

ZIYI SONG

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Education & Training

University of California, Irvine, United States	2021 – present
Ph.D. Candidate	
Department of Statistics	
Co-advisors: Prof. Michele Guindani (UCLA) & Prof. Weining Shen (UCI)	
University of Milano-Bicocca, Milano, Italy	Jan. – Apr. 2025
Visiting Ph.D. Student in Statistics	
Department of Economics, Management and Statistics (Statistics Division)	
Hosts & Supervisors: Prof. Federico Camerlenghi, Prof. Mario Beraha	
University of Michigan, Ann Arbor, United States	2019 – 2021
M.Sc. in Statistics	
The Chinese University of Hong Kong, Shenzhen, China	2016 – 2020
B.Sc. in Statistical Science, Honours First Class	

Research Interests

Bayesian methods, Bayesian nonparametrics, Random partition models, Random measures, Point processes, Repulsive mixture models, Causal inference, Spatio-temporal and functional data analysis, Statistical imaging, Single-view and multi-view clustering, Multi-modal integration, Neuroscience, Behavioral science, Biomedical applications.

Publications

(# indicates corresponding author)

Song, Ziyi[#], W. Shen, M. Vannucci, A. Baldizon, P. M. Cinciripini, F. Versace, and M. Guindani[#]. Clustering computer mouse tracking data with informed hierarchical shrinkage partition priors. *Biometrics*, 80(4): ujae124, 2024.

Song, Ziyi, F. Camerlenghi, W. Shen, M. Guindani, and M. Beraha. Repulsive mixture model with projection Determinantal point process. *Submitted to Journal of the American Statistical Association T&M*. 2025. [arXiv:2510.08838v1](https://arxiv.org/abs/2510.08838v1) (American Statistical Association Section on Bayesian Statistical Science Student Paper Competition Award in 2026, also selected for ASA Stats in Imaging Student Paper Runner-up)

Song, Ziyi, et al. Discovering hidden treatment effect heterogeneity in null clinical trials: a causal Bayesian nonparametric approach. *In preparation*. 2025+.

Song, Ziyi, et al. Multi-view functional clustering for the joint analysis of EEG data and computer mouse tracking data. *In preparation*. 2025+.

Awards & Honors

American Statistical Association Section on Bayesian Statistical Science Student Paper Award	2026
selected for ASA Stats in Imaging Student Paper Runner-up	2026
Institute of Mathematical Statistics Hannan Graduate Student Travel Award	2025
National Science Foundation Travel Award ICOSA Applied Statistics Symposium	2025
14th International Conference on Bayesian Nonparametrics (BNP14) Best Poster Award	2025
14th International Conference on Bayesian Nonparametrics (BNP14) Travel Award	2025
Academic Performance Scholarship	2018
Undergraduate Research Award	2018, 2019

Dean's List	2018, 2019
Master's List	2018, 2019

Academic Presentations

Departmental Seminars

1. Statistics seminar, University of Milan Bicocca, Italy. 2025

Invited and Contributed talks

5. Lightning talk – Nonparametric Bayesian Inference Computational Issues. ICERM, Brown University, Providence, RI. 2026
4. Invited talk – 34th ICSA Applied Statistics Symposium. Storrs, CT. 2025
3. Contributed talk – 3rd Bayesian Nonparametrics Networking Workshop. Singapore. 2024
2. Contributed talk – Orange County Biostatistics Symposium. Irvine, CA. 2023
1. Contributed talk – WNAR International Biometric Society. Anchorage, AK. 2023

Poster Presentations

2. Contributed poster – 14th International Conference on Bayesian Nonparametrics. Los Angeles, CA. 2025
1. Contributed poster – Bayesian Young Statisticians Meeting. Venice, Italy. 2024

Teaching Experience

Teaching assistant

University of California, Irvine

- STATS 295: Causal Machine Learning Fall 2024
- STATS 210: Statistics Methods I Fall 2024, Fall 2025
- STATS 211P: Statistics Methods II Spring 2024
- STATS 200A: Intermediate Probability and Statistical Theory Fall 2025
- STATS 120A/281A: Introduction to Probability and Statistics I Fall 2023
- STATS 68: Statistical Computing and Exploratory Data Analysis Spring 2023
- STATS 67: Introduction to Statistics for Computer Science Winter 2022, Winter 2023, Spring 2025
- STATS 7: Basic Statistics Spring 2022, Winter 2024

Grader

University of California, Irvine

- STATS 67: Introduction to Statistics for Computer Science Fall 2021, Fall 2022

Referee for Professional Journals

Journal of the American Statistical Association
Journal of Nonparametric Statistics
IEEE Transactions on Signal Processing

Industry Experience

Genentech *Research data science intern*

Jun. – Sep. 2023

Supervisor: Dr. Xiao Li (now Senior Principal Data Scientist at Roche) *South San Francisco, CA*

- Developed a method to identify cell types based on spatially resolved omics profiling data via a Bayesian nonparametric approach that also considers spatial neighborhood dependencies.
- Supported efforts to develop novel biomarkers by providing improved cell type identification and characterization using the proposed approach.

Professional Memberships

American Statistical Association
Institute of Mathematical Statistics
International Society for Bayesian Analysis
International Biometric Society

Languages

Computer	R (advanced), Python, Rcpp, \LaTeX
Human	Mandarin (native), English (fully proficient), Italian (basic)

Reference Writers

Prof. Michele Guindani
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University of California, Los Angeles

Prof. Weining Shen
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Prof. Mario Beraha
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