

CINDY J. PANG

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EDUCATION

University of California, Los Angeles

Los Angeles, CA

Ph.D., Biostatistics

June 2027

Dissertation: *Machine Learning Methods for High-dimensional Cancer Epigenomics Survival Modeling*

Advisor: Sudipto Banerjee, Ph.D.

University of North Carolina at Chapel Hill

Chapel Hill, NC

B.S.P.H. Biostatistics, B.A. Mathematics

May 2023

Minor: English and Comparative Literature

RESEARCH SPECIALTIES

Statistical Specialties: Bayesian statistics and computation (JAGS, Nimble), Machine Learning (Deep Learning, Multi-task Learning), Survival Analysis, Longitudinal Data, Cluster/High-performance Computing, High-dimensional data, Spatiotemporal Modeling

Applied Research Areas: Cancer Epigenomics, Wearable Device Data, Infectious Disease Surveillance

Programming Languages: R, Python, SAS, Stata, MATLAB

RESEARCH EXPERIENCE

Graduate Student Researcher

Los Angeles, CA

UCLA Department of Environmental Health

January 2025 – March 2025

Supervisor: Feng Gao, Ph.D.

- Built and benchmarked high-dimensional deep learning survival models (20K+ CpG features, 400+ samples) in Python/PyTorch to predict ovarian cancer progression-free survival
- Developed Multitask learning model to predict ovarian cancer progression-free survival and biological age, improving prognostic accuracy for ovarian-cancer relapse survival
- Applied SHAP-based explainability metrics to identify reproducible DNA-methylation biomarkers associated with ovarian cancer relapse risk

Graduate Student Researcher

Los Angeles, CA

UCLA Department of Biostatistics

September 2023 – September 2024

Supervisor: Sudipto Banerjee, Ph.D.

- Developed a Bayesian hierarchical modelling framework that reduced computation time for analyzing longitudinal wearable-device data from hours to seconds, validated using JAGS and Nimble
- Communicated findings to a scientific audience at Western North American Region of the International Biometric Society and received positive feedback from peers
- Articulated research agenda in a clear and compelling manner in competitive grant application process; Awarded \$20,000 for 2024-2025 academic year

Research Assistant

Chapel Hill, NC

Carolina Population Center

May 2021– May 2023

Supervisor: Paul L. Delamater, Ph.D.

- Created high (geographic) resolution estimates of COVID-19 vaccination coverage over time and conducted scientific literature searches, created maps and graphics, and produced narrative text describing data and methods as first-author in a peer-reviewed publication
- Improved understanding discrepancies in case reporting during COVID-19 pandemic by implementing a Bayesian hierarchical model to estimate missing COVID-19 cases over time for all North Carolina counties using cluster-computing capabilities

INDUSTRY EXPERIENCE

Summer Associate

RAND Corporation

Santa Monica, CA

June 2025– September 2025

Supervisor: Sean Robson, Ph.D., Nelson Lim, Ph.D.

- Developed a large language model (LLM)–based editing tool in Python that improved technical editing accuracy by ~10% overall (including +22% in usage and +14% in point-of-view consistency) compared to RAND’s in-house AI systems
- Designed evaluation metrics to benchmark editorial AI performance and presented findings and best-practice recommendations to research and data science stakeholders

PUBLICATIONS

Peer-Reviewed:

1. **Pang CJ**, Delamater PL. Spatiotemporal characteristics of the SARS-CoV-2 Delta wave in North Carolina. *Spat Spatiotemporal Epidemiol.* 2023 Jun;45:100566. doi: 10.1016/j.sste.2023.100566. Epub 2023 Jan 13. PMID: 37301588; PMCID: PMC9838034.

In-Preparation:

1. **Pang CJ**, Gao F. Survival Machine-Learning Models Identify CpG Methylation Biomarkers of Ovarian Cancer Relapse.
2. **Pang CJ**, Banerjee S. Bayesian Meta-Analysis on the Effects of Greenspace on Metabolic Equivalence of Task from Observational Actigraphy Experiments.

PRESENTATIONS AND POSTERS

1. Pang C.J., “Bayesian Inference of Greenspace on Metabolic Equivalence of Task from Observational Actigraphy Experiments” Oral Presentation. WNAR 2024, Fort Collins, CO.
2. Pang C.J., “Estimating COVID-19 Incidence During the Pre-Vaccination Era in North Carolina Counties by Leveraging Spatial Characteristics” Poster. UNC Celebration of Undergraduate Research 2023, Chapel Hill, NC.
3. Pang C.J., “Nonlinear Dynamics of Infectious Disease Models” Oral Presentation. Directed Reading Program 2021, Chapel Hill, NC.
4. Pang C.J., “Estimating Localized COVID-19 Immunity Levels in North Carolina Counties”, Oral Presentation. Summer Undergraduate Pipeline Research Pipeline (SUP) Research Symposium 2021, Chapel Hill, NC.

HONORS & AWARDS

Graduate Research Mentorship Award (\$20k + tuition/fees), <i>UCLA Graduate Division</i>	2024-2025
Three Years Service Award, <i>Carolina Housing</i>	2023
Honors Carolina Laureate, <i>UNC-CH</i>	2023
William W. and Ida W. Taylor Summer Undergraduate Research Fellowship (\$4k), <i>UNC-CH</i>	2022
Summer Institute of Statistical Modelling for Infectious Diseases Scholarship (tuition), <i>Univ. of Wash.</i>	2022

TEACHING EXPERIENCE

Teaching Assistant

Los Angeles, CA

UCLA Department of Biostatistics

September 2023 – Present

- Developed discussion and review materials for 5 courses to explain advanced statistical programming and inference concepts; earned an 8.79/9 in Communication Skills on teaching evaluations
- Collaborated closely with other Teaching Assistants to refine teaching strategies and adapt course content based on ongoing assessment and student feedback
- Courses:

Introduction to Biostatistics A	Fall 2023, Spring 2024, Summer Session C 2024
Introduction to Biostatistics B	Winter 2024
Methods in Biostatistics C	Spring 2025
Introduction to Biostatistics for MPH students	Fall 2025
Methods in Biostatistics A	Fall 2025

Floating Teaching Assistant

Los Angeles, CA

UCLA Master in Data Science in Health (MDSH) Program

January 2025 – June 2025

- Conducted office hours (3x/week) to provide individualized academic support for 2-3 elective courses per quarter, assisting full-time working students with coursework and technical concepts
- Collaborated closely with MDSH administrative team and course instructors to communicate student feedback and improve course delivery and engagement
- Courses:

Applied Bayesian Analysis	Winter 2025
Observational Data Science	
Healthcare, Economics, and LLMs	
Power and Sample Size	Spring 2025
Deep Learning, Statistical Perspectives	

LEADERSHIP & SERVICE

President

Los Angeles, CA

Biostatistics Student Association

January 2025 – Present

- Oversee the planning and execution of 3+ events per academic quarter to foster community, inclusion, and engagement among UCLA Biostatistics students, faculty, and staff
- Foster open communication between students, faculty, and staff by relaying student feedback and working with departmental leadership to address academic and community concerns

Mentor

Los Angeles, CA

Bruins Public Health

February 2025 – June 2025

- Mentored five undergraduate students with spatial data analysis in R; all mentees presented posters and gave oral presentations at the 2025 UCLA Undergraduate Research Week.

Residential Advisor

Chapel Hill, NC

Carolina Housing

July 2020 – May 2023

- Oversaw up to 30 student residents per semester; provide mentoring and serve as a mandated reporter
- Planned and organized 8 community programs per semester to create an inclusive housing environment