FAN BU

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PROFESSIONAL AFFILIATIONS

Tenure-track Assistant Professor *Jan 2024 (scheduled) -*
Department of Biostatistics, University of Michigan - Ann Arbor

Postdoctoral Scholar *Aug 2021 - present*
Department of Biostatistics, University of California - Los Angeles

Visiting Scholar *Sept 2022 - Nov 2022*
Simons Institute, University of California - Berkeley

Research Intern *May 2020 - Aug 2020*
Duke Center for AIDS Research

EDUCATION

Department of Statistical Science, Duke University *2017 - 2021*
Ph.D. in Statistics; Dissertation: Stochastic Process Models on Dynamic Networks

School of Mathematical Sciences, Peking University *2013 - 2017*
B.S. in Mathematics and Applied Mathematics

RESEARCH INTERESTS

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

PUBLICATIONS AND PREPRINTS

(† denotes first-author work)

F. Bu, M. J. Schuemie, A. Nishimura, L. H. Smith, K. Kostka, T. Falconer, J. A. McLeggon, P. B. Ryan, G. Hripcsak, and M. A. Suchard. Bayesian Safety Surveillance with Adaptive Bias Correction (2023). *Statistics in Medicine.* In print. †

F. Bu, J. Kagaayi, M. K. Grabowski, J. Xu, and O. Ratmann. Inferring HIV Transmission Patterns from Viral Deep-Sequence Data via Latent Spatial Poisson Processes (2023). *Biometrics.* In print. †

M. Schuemie, **F. Bu**, A. Nishimura and M. Suchard. Adjusting for Both Sequential Testing and Systematic Error in Safety Surveillance using Observational Data: Empirical Calibration and MaxSPRT (2023). *Statistics in Medicine.*

R. Asencio, **F. Bu**, L. Tucker, G. Varela, J. Moody, and A. Volfovsky. Network Position and Emergent Phenomena: A Multi-team System Case Study (2022+). *Under revisions.*

F. Bu, A. E. Aiello, A. Volfovsky, and J. Xu. Likelihood-based Inference for Partially Observed Stochastic Epidemics with Individual Heterogeneity (2021+). *Under revisions. arXiv:2112.07892.*†

F. Bu, A. E. Aiello, J. Xu, and A. Volfovsky. 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**). †

F. Bu, S. Xu, K. Heller, and A. Volfovsky. SMOGS: Social Network Metrics of Game Success (2019). *The 22nd International Conference on Artificial Intelligence and Statistics (AISTATS).* [†]

W. Zhang, **F. Bu**, D. Owen-Oas, K. Heller, and X. Zhu. Who Started It? Identifying Root Sources in Textual Conversation Threads (2018). *arXiv:1809.03648.*

WORKING PAPERS

V. Obregon-Perko, A. Awasthi, **F. Bu**, R. Barfield, S. J. Berendam, B. Yagnik, T. Styles, M. Kumar, E. Fray, J. Siliciano, R. R. Amara, G. G. Fouda, S. R. Permar, C. Chan, A. Chahroudi. Viral and Immune Predictors of Time to Viral Rebound in SHIV-infected Infant Macaques (2021+).

TEACHING & MENTORING

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

AWARDS AND HONORS

OHDSI Titan Award for Methodological Research.	*October 2022*
Mentorship of Excellence award for 2022 UCLA B.I.G. summer research program.	*August 2022*
ISBA World Meeting travel award.	*June 2022*
Duke CFAR Fall Retreat Best Poster Award.	*October 2020*
SBSS Student Paper Award; JSM travel award.	*August 2020*
Honorable Mention for Ph.D. Teaching Assistant for the Year	*May 2020*
Women in Machine Learning Workshop (WiML) travel award.	*December 2017*

INVITED TALKS AND PRESENTATIONS

ORAL PRESENTATIONS:

Invited talk at EcoStat 2023.	*August 2023*
Invited talk at IISA 2023.	*June 2023*
Contributed talk at ENAR 2023.	*March 2023*
Invited colloquim talk at Reed College.	*March 2023*
Topic-contributed talk at CMStatistics 2022.	*December 2022*
Invited talk at the UCLA 2022 Fall Biomathematics Seminar Series .	*November 2022*
Invited presentation at the 2022 OHDSI Global Symposium.	*October 2022*
Oral presentation at NSF Student Conference on COVID-19 Modeling.	*January 2021*
Invited talk at 2020 Bayesian Young Statisticians Meeting: Online (BAYSM:O).	*November 2020*

Topic-contributed talk at 2020 Joint Statistical Meetings.	*August 2020*
Invited talk at the 3rd Annual AT&T Labs Graduate Student Symposium.	*November 2019*
Invited talk at the 2019 New England Symposium on Statistics in Sports (NESSIS).	*September 2019*
Spotlight talk on Duke Machine Learning Day.	*March 2019*

POSTER PRESENTATIONS:

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

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: *The Proceedings of the National Academy of Sciences (PNAS)*, *Journal of the American Statistical Association (JASA)*, *Annals of Applied Statistics (AOAS)*, *Statistics in Medicine*, *Statistical Science*, *Science Advances*, and *Environmental and Ecological Statistics*.

SELECT ONGOING & PAST RESEARCH

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 the National Undergraduate Innovation Grant of China)