

Laila C. Johnston

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Education

2023 – present **Ph.D. Student, Cognitive Science**
Brown University, Providence, RI, USA
Advisors: Roman Feiman & Ellie Pavlick

2018 – 2023 **B.S. in Mathematics, Minor in Computer Science, Minor in Philosophy**
University of Central Florida, Orlando, FL, USA

Research Interests

computational cognitive science ~ compositional concepts ~ concept learning ~ probabilistic language of thought
~ the nature of hypothesis spaces ~ large language models ~ question asking ~ learning from explanation ~
the frame problem ~ ad-hoc alternatives ~ the relevance problem

Research Experience

2023 – present **Ph.D. Student, Language and Thought Lab**, Brown University, Providence, RI
Advisor: Prof. Roman Feiman

2023 – present **Ph.D. Student, LUNAR Lab**, Brown University, Providence, RI
Advisor: Prof. Ellie Pavlick

2021 – 2023 **CoCoSci Group**, Massachusetts Institute of Technology, Cambridge, MA
Undergraduate Researcher (Sep. 2022 – May 2023)
Research Fellow, MSRP Bio/Neuro (Summer 2022)
Visiting Student (Aug. 2021 – Dec. 2021)
Advisor: Prof. Joshua B. Tenenbaum

Summer 2021 **Research Fellow**, MSRP Bio/Neuro, Center for Brains, Minds, and Machines, *Computational Cognitive Neuroscience Lab*, Harvard University, Cambridge, MA
Advisor: Prof. Samuel J. Gershman

2020 – 2021 Carnegie Mellon University, *Center for the Neural Basis of Cognition*, Pittsburgh, PA
Undergraduate Researcher (Sep. 2020 – Feb. 2021)
Research Fellow, Undergraduate Program in Neural Computation (Summer 2020)
Advisor: Prof. David Danks

Awards and Honors

2023	National Science Foundation Graduate Research Fellowship
Summer 2022	Massachusetts Institute of Technology Summer Research Fellow (NSF Funded)
Summer 2022	McNair Summer Research Institute Scholarship
Feb. 2022	Mathematics of Collective Intelligence Workshop Travel Scholarship , IPAM, UCLA
Fall 2021	Visiting Student Fellowship , Department of Brain and Cognitive Sciences, MIT
2018 – 2021	Dean's List (5 Semesters), University of Central Florida
2021	Hispanic Heritage Scholarship Fund of Metro Orlando Scholar
Summer 2021	Massachusetts Institute of Technology Summer Research Fellow (NSF Funded)
Summer 2021	McNair Summer Research Institute Scholarship
2020	Ronald E. McNair Scholar

2020	Carolyn Euliano Endowed Scholarship in Mathematics , University of Central Florida
Summer 2020	Carnegie Mellon University Summer Research Fellow (NIH Funded)
2018	EXCEL Scholar , University of Central Florida
2018	Pegasus Scholar , University of Central Florida
2018	Florida's Bright Futures Academic Scholar
2018	International Baccalaureate Diploma Recipient

Publications

Johnston, L.*, Hillman, N.*, Danks, D. (2021). Individual Differences in Causal Learning. *Proceedings of the 43rd Annual Conference of the Cognitive Science Society*.

* co-author

Conferences

Johnston, L.^Δ, Smits, D. A., Pavlivk, E., Feiman, R. (2024, June). The Structure of Ad-Hoc Alternatives. *Experiments in Linguistic Meaning*. Poster presentation.

Johnston, L.C.^Δ, Siegel, M.H., Tenenbaum, J.B., Gerstenberg, T. (2022, October). Reasoning with Compositional Concepts in the Probabilistic Language of Thought. *SACNAS NDiSTEM Research Conference*. Poster presentation.

Johnston, L.C.^Δ, Siegel, M.H., Tenenbaum, J.B., Gerstenberg, T. (2022, August). Reasoning with Compositional Concepts in the Probabilistic Language of Thought. *Center for Brains, Minds, and Machines Summer Research Poster Session*. Poster presentation.

Johnston, L.C.^Δ, Siegel, M.H., Tenenbaum, J.B., Gerstenberg, T. (2021, September). Reasoning with Compositional Concepts. *MKN McNair Heartland Research Conference*. Oral presentation (15 minutes).

Johnston, L.C.^Δ, Bates, C.J., Egger, B., Gershman, S.J. (2021, August). Scaling Models of Visual Working Memory to Natural Images: A Case Study in Human Faces. *Center for Brains, Minds, and Machines Summer Research Poster Session*. Poster presentation.

Johnston, L.^Δ, Hillman, N., Danks, D. (2021, March). Individual Differences in Causal Learning. *UCF Student Scholar Symposium*. Poster presentation.

Johnston, L.^Δ, Hillman, N.^Δ, Danks, D. (2020, August). Individual Variation in Causal Learning. *Center for the Neural Basis of Cognition Undergraduate Summer Research Showcase*. Poster presentation. Video presentation.

^Δpresenter