

MANASI JAYAKUMAR, Ph.D.

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<https://manasijkumar.github.io>

EDUCATION

Ph.D. in Psychology	Columbia University, New York, NY Advisor: Dr. Mariam Aly Attentional fluctuations and the temporal organization of memory: Insights from behavioral and pupillometry measures	2024
M.Phil in Psychology	Columbia University, New York, NY	2022
M.A. in Psychology	Columbia University, New York, NY	2020
M.S. in Applied Cognition and Neuroscience	The University of Texas at Dallas, Richardson, TX	2016
B.E. (Hons.) in Biotechnology	Birla Institute of Technology and Science, Dubai, U.A.E.	2013

ACADEMIC APPOINTMENTS

Assistant Professor	Department of Psychology, Oberlin College, Oberlin, OH	2024–present
Teaching Scholar	Department of Psychology, Columbia University, New York, NY	2023–2024
Lab Manager	Stanford Memory Lab, Stanford University, Palo Alto, CA Advisor: Dr. Anthony D. Wagner	2016–2018
Graduate Research Assistant	Functional Neuroimaging of Memory Lab, University of Texas at Dallas, Richardson, TX Advisor: Dr. Michael D. Rugg	2015–2016

AWARDS AND FELLOWSHIPS

Presidential Award for Outstanding Teaching by a Graduate Instructor, Columbia University	2024
Teaching Scholar, Graduate School of Arts & Sciences, Columbia University	2023–2024
Teaching Assessment Fellowship, Columbia University	2023–2024
Graduate Student Travel Grant, Society for the Teaching of Psychology	2023
Google Cloud Academic Research Grant	2022–2023

Lead Teaching Fellowship, Columbia University	2022–2023
Emil S. Bahary Fellowship, Columbia University	2019–2020
Dean’s Fellowship, Graduate School of Arts & Sciences, Columbia University	2018–2023
Graduated with Distinction and Honors	2013
Merit Scholarship for obtaining CGPA above 9.0/10.0, BITS Pilani, Dubai	2011–2013
Dean’s Merit List for obtaining CGPA above 9.0/10.0, BITS Pilani, Dubai	2011–2013

PRE-PRINTS UNDER REVIEW

☺author is/was an undergraduate research mentee.

+author is/was a post-baccalaureate research scholar.

Jayakumar, M., Tsegai-Moore, A.⁺, Nemeth, C.[☺], Aly M., (2024). Pupil size at encoding predicts the temporal structure of memory. *PsyArXiv*. <https://doi.org/10.31234/osf.io/bzqfu>

PEER-REVIEWED PUBLICATIONS

☺author is/was an undergraduate research mentee.

+author is/was a post-baccalaureate research scholar.

Jayakumar, M., Balusu, C.[☺], & Aly, M. (2023). Attentional fluctuations and the temporal organization of memory. *Cognition*, 235, 105408. <https://doi.org/10.1016/j.cognition.2023.105408>

Trelle, A. N., Carr, V. A., Wilson, E. N., Swarovski, M. S., Hunt, M. P., Toueg, T. N., Tran, T.T., Channappa, D., Corso, N. K., Thieu, M. K., **Jayakumar, M.**, Nadiadwala, A., Guo, W., Tanner, N. J., Bernstein, J. D., Litovsky, C.P., Guerin, S. A., Guerin, S. A., Harrison, M. B., Rutt, B. K., Deutsch, G. K., Chin, F.T., Davidzon, G.A., Hall, J.N., Sha, S. J., Fredericks, C. A., Andreasson, K.I., Kerchner, G. A., Wagner, A. D., Mormino, E. C. (2021). Association of CSF biomarkers with hippocampal-dependent memory in preclinical Alzheimer disease. *Neurology*, 96(10), e1470-e1481.

Hou, M., de Chastelaine, M., **Jayakumar, M.**, Donley, B. E., & Rugg, M. D. (2020). Recollection-related hippocampal fMRI effects predict longitudinal memory change in healthy older adults. *Neuropsychologia*, 146, 107537. <https://doi.org/10.1016/j.neuropsychologia.2020.107537>

Trelle, A. N., Carr, V. A., Guerin, S. A., Thieu, M. K., **Jayakumar, M.**, Guo, W., Nadiadwala, A., Corso, N. K., Hunt, M. P., Litovsky, C. P., Tanner, N. J., Deutsch, G. K., Bernstein, J. D., Harrison, M. B., Khazenzon, A. M., Jiang, J., Sha, S. J., Fredericks, C. A., Rutt, B. K., Mormino, E. C., Kerchner, G. A., Wagner, A. D. (2020). Hippocampal and cortical mechanisms at retrieval explain variability in episodic remembering in older adults. *ELife*, 9, e55335. <https://doi.org/10.7554/eLife.55335>

Jayakumar, M.*, Tarder-Stoll, H.*, Dimsdale-Zucker, H.R., Günseli, E., & Aly, M. (2019). Dynamic internal states shape memory retrieval. *Neuropsychologia*, 138, 107328. <https://doi.org/10.1016/j.neuropsychologia.2019.107328>

*denotes equal contribution to first authorship.

CONFERENCE TALKS

ºauthor is/was an undergraduate research mentee.

+author is/was a post-baccalaureate research scholar.

Jayakumar, M., Tsegai-Moore, A.S. +, Nemeth, C.º, Aly, M.. (2024, June). Pupil Size at Encoding Predicts Temporal Organization of Memory. Talk presented at the Manhattan Area Memory Meeting, New Haven, CT.

CONFERENCE PRESENTATIONS

ºauthor is/was an undergraduate research mentee.

+author is/was a post-baccalaureate research scholar.

Jayakumar, M., Tsegai-Moore, A.S. +, Nemeth, C.º, Khine M.T.º, Aly, M. (2023, November). Pupil-based Measures of Attention and the Temporal Organization of Recall. Poster presented at the Psychonomic Society's 64th Annual Meeting, San Francisco, CA.

DiGiovanni, A. *, **Jayakumar, M. ***, Gasser, C. *, Bloom, P. +, Vannucci, A. +, Durazi, A., Espinoza-Heredia, C., Lomestoire, A., Silver, B. (2022, March). Summer Internship Program in Psychological Sciences (SIPPS): Engaging students in hands-on research opportunities. Poster presented at the Celebration of Teaching and Learning Symposium, Columbia University, New York, NY. **denotes equal contribution to authorship.

Jayakumar, M., Balusu, C.º, Aly, M. (2021, August). Spontaneous attentional fluctuations and the temporal organization of recall. Poster presented at the Context and Episodic Memory Symposium, Philadelphia, PA.

Jayakumar, M., Balusu, C.º, Aly, M. (2021, March). Spontaneous attentional fluctuations and the temporal organization of recall. Poster presented at the Cognitive Neuroscience Society virtual meeting.

Kidwai, A., Hou, M., de Chastelaine, M., **Jayakumar, M.**, Rugg, M. D. (2021, March). Hippocampal tail volume predicts longitudinal memory change in healthy older adults. Poster presented at the Cognitive Neuroscience Society virtual meeting.

Harrison, M., Carr, V.A., Corsol, N., Deutsch, G., Fredericks, C., Guerin, S., Guo, W., Hunt, M., **Jayakumar, M.**, Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Mormino, E. C., Nadiadwala, A., Sha, S., Tanner, N., Thieu, M., Trelle, A.N., Wagner, A. D. (2019, October). Individual differences in neural differentiation during episodic encoding predict associative retrieval in putatively healthy older adults. Poster presented at the Society for Neuroscience meeting. Chicago, IL.

Harrison, M., Bernstein, J., Carr, V.A., Corsol, N., Deutsch, G., Fredericks, C., Guerin, S., Guo, W., Hunt, M., **Jayakumar, M.**, Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Mormino, E. C., Nadiadwala, A., Sha, S., Tanner, N., Thieu, M., Trelle, A.N., Wagner, A. D. (2019, January). Individual differences in neural pattern similarity during encoding relate to memory performance in putatively healthy older adults. Poster presented at the Dallas Aging and Cognition Conference. Dallas, TX.

Trelle, A.N., Bernstein, J., Carr, V.A., Corsol, N., Deutsch, G., Fredericks, C., Guerin, S., Guo, W., Harrison, M., Hunt, M., **Jayakumar, M.**, Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Mormino, E. C., Nadiadwala, A., Sha,

S., Tanner, N., Thieu, M., Wagner, A. D. (2019, January). Cortical differentiation, hippocampal integrity, and amyloid burden are linked to individual differences in episodic memory decline with age. Poster presented at the Dallas Aging and Cognition Conference. Dallas, TX.

Mormino, E.C., Nadiadwala, A., Azevedo, C., Guo, W., Castillo, J.B., Hall, J.N., Trelle, A.N., Sha, S., **Jayakumar, M.**, Tanner, N., Harrison, M., Deutsch, G., Fredericks, C.A., Greicius, M.D., Srinivas, S.M., James, M.L., Zaharchuk, G., Wagner, A.D., Chin, F.T. (2018, July). P4-315: Tau PET imaging with ¹⁸F-PI2620 in aging and Alzheimer's disease. *Alzheimer's & Dementia*, 14: P1577-P1578. Poster presented at the Alzheimer's Association International Conference. Chicago, IL. doi:[10.1016/j.jalz.2018.07.138](https://doi.org/10.1016/j.jalz.2018.07.138)

Trelle, A.N., Bernstein, J., Carr, V.A., Deutsch, G., Fredericks, C.A., Guerin, S.A., Guo, W., Harrison, M., **Jayakumar, M.**, Jiang, J., Kerchner, G.A., Khazhenzon, A., Litovsky, C., Mormino, B.C., Nadiadwala, A., Sha, S., Tanner, N., Thieu, M., Wagner, A.D. (2018, July), P4-322: The Contribution of Early Alzheimer's Disease Markers to Individual Differences in Episodic Memory in Cognitively Normal Older Adults. *Alzheimer's & Dementia*, 14: P1585-P1585. Poster presented at the Alzheimer's Association International Conference. Chicago, IL. doi:[10.1016/j.jalz.2018.07.145](https://doi.org/10.1016/j.jalz.2018.07.145)

Trelle, A.N., Bernstein, J., Carr, V.A., Fredericks, C., Guerin, S., Guo, W., **Jayakumar, M.**, Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Sha, S., Thieu, M., Wagner, A. D. (2018, April). Cortical representations during memory encoding and retrieval predict successful associative memory retrieval in healthy older adults. Poster presented at the International Conference on Learning & Memory. Huntington Beach, CA.

Trelle, A.N., Bernstein, J., Carr, V.A., Fredericks, C., Guerin, S., Guo, W., **Jayakumar, M.**, Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Mormino, B., Sha, S., Tanner, N., Thieu, M., Wagner, A. D. (2018, March). Parietal and occipitotemporal cortical reinstatement differentially predicts successful associative memory retrieval in older adults. Poster presented at the Cognitive Neuroscience Society meeting. Boston, MA.

Trelle, A.N., Bernstein, J., Carr, V.A., Fredericks, C., Guerin, S., Guo, W., **Jayakumar, M.**, Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Sha, S., Thieu, M., Wagner, A. D. (2017, November). Cortical and hippocampal predictors of individual differences in episodic memory in putatively healthy older adults. Poster presented at the Society for Neuroscience meeting. Washington D.C.

Jayakumar, M., de Chastelaine, M., Donley, B.E., Kennedy K., Rugg, M.D. (2016, November). Relationship between episodic memory performance, fMRI correlates of encoding and retrieval and estimates of regional brain structure in older adults. Poster presented at the Society for Neuroscience meeting. San Diego, CA.

TEACHING EXPERIENCE

Instructor of Record

Introduction to Psychological Science, Oberlin College Fall 2024
40-student introductory undergraduate psychology lecture, in-person

Complex Cognition, Oberlin College Fall 2024
40-student intermediate undergraduate psychology lecture, in-person

Cognition Research: From lab to life!, Columbia University Fall 2023
12-student upper-level undergraduate psychology seminar, in-person

Co-Instructor

How-Tos of Research, Columbia University Spring 2023
30-student intermediate undergraduate psychology course, in-person

Lab Section Instructor

Research Methods: Cognition and Decision Making, Columbia University Fall 2021
70-student upper-level undergraduate psychology course, hybrid

Statistics for Behavioral Scientists, Columbia University Spring 2021
60-student upper-level undergraduate psychology course, virtual

Teaching Assistant

Cognition: Basic Processes, Columbia University Spring 2024
110-student intermediate undergraduate psychology course, in-person

The Science of Psychology, Columbia University Fall 2019
120-student introductory undergraduate psychology course, in-person

Mind, Brain, and Behavior, Columbia University Spring 2019
120-student introductory undergraduate psychology course, in-person

Physics Measurement Techniques Lab, BITS Pilani, Dubai Fall 2011
30-student intermediate undergraduate laboratory course, in-person

Workshops Developed and Instructed

Lead Teaching Fellow Workshop, Department of Psychology, Columbia University 2023
Pedagogy workshop titled “Agency as a TA: Building Relationships with our students and creating inclusive environments”

Summer Internship Program in Psychological Sciences ([SIPPS](#)), Columbia University 2021–2023
Co-developed the flipped classroom style workshop curriculum (R programming, research skills, professional development), and instructed 11 workshops over the three years.

Psychology Department Symposium, Columbia University 2021
“How to make the most of your RA experience” workshop for undergraduate students

Columbia Psychology Scientific Computing Workshops, Columbia University 2020, 2021
Introduction to R programming, Python programming fundamentals for R Users

PEDAGOGY TRAINING

Teaching Development Program - Advanced Track

2020–2024

Center for Teaching and Learning (CTL), Columbia University

- Engaged in a 5-week intensive seminar on inclusive teaching practices and created my statement of inclusive teaching
- Participated and reflected on CTL workshops including ones on metacognition, active learning, and assessment and feedback
- Conducted a guest lecture that was observed by the CTL director
- Designed a policy sheet and a first-day plan for teaching to detail the objectives and goal for the first day of class

PEDAGOGY PRESENTATIONS

Conference Talks

Jayakumar, M., DiGiovanni, A., Gasser, C., Bloom, P., Vannucci, A. (2023, October). Summer Internship Program in Psychological Sciences: Engaging students in hands-on research opportunities. Talk presented at the Society for the Teaching of Psychology's 22nd Annual Conference on Teaching held in Portland, OR.

DiGiovanni, A., **Jayakumar, M.**, Vannucci, A. (2023, October). Capitalizing on Scaffolded Assessments to Teach Open Science and Research Methods. Talk presented at the Society for the Teaching of Psychology's 22nd Annual Conference on Teaching held in Portland, OR.

Poster Presentations

Jayakumar, M.*, DiGiovanni, A.*, Gasser, C.*, Bloom, P.⁺, Vannucci, A.⁺, Durazi, A., Espinoza-Heredia, C., Lomestoire, A., Silver, B. (2022, March). Summer Internship Program in Psychological Sciences (SIPPS): Engaging students in hands-on research opportunities. Poster presented at the Celebration of Teaching and Learning Symposium, Columbia University, New York, NY. **denotes equal contribution.

MENTORING EXPERIENCE

Research Mentees

Cecilia Nemeth, Undergraduate Research Assistant, Columbia University	2022–present
Aria Tsegai-Moore, Post-Baccalaureate Scholar, Columbia University	2021–2023
Moe Khine, Undergraduate Research Assistant, Columbia University	2021–2023
Chinmayi Balusu, Undergraduate Research Assistant, Columbia University	2019–2022
Clementine Chou, Undergraduate Research Assistant, Stanford University	2016–2018

Mentee Presentations

^omentee is/was an undergraduate student

⁺mentee is/was a post-baccalaureate scholar in the Columbia University Bridge to the Ph.D. program

Tsegai-Moore, A.⁺, Jayakumar, M., Aly, M. (2023, July) The influence of Attentional Fluctuations on Memory. Poster presented at the Columbia University Pathways Program Symposium, New York, NY.

Nemeth, C.º, Jayakumar, M., Tsegai-Moore, A.+, Aly, M. (2022, October) How do attentional fluctuations during encoding influence memory? Poster presented at the Columbia Undergraduate Research Symposium, New York, NY.

Nemeth, C.º, Jayakumar, M. (2022, August) How do attentional fluctuations affect the semantic organization of memory? Poster presented at the SIPPS 2022 Mini-Research Conference, New York, NY.

Tsegai-Moore, A.+, Jayakumar, M., Aly, M. (2022, June) The Influence of Attentional Fluctuations on Memory. Talk presented at the Bridge to the Ph.D. Annual Symposium, New York, NY.

Balusu, C.º, Jayakumar, M., Aly, M., (2020, May) How Does Attentional State Influence Temporal Organization of Memory? Poster presented at the Columbia Psychology Symposium, New York, NY.

Mentee Awards

Runner-up Best Poster Presentation, Columbia Psychology Symposium, Chinmayi Balusu 2020

INSTITUTIONAL SERVICE

Graduate Mentor, Undergraduate Mentoring Program, Women in Science at Columbia	2022–2023
Developer and Organizer, Summer Internship Program in Psychological Sciences (SIPPS)	2021–2023
Inaugural Member, Columbia Psychology Diversity, Equity, and Inclusion Group	2020–2022
Student Organizer, Columbia Psychology Prospective Graduate Student Recruitment	2020–2021
Grad School Q&A Session Panelist, Columbia Psychology Symposium	2020

DISCIPLINARY SERVICE

Graduate Mentor, Simply Neuroscience Action Potential Advising Program	2021–2022
Student Organizer, Innovators in Cognitive Neuroscience Seminar Series	2020–2023

AD-HOC REVIEWER

Journal of Cognitive Neuroscience
Frontiers in Behavioral Neuroscience
National Science Center, Poland
Vision

MEDIA

The Psychology PhD Podcast May 2022
Interviews about the unique background and experiences of graduate students in the Psychology department at Columbia University.
<https://www.youtube.com/watch?v=6JjnLeVy-TA> (also available as a [podcast](#))