

CAROLINE KAICHER

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EDUCATION

Stanford University

Fall 2024-Present

Ph.D. in Psychology

Advisors: Ellen Markman and Laura Gwilliams

Colgate University

B.A. in Neuroscience with High Honors & Minor in Linguistics

May 2022

Honors Thesis: Neural correlates and subjective assessments of multimodal training on perception of foreign language prosody

RESEARCH EXPERIENCE

Lab Manager for Dr. Jessica Cantlon

Summer 2022-Summer 2024

Carnegie Mellon University Department of Psychology

Recruited over 75 4-8 year-olds and their parents for a developmental fMRI study on number line estimation and spatial experience, developed experimental protocol, coded in-scanner localizer in PsychoPy, and ran experimental sessions. Preprocessed structural and functional data and conducted group analyses on BrainVoyager, organized and analyzed behavioral data using RStudio. Maintained lab database, administered subject payments, and organized lab meetings. Supervised and trained undergraduate RAs.

Student Researcher at the Center for Language and Brain

Fall 2020-Spring 2022

Colgate University Department of Psychological and Brain Sciences

Surveyed literature and designed a study on multimodal language processing and Japanese pitch accent perception. Created study materials and stimuli, as well as organized participant data and recruited 66 participants. Conducted Zoom sessions with participants to carry out the study. In second year, designed a follow-up study as an honors thesis utilizing EEG and conducted 48 participant sessions in-person.

Research Assistant for Professor Christopher Heffner

Summer 2021

University at Buffalo Department of Communicative Disorders and Sciences

Surveyed literature on speech phoneme category learning and designed an experiment comparing active and passive training of nonnative phonemes as well as how verbal and nonverbal labels affect phoneme category learning. Programmed study to be conducted online using JSPsych and obtained grant funding to compensate participants. Currently planning a follow-up experiment.

Research Assistant for Professor Andrea Zevenbergen

Summer 2020

SUNY Fredonia Department of Psychology

Determined categories for a discourse analysis coding system in order to analyze data for a study. Coded transcripts of parent/child shared reading data into utterance categories for further analysis purposes.

Research Assistant for Professor Marieke Van Heugten

Summer 2019

University at Buffalo Department of Psychology

Created and edited audio stimuli using Praat and visual stimuli using Final Cut Pro. Managed contact database, reaching out to prospective families to recruit research subjects as well as confirm appointments. Supervised children and interacted with parents during appointment to allow graduate students to carry out study.

PUBLICATIONS

- Aulet, L. S., **Kaicher, C. M.**, & Cantlon, J. F. (2025). Intersection of Spatial and Numerical Cognition in the Developing Brain. *Cerebral Cortex*, 35(6), bhaf126. <https://doi.org/10.1093/cercor/bhaf126>
- Kaicher, C. M.**, Conti, J. J., Dedhe, A. M., Aulet, L. S., & Cantlon, J. F. (2024). Is core knowledge a natural subdivision of infant cognition? *Behavioral and Brain Sciences*, 47, e133. doi:10.1017/S0140525X23003229
- Hirata, Y., Friedman, E., **Kaicher, C.**, & Kelly, S.D. (2024). Multimodal Training on L2 Japanese Pitch Accent: Learning Outcomes, Neural Correlates and Subjective Assessments. *Language & Cognition*, 1-38. doi:10.1017/langcog.2024.24
- Zevenbergen, A. A., Angell, A. L., Battaglia, N. A., & **Kaicher, C. M.** (2021). Co-constructing stories: Sharing wordless picture books with preschoolers. *Children and Libraries*, 19(4), 22-26.

MANUSCRIPTS IN PROGRESS

- Kaicher, C.**, & Heffner, C. (Registered Report under review). Categorization Effects of Linguistic Labels on Non-native Speech Sound Learning. *Quarterly Journal of Experimental Psychology*.

CONFERENCE PRESENTATIONS

- Kaicher, C.** (May, 2025). Investigating Subordinate Category Learning in Children. Talk presented at Bay Area Developmental Symposium, Merced, CA.
- Kaicher, C.M.**, Aulet, L.S., Cantlon, J. F. (July, 2024). Neural lateralization during number line estimation differentially predicts numerical and spatial capacity. In *Proceedings of the Annual Meeting of the Cognitive Science Society* (Vol. 46). Presented as a poster at the Cognitive Science Society, Rotterdam, Netherlands.
- Aulet, L.S., **Kaicher, C.M.**, Cantlon, J.F. (September, 2023). Investigating the neural analog-to-symbolic shift in 5- to 8-year-old children's numerical cognition. Poster presented at Flux Society Congress, Santa Rosa, CA.
- Kaicher, C.M.**, Aulet, L.S., Cantlon, J.F. (May, 2023). Investigating the neural analog-to-symbolic shift in 5- to 7-year-old children's numerical cognition. Poster presented at the 23rd annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Kaicher, C.**, Friedman, E., Kelly, S. D., & Hirata, Y. (July, 2022). Neural correlates and subjective assessments of multimodal training on perception of foreign language prosody. Poster presented at 9th conference of the International Society for Gesture Studies, Chicago, IL.
- Friedman, E., Shiner, L., **Kaicher, C.**, Kelly, S. D., & Hirata, Y. (June, 2021). Effects of audio-visual training and left-hand prosodic tracing on perception in second language learning. Poster presented at the 6th International Conference of Asia-Pacific LSP & Professional Communication Association (Online Conference), Hong Kong.
- ## DEPARTMENTAL TALKS
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- Kaicher, C.** (April, 2022). Neural Correlates and Subjective Assessments of Multimodal Training on Perception of Foreign Language Prosody. Linguistics Program, Colgate University.
- Kaicher, C.** & Friedman, E. (October, 2021). Multimodality in L2 Learning: How Audio-Visual and Gesture Training Impact Japanese Pitch Accent Perception. Linguistics Program, Colgate University.

GRANTS, HONORS, AND AWARDS

2024	Graduate Research Fellowship , National Science Foundation
2022	<i>summa cum laude</i> , Colgate University
2022	The William E. and Nellie K. Edmonston Neuroscience Award , Colgate University
2022	Award for Excellence in Language Research , Center for Language and Brain, Colgate University
2022	Max A. Shacknai Award , Center for Outreach, Volunteerism, and Education, Colgate University
2022	Alumni Memorial Scholars Grant , Non-native Speech Sound Learning – Are Linguistic Labels Special? \$1200
2021	Alumni Memorial Scholars Grant , How limited daylight during Iceland winters affects public activity, culture, and wellness \$5335
2021	Graduate School Access Fund Fellow , Colgate University
2020	Psi Chi International Honor Society in Psychology
2019	Phi Eta Sigma National Academic Honor Society
2018-2022	Dean's Award for Academic Excellence with Distinction , Colgate University
2018-2022	Alumni Memorial Scholar , Colgate University
2018	National Merit Scholarship , National Merit Scholarship Corporation

TECHNICAL SKILLS

Lab: fMRI, EEG

Programming: Python, Java, JavaScript, R

Software: BrainVoyager, PsychoPy, JSPsych, Praat, RStudio, SPSS, Qualtrics, Adobe Photoshop & Illustrator, Final Cut Pro, Google Workspace, Microsoft Suite

MENTORING

Kyle Hsin, Undergraduate Research Assistant, Carnegie Mellon University	2022-2023
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LEADERSHIP & SERVICE

Organizer/Student Mentor Stanford Psychology Paths to PhD	Fall 2024-Present
Student Liaison Bay Area Developmental Symposium	Spring 2025
Volunteer Stanford Brain Day	Winter 2025
Pen-Pal Letters to a Pre-Scientist Program	Fall 2024-Spring 2025
Lighthouse Project Volunteer Homewood-Brushton Branch YMCA, Pittsburgh, PA	Fall 2022-Summer 2024
Student Volunteer Society for Philosophy & Psychology Annual Meeting	Summer 2023
Connect 2 Colgate Mentor Colgate University	Fall 2021-Spring 2022
SAT Prep Intern Center for Outreach, Volunteerism, and Education, Colgate University	Fall 2019-Spring 2020, Fall 2021-Spring 2022
Virtual Engagement Intern Center for Outreach, Volunteerism, and Education, Colgate University	Fall 2020-Spring 2021