

Dhairyya Singh
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ACADEMIC POSITIONS

Postdoctoral Research Associate, Princeton University Princeton Computational Memory Lab PI: Dr. Kenneth Norman	2026-Present
Research Specialist, University of Pennsylvania Penn Computational Cognitive Neuroscience Lab PI: Dr. Anna Schapiro	2019-2020
Teaching Fellow, Ashoka University Department of Psychology PI: Dr. Bittu Rajaraman	2018-2019

EDUCATION

University of Pennsylvania PhD., Psychology Interdisciplinary Training in Computational Neuroscience (ITCN) PI: Dr. Anna Schapiro Committee: Dr. Sudeep Bhatia & Dr. Sharon Thompson-Schill	Spring 2021- Spring 2026
Ashoka University Post-Graduate Diploma in Advanced Studies and Research (DipASR) – Psychology (Advanced Major) and Computer Science (Minor) Magna cum Laude	2017-2018
Ashoka University B.A., Psychology (Major) Magna cum Laude	2014-2017

HONORS AND GRANTS

Society for Neuroscience Trainee Professional Development Award (TPDA)	2021
IBRO-Simons Computational Neuroscience Imbizo Summer School Attendee, Cape Town, South Africa	2019
NCBS Computational Approaches to Memory and Plasticity (CAMP) Summer School Attendee, Bangalore, India	2019
Department of Psychology, Best Undergraduate Thesis Award	2018
Dean of Faculty and Research Travel Grant	2018
Dean's List For both DipASR semesters	2017-2018
For all six B.A. semesters	2014-2017
Dean of Faculty and Research Travel Grant	2017
Department of Psychology, Builder's Award	2017
APA Division Society for Personality and Social Psychology Summer Program for Undergraduate Research (SPUR) Scholar	2016

PUBLICATIONS & PREPRINTS

Singh, D.*, Dong, C.*, Tandoc., M. C. & Schapiro, A. C. (in review). Statistical learning drives predictive shifts in object memory. *Journal of Experimental Psychology: General*.
https://doi.org/10.31234/osf.io/yuxb6_v1

* Equal contribution

Singh, D., Schapiro, A. C. (2026). Evidence for complementary learning systems within the hippocampus. *Philosophical Transactions of the Royal Society B: Biological Sciences*.

Zhou, Z., **Singh, D.**, Tandoc, M. C., & Schapiro, A. C. (2023). Building integrated representations through interleaved learning. *Journal of Experimental Psychology: General*, 152(9), 2666–2684. <https://doi.org/10.1037/xge0001415>

Singh, D., Norman, K. A., & Schapiro, A. C. (2022). A model of autonomous interactions between hippocampus and neocortex driving sleep-dependent memory consolidation. *Proceedings of the National Academy of Sciences*, 119(44), e2123432119.
<https://doi.org/10.1073/pnas.2123432119>

Majeed, N. A., **Singh, D.**, et al. (2022). Symbolic quantitative cognition in wild zebrafish (*Danio rerio*). *bioRxiv*. <https://doi.org/10.1101/2022.03.17.484678>

Singh, D., & Chatterjee, G. (2017). The evolution of religious belief in humans: A brief review with focus on cognition. *Journal of Genetics*, 96(3), 517-524.
<https://doi.org/10.1007/s12041-017-0794-7>

PRESENTATIONS

Singh, D., Williams, A.B., & Schapiro, A.C. (2025, August 12-15). *Resolving the tension between exemplar and structure learning through a mixture-of-experts model of hippocampal-PFC interactions*. [Poster presentation]. Cognitive Computational Neuroscience, Amsterdam, The Netherlands.

Singh, D.*, Dong, C.*, Tandoc, M. & Schapiro, A.C. (2024, April 13-16). *Statistical learning drives predictive shifts in object memory*. [Symposium presentation]. Cognitive Neuroscience Society, Toronto, ON, Canada.

Singh, D.*, Dong, C.*, Tandoc., M. & Schapiro, A.C. (2022, November 12-16). *Predictive shifts in object representations with statistical learning*. [Poster presentation]. Society for Neuroscience, San Diego, CA, United States.

Singh, D., Norman, K.A., & Schapiro, A.C. (2022, May 12-13). *A model of autonomous interactions between hippocampus and neocortex driving sleep-dependent memory consolidation*. [Conference presentation]. Context and Episodic Memory Symposium, Philadelphia, PA, United States.

Dong, C.*, **Singh, D.***, Tandoc., M. & Schapiro, A.C. (2022, May 12-13). *Predictive shifts in object representations with statistical learning*. [Poster presentation]. Context and Episodic Memory Symposium, Philadelphia, PA, United States.

Singh, D., Norman, K.A., & Schapiro, A.C. (2021, November 8-11). *A neural network model of sleep-dependent consolidation via autonomous hippocampal-cortical replay* [Conference presentation]. Society for Neuroscience, Online.

Singh, D., & Rajaraman, K. (2018, July). *Simple numerical cognition in zebrafish (Danio rerio)*. [Poster presentation]. International Congress of Neuroethology, Brisbane, Australia.

INVITED TALKS

Lab meeting, Favila Lab, Brown University	Spring 2026
CNI +/-	Spring 2025
Penn Chronobiology and Sleep Institute Research Meeting	Spring 2023
Penn Memory Seminar	Fall, 2022
Lab meeting, Norman Lab, Princeton University	Spring 2022

GUEST LECTURES

PSYC3300 Seminar in Sleep and Memory Topic: “ <i>Computational Models of Sleep</i> ” Instructor: Prof. Anna Schapiro	Spring, 2023
PSYC429 Seminar in Sleep and Memory Topic: “ <i>Computational Models of Sleep</i> ” Instructor: Prof. Anna Schapiro	Spring, 2022

MENTORSHIP

Cody V. Dong (Penn Undergraduate) MindCORE Summer Fellowship winner	Spring 2021 – Summer 2022
Jason Lim (Penn Undergraduate) Greenberg Fellowship winner	Spring 2023 – Fall 2023

TEACHING EXPERIENCE

Teaching Assistant, PSYC1530-401 Memory Instructor: Prof. Anna Schapiro; 100 Students (Penn)	Fall, 2022
Teaching Assistant, PSYC149-401 Cognitive Neuroscience Instructor: Prof. Michael Arcaro; 105 Students (Penn)	Spring, 2022
Teaching Fellow, BIO205/PSY211 Introduction to Neuroscience Instructor: Prof. Kaveri Rajaraman; 35 Students (Ashoka)	Spring, 2019
Teaching Fellow, PSY202 Statistics and Research Methodology II Instructor: Prof. Rashmi Nayyar; 75 Students (Ashoka)	Spring, 2019
Teaching Fellow, BIO205/PSY211 Introduction to Neuroscience Instructor: Prof. Kaveri Rajaraman; 90 Students (Ashoka)	Fall, 2018
Teaching Assistant, PSY202 Statistics and Research Methodology II Instructor: Prof. Kai Qin Chan; 45 Students (Ashoka)	Spring, 2018

AD HOC REVIEWING

Nature; eLife; Journal of Cognitive Neuroscience; PLOS One, Open Mind

SERVICE

MindCORE Representative, DEEPenn STEM Resource Fair	2025
Data and Outcomes Committee Member, Penn MindCORE Mind DivE In	2024, 2025
Prospective Graduate Student Panel, Dept. of Psychology	2024, 2025
PhD Application Support, Neuroscience Graduate Group	2023
Graduate Student Representative, Dept. of Psychology	2022-23
Journal Club Leader, Penn High School Neuroscience Research Academy	2022, 2023, 2024, 2025
Mentor, Penn MindCORE Mind DivE In	2021, 2023, 2025