

# Laila C. Johnston

$\lambda$  [lailacj.github.io](https://lailacj.github.io)  $\pi$  [laila\\_johnston@brown.edu](mailto:laila_johnston@brown.edu)  $\phi$  [google scholar](#)  $\mu$

## 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  $\sim$  compositional concepts  $\sim$  concept learning  $\sim$  probabilistic language of thought  
 $\sim$  the nature of hypothesis spaces  $\sim$  large language models  $\sim$  question asking  $\sim$  learning from explanation  $\sim$   
the frame problem  $\sim$  ad-hoc alternatives  $\sim$  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	<b>Carolyn Euliano Endowed Scholarship in Mathematics</b> , University of Central Florida
Summer 2020	<b>Carnegie Mellon University Summer Research Fellow</b> (NIH Funded)
2018	<b>EXCEL Scholar</b> , University of Central Florida
2018	<b>Pegasus Scholar</b> , University of Central Florida
2018	<b>Florida's Bright Futures Academic Scholar</b>
2018	<b>International Baccalaureate Diploma Recipient</b>

## Publications

**Johnston, L.\***, Hillman, N.\*, Danks, D. (2021). [Individual Differences in Causal Learning](#). *Proceedings of the 43<sup>rd</sup> Annual Conference of the Cognitive Science Society*.

\* *co-author*

## Conferences

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

**Johnston, L.C.<sup>Δ</sup>**, 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.<sup>Δ</sup>**, 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.<sup>Δ</sup>**, 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.<sup>Δ</sup>**, 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.<sup>Δ</sup>**, Hillman, N., Danks, D. (2021, March). [Individual Differences in Causal Learning](#). *UCF Student Scholar Symposium*. Poster presentation.

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

<sup>Δ</sup> *presenter*