

FAN BU

fanbu@ucla.edu

<https://fanbu1995.github.io>

PROFESSIONAL AFFILIATIONS

Postdoctoral Scholar

Department of Biostatistics, University of California - Los Angeles

Aug 2021 - present

Visiting Scholar

Simons Institute, University of California - Berkeley

Sept 2022 - Nov 2022

Research Intern

Duke Center for AIDS Research

May 2020 - Aug 2020

EDUCATION

Department of Statistical Science, Duke University

Ph.D. in Statistics; Dissertation: Stochastic Process Models on Dynamic Networks

2017 - 2021

School of Mathematical Sciences, Peking University

B.S. in Mathematics and Applied Mathematics

2013 - 2017

RESEARCH INTERESTS

Bayesian statistics and statistical machine learning for complex and large-scale datasets; stochastic processes and dynamic models; health data science and informatics; computational social science.

PUBLICATIONS AND PREPRINTS

Inferring HIV Transmission Patterns from Viral Deep-Sequence Data via Latent Spatial Poisson Processes (2022)[†]. *Under extended review by data consortium; full manuscript available upon request.*

Adjusting for Both Sequential Testing and Systematic Error in Safety Surveillance using Observational Data: Empirical Calibration and MaxSPRT (2022). *Accepted by Statistics in Medicine; arXiv:2207.02704.*

Network Position and Emergent Phenomena: A Multi-team System Case Study (2022+). *Under revisions.*

Likelihood-based Inference for Partially Observed Stochastic Epidemics with Individual Heterogeneity (2021)[†]. *Under revisions for Annals of Applied Statistics; arXiv:2112.07892.*

Likelihood-based Inference for Partially Observed Epidemics on Dynamic Networks (2020)[†]. *Journal of the American Statistical Association (Winner of 2020 ASA SBSS Student Paper Award).*

SMOGS: Social Network Metrics of Game Success (2019)[†]. *The 22nd International Conference on Artificial Intelligence and Statistics (AISTATS).*

Who Started It? Identifying Root Sources in Textual Conversation Threads (2018). *arXiv:1809.03648.*

WORKING PAPERS

Bayesian Safety Surveillance with Adaptive Bias Correction (2022+)[†]. *pending funders' approval; draft manuscript available upon request*

Viral and Immune Predictors of Time to Viral Rebound in SHIV-infected Infant Macaques (2021+).

([†] denotes first-author work)

TEACHING & MENTORING

Mentor for the 2022 B.I.G. summer research program at UCLA.	<i>Summer 2022</i>
Instructor of Record for <i>STA101: Data Analysis/Statistical Inference</i> .	<i>Summer 2021</i>
Lab instructor and teaching assistant for <i>STA199: Introduction to Data Science</i> .	<i>Fall 2020</i>
Lab instructor and teaching assistant for <i>STA723: Statistics Case Studies</i> .	<i>Spring 2020</i>
Lab instructor and teaching assistant for <i>STA601: Bayesian Methods and Modern Statistics</i> .	<i>Fall 2019</i>
Team manager and student mentor for <i>Duke Data+ 2019</i> .	<i>Summer 2019</i>
Instructor of <i>Duke Statistical Science Bootcamp</i> .	<i>August 2018</i>

AWARDS AND HONORS

ISBA World Meeting travel award.	<i>June 2022</i>
Duke CFAR Fall Retreat Best Poster Award.	<i>October 2020</i>
SBSS Student Paper Award; JSM travel award.	<i>August 2020</i>
Honorable Mention for Ph.D. Teaching Assistant for the Year	<i>May 2020</i>
Women in Machine Learning Workshop (WiML) travel award.	<i>December 2017</i>

INVITED TALKS AND PRESENTATIONS

ORAL PRESENTATIONS:

Topic-contributed talk at CMStatistics 2022 (scheduled)	<i>December 2022</i>
Invited talk at the UCLA 2022 Fall Biomathematics Seminar Series (scheduled)	<i>November 2022</i>
Invited presentation at the 2022 OHDSI Global Symposium (scheduled)	<i>October 2022</i>
Oral presentation at NSF Student Conference on COVID-19 Modeling.	<i>January 2021</i>
Invited talk at 2020 Bayesian Young Statisticians Meeting: Online (BAYSM:O).	<i>November 2020</i>
Topic-contributed talk at 2020 Joint Statistical Meetings.	<i>August 2020</i>
Invited talk at the 3rd Annual AT&T Labs Graduate Student Symposium.	<i>November 2019</i>
Invited talk at the 2019 New England Symposium on Statistics in Sports (NESSIS).	<i>September 2019</i>
Spotlight talk on Duke Machine Learning Day.	<i>March 2019</i>

POSTER PRESENTATIONS:

Poster presentation at the 2022 ISBA World Meeting.	<i>June 2022</i>
Poster presentation at the 22nd International Conference on Artificial Intelligence and Statistics (AISTATS).	<i>April 2019</i>
Poster presentation at the 2018 ISBA World Meeting.	<i>June 2018</i>
Poster presentation at Women in Machine Learning Workshop (WiML) 2017.	<i>December 2017</i>

PROFESSIONAL SERVICE

Program Chair for *the junior section of the International Society for Bayesian Analysis (j-ISBA)*. *January 2022 - present*

Judge for *Duke Datathon*. *October 2020 & 2021*

Consultant for *DataFest: COVID-19 Virtual Data Challenge*. *April 2020*

Consultant for *ASA DataFest @ Duke*. *April 2018 & April 2019*

Journal review for: *Journal of the American Statistical Association*, *The Proceedings of the National Academy of Sciences (PNAS)*, *Science Advances*, and *Environmental and Ecological Statistics*.

ONGOING & PAST RESEARCH PROJECTS

Bayesian Methods Development for Sequential Monitoring of Observational Data for Vaccine Safety, under FDA's CBER BEST collaborative contract (2021+). *Work in progress*.

The Evolution of Popularity and Images of Characters in Marvel Cinematic Universe Fanfictions (2018). (Technical report at *arXiv:1805.03774*)

Traffic Speed Nowcasting Based on Urban Road Network and Artificial Neural Network (2017). (B.S. thesis)

Detection of Differential Genetic Networks (2016). (Supported by National Undergraduate Innovation Grant of China)