

PRIYANKA SIGAR

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Education

Ph.D. in Neuroscience	University of California, Los Angeles	2021 - 2026
Masters in Lifesciences	University of Mumbai	2016 - 2018
Bachelors in Zoology	University of Mumbai	2013- 2016

Positions and Scientific Appointments

2021-2026	Graduate Research Student, Dept. of Psychiatric and Biobehavioral Sciences, UCLA.
Fall 2025	Teaching fellow, Dept. of Lifesciences, UCLA.
2024 – 25	Long-term trainee, University of California Leadership Education in Neurodevelopmental Disabilities (UC- LEND)
Spring 2025	Teaching fellow, Dept. of Neuroscience, UCLA.
Winter 2025	Associate Instructor, Dept. of CEILS, UCLA.
Fall 2024	Associate Instructor, Dept. of CEILS, UCLA.
Summer 2024	Teaching Assistant, Dept. of Molecular, Cellular & Development, UCLA.
Winter 2024	Teaching Assistant, Dept. of Neuroscience, UCLA.
Fall 2023	Teaching Assistant, Dept. of Molecular, Cellular & Development, UCLA.
Fall 2022	Teaching Assistant, Dept. of Molecular, Cellular & Development, UCLA.
2019-2021	Research project associate, National Brain Research Centre, India
2017-2019	Research Associate Intern, The Foundation of Medical Research, India
2017-2018	Graduate Research Student, Neuroscience, Mumbai University, India
2014-2017	Research intern, Neuroscience, Tata Institute of Fundamental Research, India

Academic Honors and Awards

2025	BRI Pat Lowe Service Excellence Award
2025	SFN Trainee Professional Development Award
2025	UCLA Doctoral Student Travel Grant
2025	University of California Leadership Education in Neurodevelopmental Disabilities (UC- LEND) Travel award
2024	Brain Research Imaging Travel Awards, UCLA
2023	INSAR Student and Trainee Workshop Travel Award
2023	INSAR Student and Trainee Award
2018	Provost Honors List, University of Mumbai, India
2015	XXI Dr. D.V. Amonkar Memorial Presentation award, University of Mumbai, India
2015	Academic distinctions award, University of Mumbai, India
2014	Inter-Collegiate Research Exhibition award, University of Mumbai, India

Research experience:

University of California, Los Angeles

Graduate student researcher

2021 – 26

- Built and validated multivariate and univariate models on autism and anxiety fMRI datasets to quantify brain-signal variability (BSV) as a neuroimaging-derived feature.
- Pioneered integration of gene-expression data with fMRI phenotypes in the lab, establishing a genetics-supported BSV framework.
- Demonstrated BSV as a reliable biomarker for anxiety symptoms and autism with converging genetic evidence, resulting in 1 peer-reviewed publication, and 4 manuscripts in preparation.
- Implemented fMRI preprocessing and QC pipelines using tools such as SPM and delivered short internal workshops on reproducible preprocessing, large-dataset acquisition, and multimodal datasets.
- Mentored two undergraduate researchers on neurodevelopmental fMRI data analysis, contributing to three conference poster presentations.
- Mentored research staff on participant recruitment and MRI data collection for an R01-funded, lab-wide study of autistic children, including coordinating clinical assessment/test assignments.

University of California Leadership Education in Neurodevelopmental Disabilities (UC- LEND) 2024 –25

- Completed interdisciplinary training in autism, child health policy, and leadership with weekly clinic seminars/case conferences; shadowed clinical care and presented cases in interdisciplinary teams to inform consultation and care plans.
- Used SPSS and R to run multivariate analyses on survey data on healthcare provider concerns for autistic adults.
- Demonstrated mental-health disparity patterns in heterogenous autistic adult population associated with provider negligence, leading a journal-submitted manuscript and presenting findings at three conferences, including an award-winning presentation.

National Brain Research Center, India

Research associate

2019 – 21

- Built an end-to-end, multi-site fMRI analytics pipeline spanning data QC, standardized preprocessing and denoising (DPARSF/FSL/AFNI), and feature generation (e.g., graph-theoretic network metrics) to enable downstream statistical modeling using SPSS and Network-based statistics toolbox.
- Analyzed functional brain network organization in autistic children and demonstrated atypical network configurations to autism severity, contributing to a peer-reviewed publication, two conference presentations, and research collaboration with a lab in Psychology Department at University of Miami.
- Mentored three undergraduate researchers by training them on the standardized pipeline and guidelines for processing neurodevelopmental fMRI datasets.

Publications:

Sigar, P., Kathrein, N., Gragas, E., Kupis, L., Uddin, L. Q., & Nomi, J. S. (2025). Age-related changes in brain signal variability in autism spectrum disorder. *Molecular autism*, 16(1), 8. <https://doi.org/10.1186/s13229-024-00631-3>.

Sigar, P., Uddin, L. Q., & Roy, D. (2023). Altered global modular organization of intrinsic functional connectivity in autism arises from atypical node-level processing. *Autism Research*, 16(1), 66–83. <https://doi.org/10.1002/aur.2840>.

Wang HR, Liu Z-Q, Pozzi E, Hussain A, **Sigar P**, et al. (2025). Childhood Maltreatment and Deviations from Normative Brain Structure: A Mega-Analysis of 3,711 Individuals from the ENIGMA MDD and ENIGMA PTSD Working Groups. *Biological Psychiatry*. 2026. doi:10.1016/j.biopsych.2026.02.016

Sigar, P., Nomi, J. S., Goodman, Z., & Uddin, L. Q. Age-related brain signal variability associated with anxiety symptoms. [Manuscript in preparation].

Sigar, P., Yue, H., & Wu, H. (2025). Uncovering bias: The impact of healthcare providers gendered and demographic assumptions on autism diagnoses and mental health in women [Manuscript in preparation].

Hotez, E., Weir, E., Brandsen, S., Vajifdar, A., Eisert, S., Rubio, A., Jackson, N. J., Kozlova, E. V., Shankar, S., **Sigar, P.**, Wu, H., Yue, H., & Kuo, A. A. (2025). A pilot health survey of autistic emerging adults: Exploring gender differences in physical and mental health. *Autism in Adulthood*. [Submitted].

Hotez E, Kuo AA, Abraham M, Adesoye T, Bonuck K, Choi C, Eisert S, Grant N, James C, Kim D, Marx A, Moody C, Ridgeway V, Rosenau KA, Sangoi J, Schmarcker K, Shulman L, **Sigar P**, Sykes JR, Walker K, Warner B, Wolpe S, Wu H, Roberts C. (2026). High-Quality Research Requires Community Engagement: Insights from an Interactive Conference Workshop. *Developmental Disabilities Network Journal*. [Submitted].

Conferences:

Sigar, P., Goodman, Z. T., Nomi, J. S., Schleifer, C., Bessette, K., Bolt, T., & Uddin, L. Q. (June 2025). Brain signal variability and gene expression profiles underlying anxiety. Poster presentation at the 31st Annual Meeting of the Organization for Human Brain Mapping (OHBM), Brisbane, Australia.

Sigar, P., Goodman, Z. T., Nomi, J. S., Schleifer, C., Bessette, K., Bolt, T., & Uddin, L. Q. (November 2025). Brain signal variability and gene expression profiles underlying anxiety. Poster presentation at the Society for Neuroscience (SfN) conference, San Diego, USA.

Sigar, P., Goodman, Z. T., Nomi, J. S., Schleifer, C., Bessette, K., Bolt, T., & Uddin, L. Q. (December 2025). Brain signal variability and gene expression profiles underlying anxiety. Poster presentation at the Brain Research Institute (BRI) Annual Neuroscience Day, University of California, Los Angeles, USA.

Sigar, P., & Saravanapandian, V. (November 2025). Impact of Brain Awareness Week on neuroscience knowledge and engagement among K–12 students from low-opportunity schools in Los Angeles neighborhoods. Poster presentation at the Society for Neuroscience (SfN) conference, San Diego, USA.

Sigar, P., & Saravanapandian, V. (December 2025). Impact of Brain Awareness Week on neuroscience knowledge and engagement among K–12 students from low-opportunity schools in Los Angeles neighborhoods. Poster presentation at the Brain Research Institute (BRI) Annual Neuroscience Day, University of California, Los Angeles, USA.

Sigar, P., Yue, H., Wu, H., Eisert, S., Kozlova, E., Vajifar, A., Shankar, S., Brandsen, S., Weir, E., & Hotez, E. (2025). Investigating the health and healthcare experiences of autistic emerging adults. Poster presented at UCLA Department of Medicine Research Day, Los Angeles, CA.

Sigar, P., Wu, H., Yue, H., Eisert, S., Kozlova, E., & Hotez, E. (2025). Mental health among emerging adults with intellectual and/or developmental disabilities: The role of gender, demographics, and healthcare experiences. Poster presented at Neal Halfon Symposium, Los Angeles, CA.

Gragas, E.A., Nomi, J.S., **Sigar, P.,** Bolt, T., & Uddin, L.Q. (June 2025). Functional connectivity differences of large-scale brain networks in autism. Abstract submitted for the 31st Annual Meeting of the Organization for Human Brain Mapping (OHBM), Brisbane, Australia.

Sigar, P., Fung, H., Goodman, Z., Nomi, J.S., Bolt, T., Bessette, K., & Uddin, L.Q. (September 2024). BOLD signal variability and brain dynamics associated with anxiety symptoms. Poster presentation at Flux Congress, Baltimore, USA.

Martinez, J.D., **Sigar, P.,** Nomi, J.S., & Uddin, L.Q. (April 2024). Age-related differences of Amygdala functional connectivity in Autism Spectrum Disorder. Presentation at the UCLA CART Symposium (Theme: Advances in Autism 2024 Autism Through the Lifespan), Los Angeles, USA.

Sigar, P., Uddin, L.Q., & Nomi, J.S. (June 2023). Aberrant BOLD signal variability and brain dynamics in anxiety disorder. Poster presentation at the 29th Annual Meeting of the Organization for Human Brain Mapping (OHBM), Montreal, Canada.

Sigar, P., Uddin, L.Q., & Roy, D. (June 2023). Atypical global organization arising from local node properties in children with Autism. Presentation at the International Society for Autism Research (INSAR) Conference, Stockholm, Sweden.

Sigar, P., Uddin, L.Q., & Nomi, J.S. (June 2022). Altered developmental trajectories of brain signal variability in Autism. Poster presentation at the 28th Annual Meeting of the Organization for Human Brain Mapping (OHBM), USA.

Sigar, P., Uddin, L.Q., & Roy, D. (January 2021). Atypical global organization arising from local node properties in children with Autism. Oral presentation at ACCS7 (Seventh Annual Conference of Cognitive Science), organized by the Association for Cognitive Science (ACS), India.

Sigar, P., Dhaval, S., & Khan, Y. (June 2017). Investigation of migration of lithium treated Glioma cells using Xenotransplantation model in Zebrafish. Poster presentation at the Annual Conference of the Department of Life Sciences, Sophia College for Women, Mumbai, India.

Workshops:

SFN Trainee Professional
Development workshop 2025
November 15th - 17th, 2025

Translational Career Paths: At the Bench or Beyond
Speaker: Paul Territo; Kimberly Searce-Levie; Matthew
Kelley; Cliona MacSweeney; Fraser Murray

*Elevating Pedagogy: Teaching-Focused Career Paths at
Research-Intensive Universities*
Speaker: Melissa Maffeo Masicampo; Celeste Pilegard; Tsz
Man Vanessa Chan-Devaere; Sarah DeMoya; Karenna
Malavanti; Samantha Scudder

*Tools and Resources for Teaching Neuroscience: A Core
Concepts Approach*
Speaker: Jennifer Schaefer; Patrick Sonner; Audrey Chen

*Life After the PhD: Career Opportunities in Brain Data
Science*
Speaker: Dimitri Yatsenko; Uma Karmarkar; Stephanie Albin

Flux Education Course 2024
September 27th, 2024 (8hrs)

*Developing a Toolkit for Studying the Interaction between
Executive Function (EF) and Learning Disabilities*
Led by: Tzipi Horowitz-Kraus, PhD, Jessica Church, PhD
*A New User's Guide to the Healthy Brain-Child Development
(HBCD) Study*
Led by: Wesley Thompson, PhD

Topological Data Analysis
Workshop
March 8, 2024 (3hrs)

*Using Topological Data Analysis to characterize fluctuations in
brain activity patterns in healthy and patient populations*
Led by: Dr. Manish Saggar at the University of California, Los
Angeles

Diversity Considerations in Adolescent
Brain Development
June 15, 2023 (5 hours)

Led by: UCLA T32 Predoctoral Training Program and UCLA
Center for Cognitive Neuroscience

Spatial Transcriptomics
March 15–16, 2023

Led by: QCB Collaboratory at the University of California, Los
Angeles

Genetics Analysis (VCF-Plink)
February 7–9, 2023

Led by: Dr. Jorgensen at the University of California, Los
Angeles

RNA-seq | Analysis
February 28–March 2, 2023

Led by: Dr. Kaczor-Urbanowicz and Dr. Bhattacharya at UCLA

RNA-seq II Analysis
March 8–9, 2023

Led by: Dr. Kaczor-Urbanowicz and Dr. Bhattacharya at UCLA

Resting-State fMRI Seminar
January 23rd, 2023 (2hrs)

Static and Dynamic Coactivation Pattern Analysis (CAP)
Led by: Dr. Jason S. Nomi at the University of California, Los Angeles

ABCD Data Analysis Workgroup
November 2022 (1hr)

Led by: Dylan Hughes at the University of California, Los Angeles

ABCD Data Analysis Workgroup
February 2023 (1hr)

Data download pipeline and coding
Led by Priyanka Sigar at the University of California, Los Angeles

fMRI ICA-Denoising Preprocessing Seminar
May 2nd, 2022 (2hrs)

Led by: Dr. Jason S. Nomi at the University of California, Los Angeles

fMRI Preprocessing using DPABI/SPM
March 23rd, 2022 (2hrs)

Led by: Dr. Jason S. Nomi at the University of California, Los Angeles

Analysis of Dynamic Functional Connectivity
February 2nd, 2022 (2hrs)

Led by: Dr. Jason S. Nomi at the University of California, Los Angeles

Microarray and Next-Generation Sequencing Training
May - June 2018

Mitochondrial DNA Evolution and Phylogeny in Insects
Led by: BIONIVID Technology Pvt. Ltd., Bangalore, India

Science Journalism Training Course
2016–2017

Led by: Indian Science Communication Society (ISCOS)

Scientific Thinking Skills
May 2015

Led by: Interdisciplinary Program in Educational Technology, IIT Bombay, India

Professional Memberships

2024-25	Student Affiliate, Association of University Centers on Disabilities (AUCD)
2024	Student Affiliate, Society for Developmental Cognitive Neuroscience, FLUX
2022-Present	Student Affiliate, International Society for Autism Research (INSAR)
2021-Present	Student Affiliate, Organization of Human Brain Mapping (OHBM)
2019-2020	Student Affiliate, Association for Cognitive Science (ACS), India
2016-Present	Student Affiliate, Society for Neuroscience (SFN)
2013-2015	Student Affiliate, Indian Science Congress Association (ISCA)

Offices/positions held

2025-Present	Co-organizer, Brain-awareness week, University of California Los Angeles
2024-2025	Newsletter editor, Brain Research Center, University of California Los Angeles
2024-2025.	Neuro Affinity Journal Club Co-Organizer, University of California Los Angeles
2023-2025	Public Affairs Head, Cell Scholars Outreach, University of California, Los Angeles
2022 - 24	Co-Organizer, NSIDP Post-Interview Activities, University of California Los Angeles
2022	Co-Organizer, Brain Hack, University of California Los Angeles
2021-2023	Lead editor Newsletter, Biological sciences council, University of California, LA
2013-2016	Student manager, Department of Lifelong learning, University of Mumbai, India
2016-2018	Journal Club Organizer, University of Mumbai, India

Skills

Project/Grant Management & Writing: Grant applications; project management; scientific writing (annual reports, journal articles, conference posters); manuscript preparation.

Research Implementation: Experimental design (end-to-end pipeline; MR scanning protocol); MRI data collection (scanner operation).

Data & Methods: Neuropsychological, behavioral, survey, resting state-fMRI; hypothesis-testing statistics; functional connectivity; graph/network analyses; genetic analyses; brain signal variability.

Tools: Python, R, Matlab, PsychoPy, E-Prime, Qualtrics; SPM, FSL, CONN; SPSS, JASP; Matplotlib, ggplot.

Teaching: Undergraduate and graduate instruction.

Science Communication: Newsletter editing (Canva, Adobe); writing; video editing; graphic design.

Languages: English, Hindi, Marathi, Gujarati.

Ad hoc reviewer service

Human Brain Mapping, Molecular Psychiatry, Brain Imaging and Behavior.

Invited presentations

University of Mumbai, India; Sophia Women's college, India, University of California Los Angeles.

References:

Lucina Uddin, Ph.D.

Professor, Department of Psychiatry and Biobehavioral Sciences & Psychology
Director, Center for Cognitive Neuroscience Analysis Core
University of California Los Angeles
lucina@ucla.edu; LUddin@mednet.ucla.edu

Carrie E. Bearden, Ph.D.

Professor, Department of Psychiatry and Biobehavioral Sciences & Psychology
Director, Center for the Assessment and Prevention of Prodromal States (CAPPS)
University of California, Los Angeles
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Tara Peris, Ph.D.

Assistant Professor in the Department of Psychiatry and Biobehavioral Sciences.
Program Director of the ABC Children's Partial Hospitalization Program
Attending psychologist in the Child OCD, Anxiety, and Tic Disorders Program
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Vidya Saravanapandian, Ph.D.

Postdoctoral Scholar and Director of Neuroscience Community Engagement and Public Education
University of California Los Angeles
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