

FAN BU

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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 & PREPRINTS

Statistical Methodology:

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 (2024). *Biometrics*. In print.

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*.

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:

F. Bu, F. Arshad, G. Hripcsak, P. B. Ryan, M. J. Schuemie, and M. A. Suchard. Response to Comments on “Serially Combining Epidemiological Designs Does Not Improve Overall Signal Detection in Vaccine Safety Surveillance” (2024). *Drug Safety*. In print.

T. V. Anand, **F. Bu**, M. J. Schuemie, M. A. Suchard, and G. Hripcsak. Comparative safety and effectiveness of angiotensin converting enzyme inhibitors and thiazides and thiazide-like diuretics under strict monotherapy (2024). *Journal of Clinical Hypertension*. In print.

R. Khera, A. Aminorroaya, L. S. Dhingra, P. M. Thangaraj, A. P. Camargos, **F. Bu**, [...], and M. A. Suchard. Comparative Effectiveness of Second-line Antihyperglycemic Agents for Cardiovascular Outcomes: A Large-scale, Multinational, Federated Analysis of the LEGEND-T2DM Study (2024). *Under review*.

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*.

F. Arshad, M. J. Schuemie, **F. Bu**, [...], and M. A. Suchard. Serially Combining Epidemiological Designs Does Not Improve Overall Signal Detection in Vaccine Safety Surveillance (2023). *Drug Safety*.

E. A. Voss, A. Shoaibi, L. Y. H. Lai, [...], **F. Bu**, [...], and P. 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*.

Awards and Honors

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:

Invited talk at the Statistical Methods for Infectious Diseases Workshop (hosted by Penn State University).	<i>April 2024</i>
Invited talk at ENAR 2024.	<i>March 2024</i>
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>
Invited talk at the FDA CBER BEST Seminar Series.	<i>February 2023</i>
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:

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

Professional Societies:

Associate Chair for <i>ENAR Social Media Committee</i>	<i>September 2023 - present</i>
Program Chair for <i>the junior section of the International Society for Bayesian Analysis (j-ISBA)</i> .	<i>January 2022 - December 2023</i>

Editorial and Review Responsibilities:

Scientific Review Committee member for 2024 OHDSI Global Symposium. (<i>Scheduled</i>)	<i>March - October 2024</i>
Editor for BaYSM 2023 proceedings.	<i>May - Septebmer 2024 (Scheduled)</i>
Grant proposal reviewer for UKRI.	<i>February 2024</i>

Journal reviewer 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*.

Conference reviewer for: *UAI 2024*.

Conference Organization:

Organizing Committee member for BIRS-CMO Workshop “Frontiers of Bayesian Inference and Data Science”.	<i>September 2024 (scheduled)</i>
Organizing Committee member for 2024 ISBA EAC conference.	<i>June 2024 (scheduled)</i>
Organizing Committee member for Bayesian Young Statisticians Meeting (BaYSM) 2023.	<i>May - November 2023</i>

Miscellaneous:

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>

TEACHING & MENTORING

Instructor for <i>Biostatistics 602: Biostatistical Inference</i> .	<i>Winter 2024</i>
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>