Sriparna Sen

[Personal Website](#)

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I am a third year Clinical & Developmental Psychology PhD student that combines neuroscience, psychology, data science and statistical approaches to study the impacts of early life adversity (ELA) on brain development, neurocognition, and resilience.

EDUCATION

University of Pittsburgh
Ph.D., Clinical & Developmental Psychology
Minor in Quantitative Methodology
Graduate Advisor: Jamie Hanson, Ph.D.

2023 - Present
Pittsburgh, PA
GPA: 3.96

Rice University
B.A. Cognitive Science, concentration in Neuroscience
B.A. Visual and Dramatic Arts, concentration in Theatre

2015 - 2019
Houston, TX
Cognitive Science (Neuroscience)
GPA: 3.97 / 4.0

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

Gard, A. M., +Fuchs, J., +Shariq, D., +Wilds, T., **+Sen, S.**, +Shaw, S. M., +Kim, H., &Bueno, S. A., &Diaz, X. J., &Gonzalez, I., &Melaku, S., &Patel, P., &Maya, G., &Walker, J., &Clarke, J., &Yang, E., &Hindenach, A., & &Warren, L. (2025). The CARE Project: A Community-Driven Study of Environmental Effects on Health and Wellbeing across Development. I In Gard, A. M. (Chair): Recent Advances in Community-Engaged Developmental Neuroscience: Three Stories of Process and Outcomes. Talk presented at the annual meeting of the Society for Research in Child Development (SRCD), Minneapolis, MN, USA. (+ or & denotes equal contribution)

Hanson, J. L., Kahhalé, I., & **Sen, S.** (2024). Integrating data science and neuroscience in developmental psychopathology: Formative examples and future directions. *Development and Psychopathology*, 1-8.

Zur, N., Liu, Y., **Sen, S.**, Khalsa, N. N., Culham, J., & Striem-Amit, E. (2023). Abstract representations of grasping action parameters in the dorsal stream. *Journal of Vision*, *23*(9), 5937-5937.

Addiego, F. M., Liu, Y., O'Brien, C., **Sen, S.**, Khalsa, N. N., Riesenhuber, M., ... & Striem-Amit, E. (2023). The visual dorsal stream processes tool-use actions regardless of body part even in people born without hands. *Journal of Vision*, *23*(9), 5497-5497.

Sen, S., Khalsa, N. N., Tong, N., Ovadia-Caro, S., Wang, X., Bi, Y., & Striem-Amit, E. (2022). The role of visual experience in individual differences of brain connectivity. *Journal of Neuroscience*, *42*(25), 5070-5084.

Striem-Amit, E., **Sen, S.**, Tong, N., Wang, X., Gandhi, T., Mahajan, V., ... & Sinha, P. (2022). Individual differences of brain plasticity in early visual deprivation and sight restoration. *Journal of Vision*, *22*(14), 3483-3483.

Liu, Y., Caracoglia, J., **Sen, S.**, Freud, E., & Striem-Amit, E. (2022). Are reaching and grasping effector-independent? Similarities and differences in reaching and grasping kinematics between the hand and foot. *Experimental Brain Research*, *240*(6), 1833-1848.

Liu, Y., Caracoglia, J., **Sen, S.**, Freud, E., & Striem-Amit, E. (2020). Similar kinematics of grasping behavior across the hand and foot. *Journal of Vision*, *20*(11), 1351-1351.

MANUSCRIPTS IN PREPARATION

Gard., A.M., **Sen, S.**(in prep). Testing the structural invariance of the bifactor model of psychopathology and its association with language across childhood. Manuscript in preparation.

Martinez-Addiego, F.[*]**,** Liu, Y.[*], Moon, K., Shytle, E., Amaral, L., O'Brien, C., **Sen, S.**, Riesenhuber, M., Culham, J.C., Striem-Amit, E. *(submitted)*. Tool-use brain regions are independent of the acting body part and motor experience.

PRESENTATIONS

POSTERS

1. **Sen, S**., Gard., A.M. (2022, November 9-11) Testing the structural invariance of the bifactor model of psychopathology and its association with language across childhood [Conference poster]. Annual Meeting of the International Society for Developmental Psychobiology, San Diego, CA, United States.

2. Liu, Y., Caracoglia, J., **Sen, S**., Freud, E., Striem-Amit, E. (2020, June 19-24). Similar kinematics of grasping behavior across the hand and the foot [Conference poster]. Vision Sciences Society. Online.

3. **Sen, S.**, Rahman, S., Yau, J. (2019, March 20-25). Bimanual perceptual interactions in the frequency domain differ for flutter and vibration cues [Conference poster]. Cognitive Neuroscience Society, San Francisco, CA, United States.

4. **Sen, S.** (2019, April). Bimanual perceptual interactions in the frequency domain differ for flutter and vibration cues [Symposium poster]. Rice Undergraduate Research Symposium, Houston, Texas, United States.

5. **Sen, S.**, Asson, S., Chen, F. (2017, April). The Power of Underwear [Symposium poster]. Rice Undergraduate Research Symposium, Houston, Texas, United States.

TALKS

Sen, S., Caracoglia, J. (2020, January 24). Action representation for reaching/grasping is similar across the hand and foot [Conference presentation]. Capital Area Cognition, Action, and Perception, Washington, DC, United States.

RESEARCH EXPERIENCE

Data Manager - Growth and Resilience across Development Lab   2021 - 2023
University of Maryland, Department of Psychology, PI: Dr. Arianna Gard   College Park, MD
- Scripted, organized, and executed MATLAB pipelines to filter and clean Adolescent Brain Cognitive Development (ABCD) imaging data based on factors like coverage score, motion censoring, and task-related performance
- Scripted codes and analyzed public data to identify neighborhoods in DC with high Black non-Hispanic populations and low household income, managed a team of undergrads to conduct observational data collection within the neighborhoods, created demographic maps in ArcGIS, generated surveys in ArcGIS and Qualtrics, and led workshops for a youth participatory action research project for the Community and Resilient Environments (CARE) study

- Executed admin tasks, mentored undergraduate students, organized and engaged in outreach events, maintained github and website, and set up data protocols for lab

Lab Manager - Sensory and Motor Plasticity Lab 2019 - 2021
Georgetown University Medical Center, Department of Neuroscience, Washington, D.C.
PI: Dr. Ella Striem-Amit
- Scripted / executed codes and analyzed data on project investigating the resting state functional connectivity profiles in the blind versus the sighted
- Recruited / managed subjects, conducted experiments, and analyzed data on project examining action representation for hand vs feet effectors in control vs dysplasic subjects
- Executed all lab admin tasks and set up foundational protocols for lab

Undergraduate Research Assistant - Yau Lab 2017- 2019
Baylor College of Medicine, Department of Neuroscience, Houston, Texas
PI: Dr. Jeffrey Yau
- Conducted a personal project studying human tactile sense perception of flutter frequencies on a target hand, as modulated by the spatial distance of distractor hand
- Scripted MATLAB codes for data collection, recruited, scheduled, and tested all participants, analyzed data in MATLAB, and presented results at Cognitive Neuroscience Society

Leadership Rice Mentorship Experience, UTHealth Public Health 2017
Undergraduate Research Intern, PI: Dr. Kayo Fujimoto Houston, Texas
- Recruited subjects and conducted phone surveys for project studying the population of men who have sex with men (MSM) in Houston and examined the network data on the places, spaces, and people they frequent and interact with

Rice's Center for Civic Leadership, Fall Project 2016
Houston Action Research Team, Undies for Everyone (UFE) Houston, Texas
- Consulted to optimize the efficiency of a local non-profit UFE that distributes free underwear to underprivileged school children
- Presented recommendations to UFE in the form of a research report and oral presentation via data results from a Qualtrics survey created and administered to nurses across Title 1 schools in the HISD school district

CLINICAL EXPERIENCE

Child Psychotherapy, University of Pittsburgh Clinical Psychology Center May 2025 - May
Supervisors: Dr. Jennifer Silk 2026
- Conduct weekly psychotherapy utilizing CBT methods and other standardized protocols (e.g. Unified Protocol) for child patients

Adult Psychotherapy, University of Pittsburgh Clinical Psychology Center May 2024 - July
Supervisors: Dr. Thomas Kamarck, Dr. Jill Cyranowski 2025
- Conduct weekly psychotherapy utilizing CBT and IPT methods as well as other standardized protocols (e.g. DBT) for adult patients

TEACHING AND MENTORING

Hot Metal Bridge Post-Baccalaureate Fellowship Program Mentor 2024-2025
- Providing one-on-one mentoring to underrepresented students in academia in order to bridge the gap between an undergraduate degree and graduate training

GARD Lab Undergrad Mentoring and Teaching 2021- 2023
- Project manager for observational data collection team of CARE project that involves 3 research assistants
- Youth participatory action research mentor for 6 adolescents collecting data on how neighborhoods affect well-being
- Mentored research assistants on lab website, blog posts, coding for experiments, and data cleaning procedures for longitudinal datasets

Course Instructor of Self-Created Course, COLL 185: The Crossroads between Cognitive Neuroscience and Theatre 2018 - 2019
- Underwent rigorous application process to be granted opportunity to teach a 1 credit self-created course to fellow Rice students in Spring 2019

Teaching Assistant, PSYC 203: Cognitive Psychology, Fall 2018 and Spring 2019 2018 - 2019

America Reads Math and Science Tutor 2018 - 2019
- Tutored elementary school students in Math and Science at local Houston America Reads center

Tapia STEM Camp Counselor 2018
- Counselor for group of 8th - 12th graders at camp focused on STEM accessibility for underrepresented students

Academic Fellows and Mentors Society 2017- 2019
- Selected based on academic performance to tutor fellow students enrolled in Intro Linguistics, Intro Psychology, and Cognitive Psychology

Rice Peer Academic Advisor 2017 - 2019
- Selected to advise a group of 8 students on academic planning, organization, and activities throughout the school year

DATA SCIENCE / STATISTICS TRAINING

WORKSHOPS

AFNI Bootcamp hosted by NIMH, May 2025

Group Iterative Multiple Model Estimation, Statistics, Methods, and Research Training Workshop, June 2024
Dr. Kathleen M. Gates

Introduction to Machine Learning in R, Statistics, Methods, and Research Training Workshop, May 2024
Dr. Shirley B. Wang, Dr. Jeffrey M. Girard

Group Iterative Multiple Model Estimation, APA Workshop, Spring 2023
Dr. Kathleen M. Gates

Introduction to Structural Equation Modeling Workshop, CenterStat, Spring 2022
Dr. Daniel J. Bauer, Dr. Patrick J. Curran

GRADUATE COURSEWORK
    Advanced Statistics II, Spring 2024

    Advanced Statistics I, Fall 2023

EXTERNAL COURSEWORK
    Machine Learning Fundamental in Python, DataCamp, Summer 2025

    INNS 541, MATLAB for Neuroscientists, Georgetown University, Spring 2020

SOCIAL JUSTICE AND DIVERSITY

Applications of Broaching Race, Ethnicity, & Culture in Short-Term Therapeutic Relationships and Clinical Research Clinical Training Workshop   May 2025 / Pittsburgh, PA
- Hosted by Dr. Rachel Vaughn-Coaxum

Creator and Leader of Applied DEI Committee   2024 - Present / Pittsburgh, PA
- Subcommittee created with the broader Psychology, Equity, and Inclusion Committee in the department.
- Focused on increasing representation of those underrepresented in psychology and increasing knowledge of community centered methods to increase minority participant in science research

University of Pittsburgh Racial Equity Collaboratory Member   2024 - Present
- Central hub of collaborators dedicated to racial equity, social justice, and applied research

Psychology, Equity, and Inclusion Committee Member   2023 - Present / Pittsburgh, PA
- General body member of this organization focused on diversity, equity, and inclusion in Psychology

VOLUNTEERING

Humane Animal Rescue Pittsburgh & Hills District Cat Rescue   2025 - Present / Pittsburgh, PA
- 100+ hours
- Foster abandoned, wounded, and/or shelter dogs and cats in my freetime

Homeless Children's Education Fund   2024 - Present / Pittsburgh, PA
- 50+ hours
- Volunteer with local organization to support children housed in community shelters around Pittsburgh

University of Pittsburgh Psi Chi Panelist   2024 / Pittsburgh, PA
- Volunteered to be a panelist for a presentation to the undergraduate Psi Chi society regarding applying to graduate school

Psychin' Out Student Mentor   2023 - Present / Remote
- Help prospective students mock interview for Clinical Psychology graduate application process
- Volunteer to meet with students interested in applying to Clinical Psychology programs

Homeless Street Outreach Volunteer   2021- 2023
StandUp for Kids   Washington, DC
- Volunteer with local organization on a weekly basis to serve unaccompanied homeless and at risk youth

Rice Alternative Spring Break Participant - Homelessness and Incarceration   2017
Rice University   Houston, TX
- Studied the homelessness and incarceration cycle for a semester via weekly meetings and readings for a service trip to NYC
- Engaged in conversations with community non-profits as well as formerly incarcerated populations

SKILLS

Clinical
Assessments: SCID, M.I.N.I, WAIS V, D-KEFS, TOVA
Populations: Adult, adolescent, child, LGBTQIA+, ethnic minority, immigrant

Computer:
Neuroimaging: AFNI, FSLeyes, BrainVoyager
Data Analysis: MATLAB, R, Python, Unix/Linux, SPSS, Git/Github, ArcGIS
Data Collection: Optitrack, Qualtrics
Other: Microsoft suite, Canva

Data Analysis:
- OLS Regression
- Regularized Regression
- Structural Equation Modeling
- Principal Components Analysis
- Hierarchical Clustering
- Random Forests
- Support Vector Machine
- Group Iterative Multiple Model Estimation

Language:
- Native in Bengali
- Intermediate in German

HONORS AND AWARDS

Lazovik Student Research Grant   2024
University of Pittsburgh ($350)
E.B. Huey Research Grant,   2024
University of Pittsburgh ($600)

Graduate Research Fellowships Program Honorable Mention,   2024
National Science Foundation

Arts and Sciences Fellowship,   2023
University of Pittsburgh ($25,000)

Lazovik Student Research Grant   2024
University of Pittsburgh ($350)

E.B. Huey Research Grant,   2024
University of Pittsburgh ($600)

Graduate School Application Scholarship,   2022
American Academy of Clinical Neuropsychology ($500)

President's Honor Roll,   2017 - 2019
Rice University

Best Poster in the Natural Sciences Division, Rice University Undergraduate   2019
Research Symposium

Rice Undergraduate Scholars Program,   2018 - 2019
Rice University ($2000)

Barbara Chilton Long Memorial Award in Theatre,   2018
Rice University ($500)

International Baccalaureate Diploma Recipient   2015

PROFESSIONAL MEMBERSHIPS

1. American Psychological Association
2. American Psychological Society
3. International Society for Developmental Psychobiology

PERSONAL FACTORS OF IMPORTANCE

1. Open science
2. Involving underrepresented populations in neurobiological/ psychological research
3. Challenging the deficit model within psychology research
4. Building community trust in science