# Soumyakanti Pan

PHD CANDIDATE · DEPARTMENT OF BIOSTATISTICS UCLA Fielding School of Public Health

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## EDUCATION \_\_\_\_\_

# **University of California Los Angeles**

Ph.D., Biostatistics

Los Angeles, USA 2021 - 2025 (expected)

- Thesis Title: Bayesian Modeling and Inference for Complex Dependent Non-Gaussian Data
- Thesis Advisor: Prof. Sudipto Banerjee

**Indian Statistical Institute** Kolkata, India M.STAT., Statistics 2019 - 2021

• First Division with Distinction

**Indian Statistical Institute** Kolkata, India B.STAT. (HONOURS), Statistics 2016 - 2019

• First Division

# Professional Experience \_\_\_\_\_

2021-Present	Graduate Student Researcher, UCLA Biostatistics
2023-2024	Teaching Assistant, UCLA Biostatistics
2021-2023	Special Reader, UCLA Biostatistics
2019-2021	Instructor for Competitive Mathematics, RKMV Narendrapur
2019	Short-term Trainee, National Institute of Biomedical Genomics, India

### AWARDS & ACHIEVEMENTS

2024	Dissertation Year Award, UCLA Division of Graduate Education	USD 39,487
	USD 20,000 in fellowship & USD 19,487 in tuition grant	
2024	Summer Mentored Research Fellowship, UCLA Graduate Division	USD 6,000
2022	Summer Mentored Research Fellowship, UCLA Graduate Division	USD 6,000
2021	University Fellowship, UCLA Division of Graduate Education	USD 14,863
2016-2021	Stipend and contingency grant, Indian Statistical Institute	
2015	<b>2nd position,</b> Advanced Mathematical Ability Test, Calcutta Mathematical Society	

## SCHOLARLY MANUSCRIPTS \_\_\_\_\_

#### **PUBLISHED**

1. Pan, S., Das, D., Ramachandran, G., & Banerjee, S. (2024). Bayesian hierarchical modeling and inference for mechanistic systems in industrial hygiene. Annals of Work Exposures and Health, 68(8), 834–845. DOI: 10.1093/annweh/wxae061

#### **PREPRINTS**

- 2. **Pan, S.** & Banerjee, S. (2024). spStack: Practical Bayesian geostatistics using predictive stacking in R 🗹
- 1. Pan, S., Zhang, L., Bradley, J. R., & Banerjee, S. (2024). Bayesian inference for spatial-temporal non-Gaussian data using predictive stacking. DOI: 10.48550/arXiv.2406.04655

# SOFTWARE\_

1. spStack: Bayesian Geostatistics Using Predictive Stacking. 🗞 😱 🗘

Fast Bayesian inference for Gaussian and non-Gaussian geospatial models without using MCMC algorithms. This R package is written in C++ with calls to FORTRAN routines for optimized linear algebra operations. Available from CRAN.

# CONFERENCE PRESENTATIONS \_

- 1. UCLA-UCI-KAUST Meeting. Los Angeles, USA, March 2023. Talk.
- 2. **Joint Statistical Meetings.** Toronto, Canada, August 2023. *Topic Contributed Paper session: Recent advances in uncertainty quantification for complex systems.*
- 3. The Bayesian Young Statisticians Meeting, *j-ISBA*. Virtual Meeting, November 2023. Short Talk.
- 4. Theory and Foundations of Statistics in the Era of Big Data. Tallahassee, USA, April 2024. Poster.

# RESEARCH EXPERIENCE \_\_\_

# **UCLA - Department of Biostatistics**

Los Angeles, USA

Sep. 2021 - Present

Advisor: Prof. Sudipto Banerjee

• Dissertation: "Bayesian Modeling and Inference for Complex Dependent Non-Gaussian Data"

#### Indian Statistical Institute - Human Genetics Unit

Kolkata, India

ADVISOR: PROF. SAURABH GHOSH

2020-2021

• Masters Thesis: "Distribution-free correlation based tests to differentiate between related populations"

# **National Institute of Biomedical Genomics**

Kalyani, India

ADVISOR: DR. SAMSIDDHI BHATTACHARJEE

2019

• Title: "Nonparametric estimation of alternate density for mixture modeling with applications to large-scale multiple testing in genomics"

# TEACHING EXPERIENCE \_\_\_\_\_

Spring 2024	BIOS 250C: Multivariate Biostatistics, Teaching Assistant	UCLA
Winter 2024	BIOS 250B: Linear Statistical Models, Teaching Assistant	UCLA
Fall 2023	BIOS 241: Spatial Modeling and Data Analysis, Teaching Assistant	UCLA
Fall 2021, 22	BIOS 255A: Measure Theoretic Probability, Special Reader	UCLA
Winter 22,23	BIOS 255B: Advanced Probability and Statistics, Special Reader	UCLA
2019-2021	Topics in Competitive Mathematics, Instructor, RKMV Narendrapur	India

# TECHNICAL SKILLS \_\_\_\_\_

Programming R, C++, and integration via R's Native Interface, Julia

Other Cluster Computing, Git, Continuous Integration, UNIX command-line interface, LaTeX

# Professional Activities \_\_\_\_\_

## **PROFESSIONAL MEMBERSHIPS**

- International Society for Bayesian Analysis (ISBA).
- American Statistical Association (ASA).
- International Indian Statistical Association (IISA).

#### PEER REVIEW

• Annals of Applied Statistics.