

MANASI JAYAKUMAR

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EDUCATION

Columbia University in the City of New York, New York M.A. in Psychology (2020) Ph.D. Student in Psychology Advisor: Dr. Mariam Aly	2018 – present
The University of Texas at Dallas, Richardson, Texas M.S. in Applied Cognition and Neuroscience	2014 – 2016
Birla Institute of Technology and Science, Dubai Campus, U.A.E. Bachelor of Engineering (Hons.) in Biotechnology	2009 – 2013

PUBLICATIONS

Works In Progress

Jayakumar, M., Balusu, C., Aly, M. (In prep) Spontaneous attentional fluctuations and the temporal organization of memory.

Published Manuscripts

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

CONFERENCE PRESENTATIONS

Jayakumar, M., Balusu, C., 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., 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., Khazenzon, 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.

RESEARCH EXPERIENCE

Aly Lab, Department of Psychology, Columbia University Sep 2018 – present
Principal Investigator: Dr. Mariam Aly
Position: Graduate (Ph.D.) Student
Project: Influence of attentional fluctuations on episodic memory organization

Stanford Memory Lab, Department of Psychology, Stanford University Jul 2016 – Jul 2018
Principal Investigator: Dr. Anthony D. Wagner
Position: Research Coordinator & Lab Manager
Project: Neural mechanisms of episodic memory in healthy aging and preclinical Alzheimer's disease.

Functional Neuroimaging of Memory Lab, UT Dallas Jan 2015 – May 2016
Principal Investigator: Dr. Michael D. Rugg
Position: Graduate Student Intern & Research Assistant
Projects: Neural mechanisms of episodic memory differences in young, middle-aged and older adults; Probability and precision of recollection memory.

TEACHING

Workshops

R Programming Fundamentals, Summer Internship in Psychological Sciences (SIPPS)	2021
Data Cleaning in R, SIPPS	2021
Correlations and basic visualization in R, SIPPS	2021
Introduction to Regression, SIPPS	2021
How to make the most of your RA experience, Columbia Psychology Symposium	2021
Introduction to R programming, Columbia Psychology Scientific Computing	2020, 2021
Python programming fundamentals for R Users, Columbia Psychology Scientific Computing	2020

Instructor

Research Methods - Lab Section, Columbia University Fall 2021
Statistics for Behavioral Scientists - Lab Section, Columbia University Spring 2021

Teaching Assistant

Research Methods: Cognition and Decision making, Columbia University Fall 2021
Statistics for Behavioral Scientists, Columbia University Spring 2021
The Science of Psychology, Columbia University Fall 2019
Mind, Brain and Behavior, Columbia University Spring 2019
Al Noor Training Center for Children with Special Needs, Dubai, U.A.E. Sep 2013 – Mar 2014
Physics Measurement Techniques Lab, BITS Pilani - Dubai Campus, U.A.E. Sep 2011 – Jan 2012

Guest Lecturer

Memory Lecture, The Science of Psychology, Columbia University Fall 2019

SERVICE

Program Administrator, Summer Internship in Psychological Sciences (SIPPS) 2021- present
Student Organizer, Innovators in Cognitive Neuroscience Seminar Series Sep 2020 – present
Inaugural Member, Columbia Psychology Diversity, Equity, and Inclusion Group 2020 – present
Student Organizer, Columbia Psychology Prospective Graduate Student Recruitment 2020, 2021
Grad School Q&A Session Panelist, Columbia Psychology Symposium May 2020

MENTORING

Student Mentees

Aria Tsegai-Moore, Bridge Scholar, Columbia University 2021 – present
Moe Khine, Undergraduate Research Assistant, Columbia University 2021 – present
Ava Homiar, Simply Neuroscience Mentee 2021 – present
Mario Bühler, Simply Neuroscience Mentee 2021 – present
Chinmayi Balusu, Undergraduate Research Assistant, Columbia University 2019 – present
Clementine Chou, Undergraduate Research Assistant, Stanford University 2016 – 2018

Mentee Awards

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

AWARDS AND ACHIEVEMENTS

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, BITS Pilani 2013
Merit Scholarship for obtaining CGPA above 9.0/10.0, BITS Pilani 2011 – 2013
Dean's Merit List for obtaining CGPA above 9.0/10.0, BITS Pilani 2011 – 2013