

Camille Gasser

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EDUCATION

- 2019 - present **PhD in Psychology** (expected 2024)
Columbia University
Advisor: Lila Davachi, PhD
Secondary Advisor: Chris Baldassano, PhD
- 2023 **MPhil in Psychology**
Columbia University
- 2021 **MA in Psychology**
Columbia University
Thesis: "Learned sequential structure acts as a scaffold for novel episodic memories"
- 2017 **BA in Psychology with honors, Summa cum Laude (4.00)**
New York University
Minor: Computer Science & Math
Honors thesis: "Predicting memory formation from EEG signals emitted during study"
Thesis advisor: Todd Gureckis, PhD

RESEARCH EXPERIENCE

- August 2019 - present **Doctoral Student Researcher**, Davachi Memory Lab
Columbia University, New York, NY
- July 2017 - July 2019 **Lab Manager & Research Assistant**, Davachi Memory Lab
New York University & Columbia University, New York, NY
- Sept. 2016 - Aug. 2018 **Honors Student & Research Assistant**, Computation & Cognition Lab
New York University, New York, NY
- March - Aug. 2017 **Trainee**, Training Program for Computational Neuroscience
New York University, New York, NY
- June - Aug. 2015 & 2016 **Research Assistant**, Neuroscape
University of California, San Francisco, CA
- Sept. 2015 - Dec. 2015 **Research Intern**, Mood and Personality Disorders Research Program
Icahn School of Medicine, Mt. Sinai, New York, NY

PUBLICATIONS

*, + denotes equal contribution

Bein, O.*, Gasser, C.*, Amer, T., Davachi, L.+ & Maril, A.+ (2023). Predictions transform memories: how expected versus unexpected events promote memory integration and separation. *Neuroscience & Biobehavioral Reviews*. <https://doi.org/10.1016/j.neubiorev.2023.105368>

Gasser, C. & Davachi, L. (2023). Cross-modal facilitation of episodic memory by sequential action execution. *Psychological Science*. <https://doi.org/10.1177/09567976231158292>

Thorp, J. N., **Gasser, C.**, Blessing, E., & Davachi, L. (2022). Data-driven clustering of functional signals reveals gradients in processing both within the anterior hippocampus and across its long axis. *Journal of Neuroscience*. <https://doi.org/10.1523/JNEUROSCI.0269-22.2022>

Tarder-Stoll, H., **Gasser, C.**, Yu, W., & Dimsdale-Zucker, H. (2021). Challenges in understanding the role of reactivation in modifying hippocampal representations. *Journal of Neuroscience*. <https://doi.org/10.1523/JNEUROSCI.0334-21.2021>

Callaghan, B.*, **Gasser, C.***, Silvers, J., VanTieghem, M., Choy, T., O'Sullivan, K., Tomparry, A., Davachi, L., & Tottenham, N. (2021). Age-related increases in posterior hippocampal granularity are associated with remote, detailed episodic memory. *Journal of Neuroscience*. <https://doi.org/10.1523/JNEUROSCI.1738-20.2020>

Clewett, D., **Gasser, C.**, & Davachi, L. (2020). Pupil-linked arousal signals track the temporal organization of events in memory. *Nature Communications*. <https://doi.org/10.1038/s41467-020-17851-9>

Halpern, D., Tubridy, S., Wang, H. Y., **Gasser, C.**, Popp, P. J., Davachi, L., & Gureckis, T. M. (2018). Knowledge Tracing Using the Brain. *Proceedings of the 11th International Conference on Educational Data Mining*, Buffalo, NY.

Manuscripts in preparation:

Gasser, C., Tomparry, A., & Davachi, L. (in prep). Effects of neural reinstatement on memory decision-making and evaluation.

CONFERENCE PRESENTATIONS

** , + denotes equal contribution*

Gasser, C. & Davachi, L. (2023). Interactions between motor learning and novel episodic encoding. *Annual Meeting of the Society for Neuroscience*. Washington, DC. [talk]

Zadbood, A., Tang, Y., Su, W., Hu, H., Capichioni, G., Ando, F., **Gasser, C.**, Bein, O., Yu, W., Wang, J., Goff, D., & Davachi, L. (2023) Evaluating the impaired hippocampal circuitry in schizophrenia sheds light on the neural mechanisms underlying pattern separation. *Annual Meeting of the Society for Neuroscience*. Washington, DC. [poster]

Jayakumar, M., DiGiovanni, A., **Gasser, C.**, Bloom, P., Vannucci, A.+. (2023). Summer Internship Program in Psychological Sciences (SIPPS): Engaging students in hands-on research opportunities. *Annual Conference on Teaching*. Portland, OR. [talk]

Gasser, C. & Davachi, L. (2022). Cross-modal facilitation of episodic memory by sequential action execution. *Manhattan Area Memory Meeting (MAMM)*. New York, NY. [talk]

Gasser, C. & Davachi, L. (2022). Cross-modal facilitation of temporal memory: familiar actions scaffold holistic event memory. *Context & Episodic Memory Symposium (CEMS)*. Philadelphia, PA. [talk]

- Gasser, C.** & Davachi, L. (2022). Learned action sequences scaffold temporal event memory. *Annual Meeting of the Cognitive Neuroscience Society*. San Francisco, CA. [poster]
- DiGiovanni, A.*, **Gasser, C.***, Jayakumar, M.*, Bloom, P.+, Vannucci, A.+, Durazi, A., Espinoza-Heredia, C., Lormestoire, A., & Silver, B. (2022). Summer Internship Program in Psychological Sciences (SIPPS): Engaging students in hands-on research opportunities. *Celebration of Teaching & Learning Symposium*. New York, NY. [poster]
- Gasser, C.** & Davachi, L. (2021). Learned action sequences act as a scaffold for novel episodic memories. *Context & Episodic Memory Symposium: International Edition (CEMSi)*. Virtual Meeting. [poster]
- Thorp, J.N., **Gasser, C.**, Blessing, E., & Davachi, L. (2021). The role of functionally-informed segmentation in measures of representational granularity along the hippocampal anteroposterior axis. *Annual Meeting of the Cognitive Neuroscience Society*. Virtual Meeting. [poster]
- Gasser, C.**, Tomparry, A., & Davachi, L. (2020). The role of neural reinstatement in memory decision-making and evaluation. *Context & Episodic Memory Symposium*. Virtual Meeting. [poster]
- Callaghan, B.L., **Gasser, C.**, Silvers, J., VanTieghem, M., Fields, A., Choy, T., Bloom, P., Harmon, C., Tomparry, A., Davachi, L., Tottenham, N. (2019). Hippocampal multivoxel encoding signatures predict long-term memory across middle childhood and adolescence in humans. *Flux Congress*: New York City, NY. [poster]
- Gasser, C.**, Callaghan, B.L., Davachi, L., & Tottenham, N. (2019). Dynamic changes in hippocampal representational granularity across development. *Manhattan Area Memory Meeting*: Princeton, NJ. [talk]
- Gasser, C.**, Tomparry, A., & Davachi, L. (2019). How memory reinstatement changes over time. *Annual Meeting of the Cognitive Neuroscience Society*. San Francisco, CA. [poster]
- Clewett, D., **Gasser, C.**, Phelps, E., & Davachi, L. (2019). Arousal modulates the organization of events in long-term memory. *Annual Meeting of the Cognitive Neuroscience Society*. San Francisco, CA. [poster]
- Gasser, C.**, Tubridy, S., & Gureckis, T.M. (2017). Predicting and augmenting human learning. *Proceedings of the 1st Annual NYU Computational Neuroscience Symposium*. New York, NY. [talk]
- Gasser, C.**, Tubridy, S., & Gureckis, T.M. (2017). Predicting memory formation from EEG signals emitted during study. *Proceedings of the 43rd Annual Undergraduate Research Conference*. New York, NY. [poster]

TEACHING EXPERIENCE

Spring 2023	Social Cognitive Neuroscience, <i>Graduate TA</i> <i>Instructor: Jon Freeman, PhD</i> Student Evaluation: 4.9/5
Spring 2022	Statistics for Behavioral Scientists, <i>Graduate TA</i> <i>Instructor: Chris Baldassano, PhD</i> Student Evaluation: 4.5/5
Fall 2021	Science of Psychology, <i>Graduate TA</i> <i>Instructor: Tina Kao, PhD</i>

Student Evaluation: 4.4/5

Guest Lecture: Models of Memory (October 2021)

Fall 2020 & 2021	Scientific Computing Workshop, <i>Instructor & TA</i> (<i>student-led bootcamp for R & python hosted by Columbia Psychology Dept.</i>)
Summer 2021-2023	Summer Internship Program in Psychological Science (SIPPS), <i>Instructor</i> Topics: data cleaning, data visualization, correlations, linear regression
Fall 2020	Statistics for Behavioral Scientists, <i>Graduate TA</i> <i>Instructor: Katherine Fox-Glassman, PhD</i> Student Evaluation: 4.9/5
Spring 2020	Cognitive Neuroscience, <i>Graduate TA</i> <i>Instructor: Mariam Aly, PhD</i>

HONORS, GRANTS, & AWARDS

2023 - present	Ruth L. Kirschstein Predoctoral Individual National Research Service Award (F31), <i>National Institute of Mental Health</i> Total Amount: \$95,388 Impact Score (Percentile): 20 (top 8%)
2022	ASGC Travel Grant, <i>Columbia University</i>
2022	Columbia Psychology Department Travel Award, <i>Columbia University</i>
2021	Honorable Mention, Graduate Research Fellowship Program (GRFP), <i>NSF</i>
2019 – present	Dean's Fellowship, <i>Columbia University</i>
2017	Doris Aaronson Award for Outstanding Departmental Research, <i>NYU</i>
2017	College of Arts & Science Alumni Association Award, <i>NYU</i>
2017	President's Service Award, <i>NYU</i>
2017	Founder's Day Award, <i>NYU</i>
2017	Computational Neuroscience Training Grant, <i>NYU</i>
2017 - present	Phi Beta Kappa Honor Society
2016	James A. Shae Research Scholar, <i>NYU</i>
2016	Dean's Undergraduate Research Fund Grant, <i>NYU</i>
2015 - present	Psi Chi Honor Fraternity
2013 - 2017	College of Arts & Science Presidential Honors Scholar, <i>NYU</i>
2013 - 2017	Dean's List, <i>NYU</i>

ACADEMIC SERVICE & COMMUNITY OUTREACH

Ad hoc (co-)reviewer for:

Journal of the Royal Society Interface
Nature Communications

May 2023 **STEAM Expo Facilitator**, The School at Columbia University
New York, NY

Planned, designed, and facilitated activities for elementary school-aged children to introduce them to concepts and phenomena in psychology and neuroscience

- August 2022 – **University Seminars Rapporteur**, Columbia University
present *New York, NY*
- Organizes the Cognitive & Behavioral Neuroscience University Seminar, alongside Drs. Chris Baldassano and Herbert Terrace; responsible for coordination with visiting speakers, production of minutes for each seminar meeting, and other organizational tasks
- Feb. 2022 **Prospective Visit Days Organizer**, Columbia University
New York, NY
- Organized events for prospective graduate students invited to interview in Columbia's psychology department
- June 2021 – **Organizer**, Summer Internship Program in Psychological Science (SIPPS)
present *New York, NY*
- Part of a core team of graduate students chiefly responsible for the conception, development, organization, and implementation of SIPPS, a summer program aimed at providing undergraduates/post-bacs with practical research skills through workshops and one-on-one mentorship; also developed the SIPPS website: <https://columbia-sipps.github.io/>
- Sept. 2020 – **Psychology Participant Pool Coordinator**, Columbia University
May 2023 *New York, NY*
- Reviewed and approved studies for the department's experiment participant pool, whereby intro-level psychology students participate in research studies as part of course requirements
- June 2020 – **Graduate Student Representative**, Columbia University
May 2021 *New York, NY*
- Organized & led orientation for first-year psychology PhD students, and facilitated communication between faculty and graduate students throughout the year
- Sept. 2020 – **Editor-in-chief/Writer**, Scientists on the Subway (SciSub)
present *New York, NY*
- Writes, edits, and oversees submission of articles for [SciSub](#) — a blog dedicated to highlighting the journeys of scientists at all career stages, with particular emphasis on featuring individuals who belong to underrepresented groups
- Sept. 2018 - **Volunteer**, Columbia University Neuroscience Outreach (CUNO)
Sept. 2020 *New York, NY*
- Participates in events aimed to foster learning and interest in neuroscience research among NYC students of all ages (e.g. science fairs, brain activity booths)
- Sept. 2014 - **Treasurer/Mentor**, Women and Youth Supporting Each Other (WYSE)
May 2017 *New York University, New York, NY*
- Provided support and mentorship to middle school girls in curriculum including mental health, sexual education, substance abuse, and conflict resolution

Feb. 2014 - **Volunteer**, Daniel's Music Foundation
May 2015 *New York, NY*

Assisted children and adults with mental and/or physical disabilities during a range of music and dance classes

MENTORSHIP

Jane Kaiser, Research Assistant, *Barnard College* (June 2021 – May 2022)
Lauren Jones, Research Assistant, *Barnard College* (September 2021 – May 2022)
Kevin Yoo, Research Assistant, *Columbia University* (June 2022 – December 2022)
Soo Yeon Choi, Research Assistant, *Columbia University* (June 2022 – present)
Mia Soviero, Research Assistant, *Barnard College* (February 2023 – present)

SKILLS

Programming languages: R, Python, Matlab, bash, Java (basic), JavaScript (basic)
Neuroimaging analysis packages: FSL, SPM, fMRIprep, BrainIAK, MRIQC
Applications: Microsoft Word, PowerPoint, Excel, Adobe Illustrator, Photoshop, LaTeX, git
Research techniques: fMRI, EEG, rTMS, eye-tracking
Online experiment tools: Gorilla, Prolific, Qualtrics

RELEVANT COURSEWORK

Graduate: Human Brain Imaging for Cognitive Neuroscience, Methods & Issues in Cognitive Neuroscience, Introduction to Statistical Modeling in Psychology, Non-Mnemonic Functions of Memory Systems, Analysis of Change (Multilevel Regression Models), Social Cognitive Neuroscience, Graduate Seminar on Cognition

Audited Graduate Courses: Bayesian Modeling of Behavior (NYU), Computational Cognitive Modeling (NYU)

Undergraduate: Cognition, Perception, Lab in Human Cognition, Developmental Psychology, Statistics for the Behavioral Sciences, Advanced Psychological Statistics, Biology I, Introduction to Computer Programming, Introduction to Computer Science, Data Structures, Calculus I & II