L.*, Yao, S., Wu, J., Spelke, E., Tenenbaum, J.B., and Ullman, T.D., (2019) Modeling expectation violation in intuitive physics with coarse probabilistic object representations. *Advances in Neural Information Processing Systems.*

Ullman, T. D., Kosoy, E., Yildrim, I., Soltani, A., Siegel, X., Tenenbaum J.B., and Spelke, E.,(2019), *Draping an Elephant: Uncovering Children's Reasoning About Cloth-Covered Objects Proceedings of the 41st Annual Conference of the Cognitive Science Society.*

Ullman, T. D., Alonso-Diaz, S., Ferringo, S., Zahid, S., and Kidd, C. (2017), Weight matters: The role of physical weight in non-physical language across age and culture. *Proceedings of the* 39^{th} *Annual Conference of the Cognitive Science Society.*

Liu, S., Ullman, T.d., and McCoy, J.P., (2019), People's perception of others' risk preferences. *Proceedings of the 41st Annual Conference of the Cognitive Science Society.*

Liu, S., Ullman, T. D., Tenenbaum, J. B., and Spelke, E. S. (2017), What's worth the effort: Ten-month-old infants infer the value of goals from the costs of actions. *Proceedings of the* 39^{th} *Annual Conference of the Cognitive Science Society.*

Kryven, M., Ullman, T. D., Cowan, W., and Tenenbaum, J. B. (2017), Thinking and guessing: Bayesian and empirical models of how humans search. *Proceedings of the* 39^{th} *Annual Conference of the Cognitive Science Society.*

Chang, M. B., Ullman, T. D., Torralba, A., and Tenenbaum, J. B. (2017), A compositional object-based approach to learning physical dynamics. *International Conference on Learning Representations (ICLR).*

Ullman, T.D., Xu, Y. & Goodman, N.D. (2016), The Pragmatics of spatial language. *Proceedings of the* 38^{th} *Annual Conference of the Cognitive Science Society.*

Ullman, T.D., Siegel, M., Tenenbaum, J.B. & Gershman, S.J. (2016), Coalescing the vapors of human experience into a viable and meaningful comprehension. *Proceedings of the* 38^{th} *Annual Conference of the Cognitive Science Society.*

Kryven, M., Ullman, T.D., Cowan, W. & Tenenbaum, J.B. (2016), Outcome or strategy? A Bayesian model of intelligence attribution. *Proceedings of the* 38^{th} *Annual Conference of the Cognitive Science Society.*

Gerstenberg, T., Ullman, T. D., Kleiman-Weiner, M., Lagnado, D. A. & Tenenbaum, J. B. (2014), Wins above Replacement: Responsibility attributions as counterfactual replacements. *Proceedings of the* 36^{th} *Annual Conference of the Cognitive Science society.*

Ullman, T.D., Stuhlmüller A., Goodman, N.D. & Tenenbaum, J.B. (2014), Learning physics from dynamical scenes. *Proceedings of the* 36^{th} *Annual Conference of the Cognitive Science society.*

Bonawitz E., Ullman, T.D., Gopnik, A. & Tenenbaum, J.B. (2012), Sticking to the evidence? A Computational and behavioral case Study of micro-theory change in the domain of magnetism, *International Conference Developmental Learning and Epigenetic Robotics; best paper award: experiment combined with computational model.*

Ullman, T.D.*, McCoy, J.P.*, Stuhlmuller, A., Gerstenberg, T. & Tenenbaum J.B.

(2012), Why blame Bob? Probabilistic generative models, counterfactual reasoning, and blame attribution. *Proceedings of the* 33*rd Annual Conference of the Cognitive Science Society.*

Ullman, T.D., Goodman, N.D. & J. B. Tenenbaum (2010), Theory acquisition as stochastic search. *Proceedings of the* 32*nd Annual Conference of the Cognitive Science Society.*

Ullman, T.D., Baker, C.L., Macindoe, O., Evans, O., Goodman, N.D. & Tenenbaum, J.B. (2010), Help or hinder: Bayesian models of social goal inference. *Advances in Neural Information Processing Systems (Vol. 22, pp. 1874-1882).*

Goodman, N.D., Ullman, T.D. & Tenenbaum, J.B. (2009), Learning a theory of causality *Proceedings of the* 31*st Annual Conference of the Cognitive Science Society.*

Invited Talks and Presentations

The Physical Basis of Imagery and Imagination.
Departmental Colloquium, University of Maryland, 2023.

The Physical Basis of Imagery and Imagination.
Departmental Seminar, Central European University, 2023.

The Physical Basis of Imagery and Imagination.
Special Workshop on The Puzzle of Imagistic Cognition, Salzburg, 2023.

Opening the Black Box: People Evaluate Agents Based on the Algorithms that Drive their Behavior.
Society for Philosophy and Psychology (SPP), Milan, 2022.

Cognitive Evaluation with the Animal AI Environment
AI Evaluation Beyond Metrics workshop, IJCAI, Vienna, 2022.

Approximations in physical simulators as hypotheses for intuitive physics.
Neurotheory Center Kickoff, Harvard, 2022.

Models of Core Common Sense
CBMM Summer Lecture Series, MIT, 2022.

Models of Core Common Sense
CBS URM summer student workshop, Harvard, 2022.

Through a Glass Darkly: Approximations in physical simulators as working hypotheses for intuitive physics.
NeurIPS 2021 workshop on Physical Reasoning and Inductive Biases for the Real World, 2021.

Interdisciplinary Approaches to Transformative Experience,
Yale University, 2021.

(Keynote), Models of Core Common Sense in Infancy,
USC AI Symposium on AI with Common Sense, 2021.

Models of Core Knowledge (Physics, Really)
Special Seminar, Department of Neurobiology, Weizmann Institute, 2021.

Computational Models of Core Physics
Colloquium, Center for Cognitive Science, TU Darmstadt, 2021.

Reverse Engineering a Self,
First Person Discussion Group,Columbia University (online), 2021.

Quantitative Methods Workshop,
CBMM, MIT 2020

Models of Core Knowledge
Cognitive Seminar Series, Brown University, 2020

Models of Core Knowledge
Center for Human-Compatible AI at UC Berkeley (CHAI), 2020

Discussant in 'Is that so? How children evaluate claims and conjectures'
Child Development Society (CDS) Meeting, Louisville, KT, 2019.

Computational Models of Core Intuitive Physics,
Yale Current Works series, Yale, CN, 2019.

Neuro-symbolic Computing and Machine Common Sense
AI Research Week, IBM, MA, 2019.

Computational Models of Core Intuitive Physics,
Facebook Workshop on Understanding Human and Machine Intelligence, NYC, NY, 2019.

Reverse Engineering a Self,
Formal and Experimental Conference, Northeastern, MA, 2019

Thinking New Thoughts,
Workshop on Possibility and Value, Radcliffe Institute for Advanced Studies, MA, 2019.

Evaluating Future Selves,
Workshop on Imagination, Simulation, and the Self, Tufts, MA, 2018.

Physics Meets Development,
CVPR workshop on Vision Meets Cognition, Salt Lake City, UT, 2018.

Canonical Mass: Preschoolers Expectations of Dynamic Variables for Solid Objects,
Society for Research in Child Development, Austin, TX. 2017.

Modal Imagination,
Ranch Metaphysics Workshop, Tucson, AZ. 2017.

People and Things,
Current Work in Developmental Psychology Colloquium. Boston College, MA. 2016.

Development, Psychology, Physics.

DeepMind Technologies, London. 2016.

Modal Prospection
Philosophy Seminar. Rutgers University, NJ. 2016.

Imagining and Evaluating Possible Future Selves,
42*nd* Meeting of the Society for Philosophy and Psychology. Austin, TX. 2016.

Computational Cognitive Science,
Interdisciplinary College on AI, Germany. 2016.

Probabilistic Programming,
Interdisciplinary College on AI, Germany. 2016.

Effort as a Bridge Across Action and Action Understanding,
The 20^{th} International Congress on Infant Studies. New Orleans, LA. 2016.

Children's Learning as Stochastic Search,
Society for Research in Child Development. Philadelphia, PA. 2015.

Theories, Imagination, and the Generation of New Ideas,
Center for Brains, Minds and Machines Summer School. Woods Hole, MA. 2015.

Probabilistic Programming Tutorial,
Center for Brains, Minds and Machines Summer School. Woods Hole, MA. 2015.

Theories of Physics,
More on Development. Columbus, OH. 2015.

Modeling a Theory of the Self,
Workshop on Transformative Experiences. Chicago, IL. 2015.

Deep Thoughts: The Value of Understanding,
Commentator at 41^{th} Meeting of the Society for Philosophy and Psychology. Duke University, NC. 2015.

Wins Above Replacement: Responsibility Attributions as Counterfactual Replacement,
40^{th} Meeting of the Society for Philosophy and Psychology. Vancouver, Canada. 2014.

Theories, Imagination, and the Generation of New Ideas,
Center for Brains, Minds and Machines Summer School. Woods Hole, MA 2014.

Probabilistic Programming Tutorial,
Center for Brains, Minds and Machines Summer School. Woods Hole, MA. 2014.

Learning Physics from Dynamic Scenes,
36^{th} Annual Meeting of the Cognitive Science Society. Quebec, Canada. 2014.

Theories, Imagination, and the Generation of New ideas,
Pre-conference debate at Child Development Society Meeting. Memphis, TN. 2013.

Help or Hinder? Bayesian Models of Social Goal Inference,
Simons Center, MIT. 2010.

Why Blame Bob? Probabilistic Generative Models and Blame Attribution,
34^{th} Annual Meeting of the Cognitive Science Society. Sapporo, Japan. 2012.

Theory Learning as Stochastic Search,
32*nd* Annual Meeting of the Cognitive Science Society. Portland, OR. 2010.

Help or Hinder? Bayesian Models of Social Goal Inference,
Machine Learning Summer School, Cambridge, UK. 2009.

Help or Hinder? Bayesian Models of Social Goal Inference,
23*rd* Annual Conference on Neural Information Processing Systems. Vancouver. 2009.

Other

Honors and Awards	2021	Jacobs Foundation Research Fellowship
	2020	Harvard University Special Commendation: Extraordinary Teaching in Extraordinary Times
	2011	ICDL Best Paper Award: Experiment with computational model
	2011	MIT Continued Dedication to Teaching award
	2010	MIT Excellence in Teaching award
	2010	National Science Foundation (NSF) fellowship
	2009	Singleton Graduate Fellowship
	2009	National Science Foundation (NSF) honorable mention
	2004-2007	Hebrew University of Jerusalem Scholarships of Excellence

Popular Press — Work has been mentioned in, or have been interviewed for New York Times, The New Yorker, BBC, The Verge, Psychology Today, Discover Magazine, Scientific American, Wired, MIT Technology Review, Nature

Teaching Experience and Outreach

2023	Instructor, 'Imagination, Pretense, and Make-Believe Worlds' (Harvard PSY1340)
2023	Co-organizer of funded workshop 'Computational Cognitive Models of Learning and Development'
2023	Instructor, 'Decisions Big and Small' (Harvard PSY1322)
2023	Colloquium committee member, Harvard Psychology
2023	Guest lecturer, 'Biological and Artificial Intelligence' (Harvard NEURO140)
2023	Guest lecturer, 'Mind and Brain' (Howard University)
2022	Instructor, 'Decisions Big and Small' (Harvard PSY1322)
2021	Instructor and organizer, 'Research Seminar in Cognition, Brain, and Behavior' (Harvard PSY3340)
2021	Instructor, 'Imagination, Pretense, and Make-Believe Worlds' (Harvard PSY1340)
2021	Instructor, 'Decisions Big and Small' (Harvard PSY1322)
2021	Instructor and organizer, 'Research Seminar in Cognition, Brain, and Behavior' (Harvard PSY3340)
2021	Guest lecturer, 'Biological and Artificial Intelligence' (Harvard NEURO140)
2021	Guest lecturer, Harvard Developmental Seminars
2021	Guest lecturer, Harvard Cognition, Brain, Behavior Seminar
2021	Colloquium committee member, Harvard Psychology
2020	Instructor, 'Imagination, Pretense, and Make-Believe Worlds' (Harvard PSY1340)
2020	Instructor, 'Decisions Big and Small' (Harvard PSY1322)
2020	Instructor and organizer, 'Research Seminar in Cognition, Brain, and Behavior' (Harvard PSY3340)
2020	Colloquium committee member, Harvard Psychology
2019	Guest lecturer, Harvard Developmental Seminars
2018	Guest lecturer, Harvard Developmental Seminars
2017	Lecturer and Teaching Assistant, CBMM summer school
2015	Lecturer and Teaching Assistant, CBMM summer school
2014	Lecturer and Teaching Assistant, CBMM summer school
2012	Teaching Assistant, Topics in early childhood cognition (MIT 9.85)
2011	Teaching Assistant, Cognitive processes (MIT 9.65)
2010	Planning committee member, Cambridge Science Festival
2009	Presenter and volunteer at Neuroscience Day, Museum of Science

Service

Reviewer (partial): Brain and Behavioral Sciences, Cognition, Cognitive Psychology, Cognitive Development, Cognitive Science, Cognitive Research: Principles and Implications, Developmental Psychology, Developmental Science, JEP: General, Memory and Cognition, Nature Human Behavior, Nature Communications, Psychological Review, Proceedings of the Royal Society B, Scientific Reports, Topics in Cognitive Science, Philosophical Psychology, Neural Information Processing Systems (NeurIPS), The Annual Conference of the Cognitive Science Society (CogSci), AAAI, JoV, PLoS ONE

Grant and Award Reviews: Templeton Foundation, ERC, Israel Science Foundation (ISF), APA Dissertation Research Award, NSF SPRF

Mentor since its founding in PPREP Harvard Workshop to help students from historically minoritized groups with their applications to positions in academia

Associate Editor for Open Mind

Guest Editor for Open Mind

Guest Editor for PNAS

Co-organizer of special workshop, 'Computational Cognitive Models of Learning and Development',
funded by the Estes Fund through APS, Harvard (2023)

Ongoing organizer of Machine Common Sense reasoning meetings (intuitive psychology and general track, 2019-2021)

Co-organizer of "The Origins of Commonsense in Humans and Machines" Workshop, Cogsci (2020)

Co-organizer of Lorentz Center "Developing Models of the Word" Workshop, Leiden, Netherlands (2020)

Co-organizer of Cognition, Brain, Behavior lunch seminar series, Harvard (2019, 2020)

PC Member AAAI main track

Organizer of "More on Development (MOD)" special workshop on learning (Ohio, 2015)

Co-Organizer of Child Development Society pre-conference on "computational cognitive models and cognitive development" (2014)

Students Mentored (partial list)

Eric Bigelow (2020-), Mariel Goddu (2020-2023), Sophie Bridgers (2020-2023, went on to become Cognitive Scientist at DeepMind), Yichen Li (2020-), YingQiao Wang (2020-), Tal Boger (2021-2023, went on to graduate studies at JHU), Brandon Woo (2020-2023, incoming faculty at UCSB), Izabele Jonusaite (2021-2023, went on to graudate studies at MIT), Colin Conwell (2019-), Pechthida Kim (2020-2021, won Mary Gordon Roberts MBB Research Fellowship during this time), Zana Bucina (2020), Konstantina Katsimeni (2020), Julian De Freitas (2020, now faculty at HBS), Arunima Sarin (2019-2023), Enosa Ogbeide (2019), Nensi Gjata (2019), Shari Liu (2018-2020, went on to post-doc at MIT and then faculty at JHU), Felix Sosa (2017-), Cameron Nieters (2017), Michael Chang (2016, 2017, went on to graduate studies at UC Berkeley), Eliza Kosoy (2016–2017, went on to graduate studies at Berkeley), Heather Tarr (2016, went on to graduate studies at Brown), Alexandra Wheeler (2016), Samuel Zimmerman (2016-2017), Marta Kryven (2016, went on to post-doc position at MIT)

Membership

Association for Psychological Science (APS)

Cognitive Science Society (CSS)

Society for Research in Child Development (SRCD)

Cognitive Development Society (CDS)

Society for Philosophy and Psychology (SPP)

Society for Personality and Social Psychology (SPSP)