Robert Z. Sparks

(815)-715-3076 • bsparks@stanford.edu
450 Jane Stanford Way, Stanford, CA 94305

Education and Professional Experience

Lab Manager – Research Professional Language and Cognition Lab Advisor: Prof. Michael C. Frank	Stanford University	2024-present
Lab Manager – Research Coordinator Language and Cognition Lab Advisor: Prof. Michael C. Frank	Stanford University	2022-2024
BS, Symbolic Systems, Departmental Honors Concentration: Cognitive Science Advisor: Prof. Hyowon Gweon	Stanford University	2022
Research Assistant Social Learning Lab Advisors: Prof. Hyowon Gweon and Aaron Chuey	Stanford University	2020-2022
Engineer Program-Modeler Intern CBRNE Defense – Hazard Modeling	Battelle	2019

Honors & Awards

Robert Glushko Prize for Excellence in Undergraduate Research   Stanford University   2022
Recognized for senior Honors project, "Communication as Influence: Preschool-Aged Children Can Infer What Speakers Know Based on How They Influence Others," under the supervision of Hyowon Gweon and Aaron Chuey (Stanford Psychology)

The Lunsford Award for Oral Presentation of Research Finalist   Stanford University   2019
One of 4 Finalists for the Lunsford Award, which recognizes innovative oral and multimedia presentations within the Program in Writing and Rhetoric, emphasizing excellence in dynamic presentations that effectively blend research and strong oral delivery.

Publications

R. Z. Sparks, B. Long, G. E. Keene, M. J. Perez, A. W.M. Tan, V. Marchman, and M. C. Frank (2024). Characterizing contextual variation in children's preschool language environment using naturalistic egocentric videos. In Proceedings of the 46th Annual Conference of the Cognitive Science Society.

B. Long, G. Kachergis, V. A. Marchman, S. F. Radwan, **R. Z. Sparks**, V. Xiang, C. Zhuang, O. Hsu, B. Newman, D. L. K. Yamins, & M. C. Frank (2023). The BabyView Camera: Designing a New Head-mounted Camera to Capture Children's Early Social and Visual Environments. *Behavior Research Methods.* doi:10.3758/s13428-023-02206-1

A. Chuey, **R. Z. Sparks**, & H. Gweon. (2023). Young children can identify knowledgeable speakers from their causal influence over listeners. In *Proceedings of the 45th Annual Conference of the Cognitive Science Society*.

R. Z. Sparks, A. Chuey, & H. Gweon. (2022). Preschool-Aged Children Can Infer What Speakers Know Based on How They Influence Others [Undergraduate Honors Thesis]. *Stanford Digital Repository*.

Abstracts

V. Boyce, I. Chen, **R. Z. Sparks**, M. Perez, and M. C. Frank (2024). 4-5 year old children can successfully communicate using ad-hoc referential expressions. 6th California Meeting on Psycholinguistics.

Manuscripts in Preparation

B. Long, V. Xiang, S. Stojanov, **R. Z. Sparks**, Z. Yin, G. E. Keene, A. W.M. Tan, S. Y. Feng, C. Zhuang, V. A. Marchman, D. L.K. Yamins, M. C. Frank (2024) The BabyView dataset: High-resolution egocentric videos of infants' and young children's everyday experiences. Submitted for review.

M. Bohn, J. Prein, A. Ayikoru, F. Bednarski, A. Dzabatou, M. C. Frank, A. Henderson, J. Isabella, J. Kalbitz, P. Kanngiesser, D. Keşşafoğlu, B. Koymen, M. V. Manrique-Hernandez, S. Magazi, L. Mújica-Manrique, J. Ohlendorf, D. Olaoba, W. R. Pieters, S. Pope-Caldwell, K. Slocombe, **R. Z. Sparks**, J. Sunderarajan, W. Vieira, Z. Zhang, Y. Zong, R. Stengelin, D. Haun (2024). A universal of human social cognition: Children from 17 communities process gaze in similar ways. Submitted for review.

M. C. Frank, H. Baumgartner, M. Braginsky, G. Kachergis, A. Lightbody, **R. Z. Sparks**, R. Zhu, K. A. Dodge, A. Cubillo (2024). Learning Variability Network Exchange (LEVANTE): A global framework for measuring children's learning variability through collaborative data sharing. Submitted for review.

J. Prein, F. Bednarski, A. Dzabatou, M. C. Frank, A. Henderson, J. Isabella, J. Kalbitz, P. Kanngiesser, D. Keşşafoğlu, B. Koymen, M. V. Manrique-Hernandez, S. Magazi, L. Mújica-Manrique, J. Ohlendorf, D. Olaoba, W. R. Pieters, S. Pope-Caldwell, U. Sen, K. Slocombe, **R. Z. Sparks**, R. Stengelin, J. Sunderarajan, K. Sutherland, F. Tusiime, W. Vieira, Z. Zhang, Y. Zong, D. B.M. Haun, M. Bohn (2024). (2024). Measuring variation in gaze following across communities, ages, and individuals —
a showcase of the TANGO–CC.

A. Chuey, **R. Z. Sparks**, S. Wistreich, H. Gweon (2024). Young Children Identify Knowledgeable Speakers Using Causal Influence.

Presentations

Contextual Variation in the Preschool Language Environment: Insights from Egocentric Videos and Automated Speech Transcription (Symposium Talk)	Society for Research in Child Development Conference 2025	Under Review
Characterizing Contextual Variation in Children's Preschool Language Environment Using Naturalistic Egocentric Videos (Poster)	Cognitive Science Society Conference 2024	July 2024
The Babyview Camera: A Head-Mounted Camera for Capturing Children's Early Social and Visual Experiences (Poster) **with**: Violet Xiang	eWEAR Annual Meeting Symposium, Stanford Wearable Electronics Initiative	February 2024
Quantifying Children's Everyday Learning Environments via Head-Mounted Camera **with**: Dr. Bria Long	Language and Cognition Lab, Stanford University	July 2023
Communication as Influence: Preschool-Aged Children can Infer What Speakers Know Based on How They Influence Others	Symbolic Systems Honors Forum, Stanford University	June 2022
Preschool-Aged Children can Infer What Speakers Know Based on How They Influence Others (Poster)	Symbolic Systems Capstone Fair, Stanford University	June 2022
Communication as Influence: Examining Children's Ability to Infer Knowledge from Influence (Poster)	Symbolic Systems Research Forum, Stanford University	October 2021
Examining Children's Ability to Infer Knowledge from Influence	Social Learning Lab, Stanford University	August 2021
Inferring Action Goals and Knowledge Communication	Symbolic Systems Research Forum, Stanford University	October 2020

Mentorship

Malia Perez	Mentor, Honors Students Undergraduate Research Assistant Stanford Summer Research Internship	2023-Present
Hana Doueiri	Mentor, Honors Student Undergraduate Research Assistant	2023-Present
Victoria Phan	Mentor, Undergraduate Research Assistant	2023-Present
Gabi Ignacio	Mentor, Undergraduate Research Assistant	2024-Present
Jasmine Clark	Mentor, Undergraduate Research Assistant	2024-Present
Yannick Mofor	Mentor, Undergraduate Research Assistant Stanford Summer Research Internship	2024-Present
Rebecca Pizzitola	Mentor, Stanford Summer Research Internship	2024
Mary Markley	Project Manager, Graduate Research Assistant	2024
Kaitlyn Leahy	Project Manager, Graduate Research Assistant	2023-2024
Ilaria Chen	Mentor, Stanford Summer Research Internship	2023
Chloe Haydel Brown	Project Manager, Graduate Research Assistant	2023

Teaching

Research Methods in Psychology	Guest Speaker, Stanford Psychology	Winter 2024

Delivered a presentation to undergraduate students on longitudinal data collection, egocentric video data, naturalistic data as an approach to studying development, and data and participant privacy.

Developmental Psychology Summer Seminar	Instructor and Co-Organizer, Stanford Psychology	2023-2024

Co-organized and instructed a 10-Week summer seminar for interns as a part of a summer research program in psychology and cognitive science. Syllabus included scientific reading, DEI in psychological research, data wrangling & visualization, completing an honors project, and topics in developmental and cognitive psychology.

Service

Stanford Scaffolding of Cognition Lab with: Dr. Cameron Ellis	Volunteer	2024-Present

Assist the research team in collecting experimental & neuroimaging data using awake infant fMRI, adult fMRI, and eye-tracking.

Stanford Psychology Diversity Committee	Committee Member, Climate & Inclusion Outreach & Community Partnership	2023-Present

Member of the official committee of the Department of Psychology, composed of a group of faculty, staff, students, to support and foster diversity in our department in collaboration with the chair and departmental leadership. I work

specifically on subcommittees created to lead and contribute to initiatives supporting internal department climate, public outreach, and broader community partnership.

Stanford Paths to PhD	Committee Member, Outreach Team	2023-Present

Helped organized and coordinate Stanford Paths to PhD 2023: an information session, panel, and workshop designed to support people from underrepresented groups interested in pursuing graduate programs or postbac positions in the field of Psychology.

Stanford Chariot Program	Volunteer, Lucille Packard Children's Hospital	2023-Present

Work with and assist in the research activities of the Chariot Program Team to deploy innovative technologies (VR, AR, XR) to patients to support early learning and physical activity during hospital stays and to minimize attention to stressful stimuli, pain, and anxiety.

Stanford University Dance Marathon	Executive Director - Programming, Stanford University	2017-2020

Director of team facilitating fundraising, operation of campus activities, and recruitment for Stanford Dance Marathon which raises money for the Uncompensated Care Program at the Bass Center at Lucile Packard Children's Hospital