ALYSSA H. SINCLAIR

Curriculum Vitae

Duke University, Center for Cognitive Neuroscience, Durham, NC Lab Phone: (919)-681-4601

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Research Interests: Prediction error, memory & belief updating, learning, decision making, hippocampus

Education

Ph.D., Duke University — Psychology & Neuroscience, Cognitive Neuroscience	2018 – 2023
Cumulative GPA: 4.0/4.0 Advisors: Prof. R. Alison Adcock & Prof. Gregory R. Samanez-Larkin Committee Members: Prof. Elizabeth Marsh & Prof. Felipe De Brigard	(anticipated)
M.A., Duke University — Psychology & Neuroscience, Cognitive Neuroscience Cumulative GPA: 4.0/4.0	2018-2021
B.Sc. with High Distinction, Valedictorian, University of Toronto - Research Psychology	2014 — 2018
Cumulative GPA: 4.0/4.0, recipient of the Governor General's Academic Medal Honors Thesis: Prediction Error Influences Episodic Memory Reconsolidation Advisors: Prof. Morgan Barense & Prof. William Cunningham	

Teaching Experience

Lecturer — Cognitive Neuroscience Research Internship, Duke University	2020-2021
Topics: Cog Neuro Methods, Memory & Motivation, Reinforcement Learning	
Lecturer — Duke Neuro Methods Workshops, Duke University	2020-2021
Topics: Mixed Effects Regression, Advanced Data Visualization	
Teaching Assistantships — Dep. of Psychology & Neuroscience, <i>Duke University</i>	
NEUROSCI101: Biological Bases of Behavior, Team-Based (Prof. Minna Ng)	2021
PSY444: Neuroscience Service Learning (Prof. Minna Ng)	2021
NEUROSCI101: Biological Bases of Behavior (Profs. Karen Murphy & Minna Ng)	2020
Teaching Assistantship — Victoria College, <i>University of Toronto</i>	
VIC171: Method, Theory, & Practices in Natural Sciences (Prof. Brian Baigrie)	2017-2018
Independent Tutor for University and High School Students - Toronto, ON	2016-2018

Preprints

Sinclair, A.H., Taylor, M.K., Brandel-Tanis, F., Davidson, A., Chande, A.T., Rishishwar, L., Andris, C., Adcock, R.A., Weitz, J.S., Samanez-Larkin, G.R., & Beckett, S.J. (2022). Counteracting COVID-19 risk misestimation with an interactive website: An online informational intervention. *PsyArXiv*. DOI: https://doi.org/10.31234/osf.io/v8tdf

Publications

- Sinclair, A.H., Manalili, G.M., Brunec, I.K., Adcock. R.A., & Barense, M.D. (2021).

 Prediction errors disrupt hippocampal representations and update episodic memories. *Proceedings of the National Academy of Sciences*, 118, e2117625118. DOI:
 - https://doi.org/10.1101/2020.09.29.319418
- Sinclair, A.H.*, Hakimi, S.*, Stanley, M.L., Adcock. R.A., & Samanez-Larkin, G.R. (2021).

 Pairing facts with imagined consequences improves pandemic-related risk perception. *Proceedings of the National Academy of Sciences*, 118(32), e2100970118.
 - DOI: https://doi.org/10.1073/pnas.2100970118 *Denotes equal contribution.
- Sinclair, A.H., Stanley, M.L., Hakimi, S., Cabeza, R., Adcock. R.A., & Samanez-Larkin, G.R. (2021). Imagining a personalized scenario selectively increases perceived risk of viral transmission for older adults. *Nature Aging*, 1. DOI: https://doi.org/10.1038/s43587-021-00095-7
- **Sinclair, A.H.**, Stanley, M.L., & Seli, P. (2020). Closed-minded cognition: Right-Wing Authoritarianism is negatively related to belief updating following prediction error. *Psychonomic Bulletin and Review*, 27, 1348–1361. DOI: https://doi.org/10.31234/osf.io/94a7v
- Stanley, M.L., **Sinclair, A.H.**, & Seli, P. (2020). Intellectual humility and perceptions of political opponents. *Journal of Personality*, 88(6), 1-21. DOI: https://doi.org/10.1111/jopy.12566
- Sinclair, A.H. & Barense, M.D. (2019). Prediction error and memory reactivation: How incomplete reminders drive reconsolidation. *Trends in Neurosciences*, 42(10), 728-740. DOI: https://doi.org/10.31234/osf.io/h8fy9
- Sinclair, A.H. & Barense, M.D. (2018). Surprise and destabilize: Prediction error influences episodic memory reconsolidation. *Learning & Memory*, 25(8), 369-381. DOI: https://doi.org/10.1016/j.tins.2019.08.007

Conference Talks

- **Sinclair, A.H.**, Hakimi, S., Stanley, M.S., Adcock. R.A., Samanez-Larkin, G.R. (2021, July). Pairing facts with imagined consequences improves pandemic-related risk perception. *Society for Applied Research on Memory and Cognition*, Virtual Conference.
- **Sinclair, A.H.,** Manalili, G.M., & Barense, M.D. (2019, June). Surprise drives episodic memory updating and distortion. *Society for Applied Research on Memory and Cognition*, Cape Cod, MA.
- **Sinclair, A.H.** & Barense, M.D. (2018, May). Prediction error influences episodic memory reconsolidation. *Toronto Area Memory Group Conference*, Toronto, ON.
- **Sinclair, A.H.** & Barense, M.D. (2018, May). Prediction error influences episodic memory reconsolidation. *Undergraduate Thesis Conference*, Toronto, ON. *Awarded Notable Presentation.
- **Sinclair, A.H.** & Barense, M.D. (2018, April). Surprise and destabilize: Prediction error influences episodic memory reconsolidation. *NeuroXchange Conference*, Hamilton, ON.

Poster Presentations

- Sinclair, A.H., Hakimi, S., Stanley, M.S., Adcock. R.A., & Samanez-Larkin, G.R. (2020, October). Perceived vs. actual virus transmission risk during the COVID-19 pandemic. *Society for Neuroeconomics*, Virtual Conference.
- **Sinclair, A.H.**, Hakimi, S., Adcock. R.A., & Barense, M. D. (2020, August). Effective connectivity among cortico-hippocampal regions predicts memory for naturalistic episodes. *Context and Episodic Memory Symposium*, Virtual Conference.
- **Sinclair, A.H.**, Poh, J.H., Adcock. R.A., & Barense, M. D. (2020, May). Neural representations of emotional valence and intensity during naturalistic events. *Cognitive Neuroscience Society*, Virtual Conference.
- Sinclair, A.H., Manalili, G.M., & Adcock, R.A., & Barense, M. D. (2019, Nov). Surprising event boundaries modulate hippocampal activity and distort episodic memories. *Psychonomic Society*, Montreal, QC.
- **Sinclair, A.H.**, Manalili, G.M., Adcock, R.A., & Barense, M. D. (2019, Oct). Prediction errors at event boundaries drive episodic memory reconsolidation. *Society for Neuroscience*, Chicago, IL. *Trainee Professional Development Award
- **Sinclair, A.H.,** Manalili, G.M., & Barense, M.D. (2019, Apr). Neural mechanisms of prediction error and episodic memory distortion. *Smokies Cognition and Neuroscience Symposium*, Asheville, NC.
- Sinclair, A.H., Manalili, G.M., & Barense, M.D. (2019, Mar). Neural mechanisms of episodic memory reconsolidation: A critical role for prediction error. *Cognitive Neuroscience Society*, San Fran., CA.
- **Sinclair, A.H.** & Barense, M. D. (2017, Nov). Surprise and destabilize: Prediction error triggers episodic memory updating. *Society for Neuroscience*, Washington, D.C.
- **Sinclair, A.H.** & Barense, M. D. (2017, Apr). Prediction errors in episodic memory reconsolidation. *NeuroXchange Conference*, McMaster University, Hamilton, ON. *Outstanding Poster Award.

Fellowships & Grants

Graduate Research Fellowship, National Science Foundation	\$138,000, 2019—23
Charles Lafitte Foundation Outreach Grant, Duke University, CNRI	\$36,434, 2021–22
Research Germinator Award, Duke Institute for Brain Sciences	\$25,000, 2019—22
Postgraduate Scholarship, Natural Sci. and Eng. Research Council of Canada	\$63,000, 2019—22
James B. Duke Graduate Fellowship, Duke University	\$20,000, 2018—2022
Special Topics COVID-19 Research Grant, Duke University	\$2,500, 2020
NSERC Canada Graduate Scholarship- Master's (Declined)	\$17,500, 2018
NSERC Undergraduate Student Research Award, University of Toronto	\$5,625, 2018
Undergraduate Research Grant, University of Toronto	\$1,500, 2018
George Mandler Research Fund, University of Toronto	\$550, 2018

Awards & Honors

Trainee Professional Development Award, Society for Neuroscience	2019
SARMAC 2019 Travel Award, Society for Applied Research on Memory & Cognition	2019
Charles Lafitte Foundation Travel Awards, Duke University	2018, 2019
Governor General's Academic Medal, Government of Canada, University of Toronto	2018
National award granted to the highest-performing undergraduate student.	
John Black Aird Scholarship, University of Toronto	2018
Awarded to the top student of the graduating class (of 18,500 students).	
Rose Sheinin Award, University of Toronto	2018
Awarded for academic excellence in an undergraduate science program.	
Women's Centenary Silver Medal, Victoria College, University of Toronto	2018
Treble & Barber Graduate Studies Scholarship, Victoria College, University of Toronto	2018
Dean's List Scholar, University of Toronto	2014-18
James Mark Baldwin Prize for Best Essay, University of Toronto	2017
Moscovitch Award for Outstanding Contribution to Discussion, TAMeG Conference	2017
Outstanding Poster Presentation, NeuroXchange Conference	2017
University of Toronto Scholars Award, University of Toronto	2014-17
Academic Merit Scholarships, Victoria College, University of Toronto	2014-17

Skills

- fMRI Data Collection & Analysis (FSL, SPM)
- Computational fMRI Analysis (NeuroHackademy 2020)
- Transcranial Magnetic Stimulation Certification
- Programming and statistics with R, Python, Bash, Psychopy/Pavlovia, MATLAB, SPSS, & EyeLink
- Data Visualization with R and Adobe Illustrator

Affiliations

- Society for Neuroscience
- Cognitive Neuroscience Society
- Society for Applied Research in Memory and Cognition
- Society for Neuroeconomics
- Psychonomic Society

Service & Outreach

Ad Hoc Reviewer — Psychological Science, Nature Communications, Journal of Cognitive Neuroscience, Learning & Memory, Cognition, Learning & Motivation, Memory & Cognition, Neuropsychologia, Journal of Applied Research on Memory and Cognition, WIREs Cognitive Science, Personality Science

Nominated Representative — Graduate Student Affairs, Duke University

Graduate Student Liaison representing the Cognitive Neuroscience Program.

2019-Present

Project Coordinator & Mentor — Cognitive Neuroscience Research Internship

Contributed to developing and leading a research internship program that provides equitable and accessible research opportunities for undergraduate students from historically underrepresented backgrounds. Lectured, mentored, performed administration, and obtained funding (Charles Lafitte Foundation Outreach Grant). https://sites.duke.edu/cogneuroresearchinternship/

2020-Present

Service Learning Facilitator — Neuroscience Service Learning Course, Duke University
Contributed to developing and facilitating a new service learning course.
Forged new connections with local community partners that support K-8 children in underserved neighborhoods. Oversaw the design, production, and donation of educational activity kits that introduce children to neuroscience.

2021

Mentor — Científico Latino: Graduate School Mentorship Initiative
Guided STEM graduate school applicants from underrepresented minorities.
Revised graduate and NSF-GRFP applications, conducted mock interviews.

2019-Present

• **Volunteer Editor** — The Inkblot: Undergraduate Journal of Psychology Reviewed & edited papers from undergraduate psychology students. 2017-2018

Let's Talk Science Challenge — University of Toronto

2017

Outreach poster fair, communicating neuroscience to middle school students.

References

Prof. Gregory R. Samanez-Larkin, Duke University

Prof. R. Alison Adcock, Duke University

Prof. Morgan D. Barense, *University of Toronto*

Prof. Minna Ng, Duke University

Prof. William Cunningham, University of Toronto

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