Yaxin Liu
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EDUCATION AND EMPLOYMENT

Georgetown University Aug 2024 -
Postdoc Research Scientist

University of Bonn 2023 - 2024
Postdoc Research Associate

Emory University 2017 - 2023
Ph.D. in Psychology (Cognitive & Developmental Sciences)

University of Toronto 2013 - 2017
Honors B.Sc. Psychology & Cognitive Science, minor in linguistics
High Distinction

PUBLICATIONS

Liu, Y., Ayzenberg, V. & Lourenco, S.F (2024). Object geometry serves humans' intuitive physics of stability. *Sci Rep* 14, 1701. https://doi.org/10.1038/s41598-024-51677-5

Liu, Y., & Lourenco, S. F. (2024). Drift Diffusion Modeling of Gender Differences in Mental Rotation Tasks that Emphasize either Speed or Accuracy. *PsyArxiv*. https://doi.org/10.31234/osf.io/dfts3

Liu. Y., & Lourenco, S. F. (2023). Trial history influences the malleability of gender differences in children's mental rotation performance. *Proceedings of the Annual Meeting of the Cognitive Science Society,* 45. https://escholarship.org/uc/item/65j3s6g6#main

Lourenco, S. F., & **Liu, Y.** (2023). The Impacts of Anxiety and Motivation on Spatial Performance: Implications for Gender Differences in Mental Rotation and Navigation. *Current Directions in Psychological Science*, *0*(0). https://doi.org/10.1177/09637214231153072

Liu, Y., & Lourenco, S. (2022). Affective Factors Affect Visuospatial Decision-making: A Drift Diffusion Modeling Approach. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 44. https://escholarship.org/uc/item/9kd457qg

Liu, Y., & Lourenco, S. F. (2021). Visual perception of apparent motion follows minimization principles of geometry. *Journal of Experimental Psychology: Human Perception and Performance, 47(9), 1247-1252.* https://doi.org/10.1037/xhp0000938

CONFERENCE PRESENTATIONS

Liu. Y., & Lourenco, S. F (2022, July). Affective factors affect visuospatial decision-making: A drift diffusion modeling approach. Talk presented at the 44th Annual Meeting of the Cognitive Science Society (CogSci), Toronto, Canada.

Liu, Y., & Lourenco, S. F. (2022, Nov). Gender differences of motivation-related effects in childhood. Poster presented at the 3rd Mental Effort Workshop. Brown University, RI.

Liu, Y., & Lourenco, S. F. (2022, May). Drift diffusion modeling informs visuospatial decision making. Poster presented at the Vision Sciences Society. St.Pete Beach, FL. https://doi.org/10.1167/jov.22.14.3394

Liu, Y., Ayzenberg, V., & Lourenco, S. F. (2022, April). Children, adults, and machines use the geometric centroids of objects to judge physical stability. Poster presented at the Cognitive Development Society. Madison, WI.

Liu, Y., & Lourenco, S. F. (2020, July). Object stability is determined by geometric centroid. Poster presented at the 20th annual meeting of the Vision Sciences Society. V-VSS, Online. https://doi.org/10.1167/jov.20.11.1508

Liu, Y., & Lourenco, S. F. (2019, May). Perception of Apparent Motion is Constrained by Geometry, not Physics. Poster presented at the 19th annual meeting of the Vision Sciences Society. St. Pete Beach, FL. https://doi.org/10.1167/19.10.37b

Liu, Y., & Lourenco, S. F. (2019, Oct). Will it fall? The perceptual roots of physical stability in humans. Poster presented at the Cognitive Development Society. Louisville, KY.

Liu, Y., & Lourenco, S. F. (2019, June). Perception of Apparent Motion is Constrained by Geometry, not Physics. Poster presented at the International Conference on Predictive Vision. Toronto, Canada.

Liu, Y., & Banton, S, supervised by Prof. Ian Spence (2015, Mar). *Strategy Use and Spatial Visualization Ability in Mental Rotation.* Poster presented at the Undergraduate Research Forum, Faculty of Arts and Science, University of Toronto.

AWARDS, HONORS & FELLOWSHIPS

SIRE Graduate Fellowship in Social Sciences ($23,831)	2021
Laney Graduate School Professional Development Research Award ($2500)	2021
Finalist, Dean's Teaching Fellowship (Technology Enhanced)	2021
SIRE Fellowship in Natural Sciences ($8000, declined)	2021
Laney Graduate School Fellowship ($2500 each year)	2017 - 2022
The Ethel Treble and F Louis Barber Travelling Scholarship ($2000)	2017
The Regent's Participation Award ($1000)	2017
Dean's List Scholar, University of Toronto	2014 – 2017
Undergraduate Fellowship, University of Toronto ($21,700)	2016
The Joseph Wesley MacCallum Scholarship ($1000)	2016
The Regent's In-course Scholarship ($1000)	2014

Conference Awards

Cognitive Science Society Travel Grant (declined)	2023
Computational Cognitive Models of Learning and Development Workshop Travel Award	2023
The 3rd Mental Effort Workshop Travel Award	2022

SPSP Graduate Travel Award 2022
Cognitive Development Society Diversity Travel Award 2022

TALKS

Talent Promotion in Mathematics "Forum für Begabungsförderung in Mathematik" (2024, Mar). *Fostering Spatial Intelligence in Mathematics Education.*
University of Washington, Language, Cognition, & Development Lab meeting (2023, April). *Trial history influences the malleability of gender differences in children's spatial performance.*
Emory University, Psychology Research Seminar (2022, Oct). *Intuitive physics of object stability is informed by geometry.*
Emory University, Psychology Research Seminar (2021, March). *Attitude or Aptitude? The role of affective factors in mental rotation.*

RESEARCH EXPERIENCE

Hertz Chair for Artificial Intelligence and Neuroscience, University of Bonn 2023 – June 2024
Postdoctoral Research Associate (PI: Dr. Dominik Bach)

Lourenco Lab, Emory University 2017 - 2023
Graduate Student (Advisor: Dr. Stella Lourenco)

Duncan Lab, University of Toronto 2016 – 2017
Independent Project Student (Advisor: Dr. Katherine Duncan)

Engineering Psychology Lab, University of Toronto 2014 - 2017
Research Opportunity Student & Research Assistant (Advisor: Dr. Ian Spence)

Voice and Resonance Lab, Rehabilitation Science Institute, University of Toronto 2015 - 2016
Research Assistant (PI: Dr. Tim Bressmann)

TEACHING EXPERIENCE

Instructor of Record
Scholarly Inquiry and Research Fall 2022, Spring 2023
Sex and Cognition Summer 2022

Lab Instructor
Probability and Statistics Fall 2021
Laboratory in Experimental Methods Spring 2019, Spring 2022

Teaching Assistant
Statistics with SPSS Spring 2021
Cognitive Development Fall 2020
Introduction to Psychobiology and Cognition Fall 2018, 2019

MENTORING EXPERIENCE

Graduate Mentor, Scholarly Inquiry and Research Program 2022
Graduate Mentor, Annual Meetings of CogSci Society July 2022

Graduate Mentor, Emory Undergraduate Journal Club 2020 – 2021
Student Mentor, Research Opportunity Program, University of Toronto 2016-2017

Undergraduates mentored
Mrudhula Nithiyakumar, Research Assistant 2022 – 2023
Argie Dabrowski, Research Assistant 2022 - 2023
Anna Bulka, Research Assistant 2018 - 2019
So Ye Han, Research Assistant 2018 - 2020
Noyona Mukherji, Research Assistant 2018 - 2019

PROFESSIONAL MEMBERSHIPS

Vision Sciences Society (2019 -); Cognitive Development Society (2019 -); Cognitive Science Society (2020 -);

SERVICE

Application Reviewer, Neuromatch Academy April 2024
Panelist, Graduate School and Research Journeys, Emory Mar 2023
Reviewer, Summer Undergraduate Research Program, Emory Feb 2023
Technical Chair, 44th Annual Meetings of CogSci Society July 2022
Reviewer, The New School Psychology Bulletin 2021
Member, Curriculum Committee 2021
Member, Justice, Equity, Diversity, and Inclusion Committee 2020 - 2023

PUBLIC OUTREACH & ACTIVITIES

Graduate Women's Collective, Center for Women, Emory 2021-2022
Volunteer, Fernbank Museum - Adventures in Science Day 2018, 2019
Volunteer, Atlanta Science Festival 2018
Graduate Teacher, Roots & Shoots, Toolmer Elementary School, Atlanta 2017-2018
Literacy Tutor, Chalkfarm Public School, Toronto, Canada 2015
Music Therapist, Fellburn Care Center, BC, Canada 2012-2013

EXTRA TRAINING

Virtual Reality Specialization 2024
Computational Cognitive Models of Learning and Development Workshop, Harvard 2023
Deep Learning (application based), Neuromatch Academy 2021
Computational neuroscience (application based), Neuromatch Academy 2020
Applied Analysis of Behavior Certification, Geneva Institute of Autism, Toronto 2016
Vision Science Summer School (competitive entry), Center for Vision, York University 2016

Languages: English (professional fluency); Chinese (native fluency); German (elementary)