

Tracey Mills

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Education

Massachusetts Institute of Technology PhD in Brain and Cognitive Sciences Advisors: Joshua Tenenbaum & Samuel Gershman	Sept 2024 – Present
Dartmouth College B.A. with High Honors, Computer Science & Cognitive Science GPA: 3.9/4.0 Thesis advisors: Jonathan Phillips & Soroush Vosoughi	Sept 2018 – June 2022

Research Experience

MIT Department of Brain and Cognitive Sciences PhD Student Researcher Advisors: Joshua Tenenbaum & Samuel Gershman	Sept 2024 - Present
MIT CoCoSci Lab Post-Bacc Research Assistant Advisor: Joshua Tenenbaum	Sept 2022 - Sept 2024
Dartmouth College PhilLab Undergrad Research Assistant Advisor: Jonathan Phillips	Sept 2019 - Sept 2022
Dartmouth College Minds, Machines, and Society Lab Undergrad Research Assistant Advisor: Soroush Vosoughi	Nov 2021 - June 2022
Dartmouth College Brain Engineering Lab Undergrad Research Assistant Advisor: Richard Granger	Sept 2020 - June 2022

Preprints

* denotes equal contribution

Spatiotemporal Program Learning in Human Adults, Children, and Monkeys (*Accepted at PNAS, 2026*).
Tracey Mills, Nicole Coates, Alessandra Silva, Kaylee Ji, Steven Ferrigno, Laura Schulz, Joshua Tenenbaum, Samuel Cheyette

Publications

* denotes equal contribution

Reverse Engineering the Centered Self (*Psychological Review, 2026*).
L.A. Paul*, Tracey Mills*, Tomer Ullman, Julian De Freitas, Cédric Colas, Joshua Tenenbaum.

Language and Experience: A Computational Model of Social Learning in Complex Task (*ICLR, 2026*).
Cédric Colas, Tracey Mills, Ben Prystawski, Michael Henry Tessler, Noah Goodman, Jacob Andreas, Joshua Tenenbaum.

Spatiotemporal pattern learning as probabilistic program synthesis (*NeurIPS, 2023*).
Tracey Mills, Joshua Tenenbaum, Samuel Cheyette.

Towards a model of confidence judgments in concept learning (*Proceedings of the Annual Meeting of the Cognitive Science Society, 2023*).
Tracey Mills*, Cedagao Zhang*, Tony Chen*, Joshua Tenenbaum.

Locating What Comes to Mind in Empirically Derived Representational Spaces (*Cognition, 2023*).
Tracey Mills, Jonathan Phillips.

What comes to mind? Samples from relevance-based feature spaces (*Proceedings of the Annual Meeting of the Cognitive Science Society, 2022*).
Tracey Mills, Jonathan Phillips.

Teaching

9.66 Computational Cognitive Science, MIT

Fall 2025

Service & Community

Workshop Co-organizer (CCN workshop on naturalistic problem solving, 2026)
Workshop Co-organizer (CogSci workshop on abstract problem representations, 2026)
Workshop Co-organizer (CogSci workshop on metareasoning, 2025)
Conference Reviewing (CogSci, 2026; NeurIPS workshop on cog-interp, 2025)
Ad Hoc Journal Reviewing (Open Mind)
MIT Graduate Application Assistance Program Leadership (2025)
MIT Graduate Application Assistance Program Mentor (2024-25)
Society for Philosophy and Psychology Social Media Volunteer (2024-present)
Middle School STEM NetPals Volunteer (2025-2026)
Computer Science Education Week Volunteer (2023)

Awards

James S. (1972) and Muguette Alder Fellowship (2025-2026), MIT
Presidential Graduate Fellowship (2024-2025), MIT
Magna Cum Laude (2022), Dartmouth College
Phi Beta Kappa (2022), Dartmouth College
High Honors in Computer Science (2022), Dartmouth College
Academic Achievement Award in Cognitive Science (2022), Dartmouth College
Women's Soccer Academic All Ivy Selection (2022), Dartmouth College