

FAN BU

fbu@umich.edu

<https://fanbu1995.github.io>

PROFESSIONAL AFFILIATIONS

Tenure-track Assistant Professor

Department of Biostatistics, University of Michigan - Ann Arbor

Jan 2024 - present

Postdoctoral Scholar

Department of Biostatistics, University of California - Los Angeles

Aug 2021 - Dec 2023

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 computation for complex and large-scale datasets; stochastic processes and dynamic models; observational healthcare studies and informatics; computational social science.

PUBLICATIONS AND PREPRINTS

(† denotes first-author work)

Statistical Methodology:

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*. †

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*.

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*.

Scientific & Collaborative:

R. Khera, L.S. Dhingra, A. Aminorroaya, [...], **F. Bu**, [...], and M. A. Suchard. Multinational patterns of second line antihyperglycaemic drug initiation across cardiovascular risk groups: federated pharmacoepidemiological evaluation in LEGEND-T2DM (2023). *BMJ medicine*.

E. A. Voss, A. Shoaibi, L. Y. H. Lai, [...], **F. Bu**, [...], and Patrick B Ryan. Contextualising adverse events of special interest to characterise the baseline incidence rates in 24 million patients with COVID-19 across 26 databases: a multinational retrospective cohort study (2023). *EClinicalMedicine*.

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*.

TEACHING & MENTORING

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| 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

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| OHDSI Titan Award for Methodological Research. | <i>October 2022</i> |
| Mentorship of Excellence award for 2022 UCLA B.I.G. summer research program. | <i>August 2022</i> |
| 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:

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| Invited talk at CMStatistics 2023. | <i>December 2023</i> |
| Invited talk at the RAND statistics seminar. | <i>Nov 2023</i> |
| Invited talk at EcoStat 2023. | <i>August 2023</i> |
| Invited talk at IISA 2023. | <i>June 2023</i> |
| Contributed talk at ENAR 2023. | <i>March 2023</i> |
| Invited colloquium talk at Reed College. | <i>March 2023</i> |

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| Topic-contributed talk at CMStatistics 2022. | <i>December 2022</i> |
| Invited talk at the UCLA 2022 Fall Biomathematics Seminar Series . | <i>November 2022</i> |
| Invited presentation at the 2022 OHDSI Global Symposium. | <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:

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| 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

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| Editor for BaYSM 2023 proceedings | <i>May - Septebmer 2024 (Scheduled)</i> |
| Organizing Committee member for the 2024 ISBA EAC conference. | <i>February - June 2024 (Scheduled)</i> |
| Organizing Committee member for Bayesian Young Statisticians Meeting (BaYSM) 2023 | <i>May - November 2023</i> |
| Program Chair for <i>the junior section of the International Society for Bayesian Analysis (j-ISBA)</i> . | <i>January 2022 - December 2023</i> |
| Judge for <i>Duke Datathon</i> . | <i>October 2020 & 2021</i> |
| Consultant for <i>DataFest: COVID-19 Virtual Data Challenge</i> . | <i>April 2020</i> |
| Consultant for <i>ASA DataFest @ Duke</i> . | <i>April 2018 & April 2019</i> |

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*, *Biostatistics*, *Statistical Science*, *Science Advances*, and *Environmental and Ecological Statistics*.