

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

PUBLICATIONS & PREPRINTS

Statistical Methodology:

F. Bu, A. E. Aiello, A. Volfovsky, and J. Xu. Stochastic EM algorithm for partially observed stochastic epidemics with individual heterogeneity (2024). *Biostatistics* (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 (2024). *Biometrics*.

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, 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, 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 revisions*.

V. Obregon-Perko, A. Awasthi, R. Barfield, [...], F. Bu , [...], and A. Chahroudi. Biomarkers for viral rebound timing and control post-ART in SHIV-infected infant macaques (2024+). *Under review*.

C. Cai, A. Nishimura, M. Bowring, [...], F. Bu , [...], and Patrick B. Ryan. Similar risk of kidney failure among patients with blinding diseases who receive ranibizumab, aflibercept, and bevacizumab (2024). *Ophthalmology Retina*.

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*.

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*.

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>

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. *March - October 2024*

Co-editor for BaYSM 2023 proceedings. *May - September 2024 (Scheduled)*

Grant proposal reviewer for UKRI. *February 2024*

Journal reviewer for: *The Proceedings of the National Academy of Sciences (PNAS)*, *Journal of the American Statistical Association (JASA)*, *Biometrics*, *Annals of Applied Statistics (AOAS)*, *Journal of Computational and Graphical Statistics (JCGS)*, *Statistics in Medicine*, *Biostatistics*, *Bayesian Analysis*, *Statistical Science*, *Science Advances*, *Environmental and Ecological Statistics*, and *Statistics and Computing*.

Conference reviewer for: *Uncertainty in Artificial Intelligence (UAI) 2024*.

Conference Organization:

Scientific Programme Committee member for CFE-CMStatistics 2024 *April - December 2024*

Organizing Committee member for BIRS-CMO Workshop “Frontiers of Bayesian Inference and Data Science”. *December 2023 - September 2024*

Organizing Committee member for 2024 ISBA EAC conference. *February - June 2024*

Invited session (j-ISBA sponsored) organizer for Joint Statistical Meetings (JSM) 2024 *December 2023 - August 2024*

Organizing Committee member for Bayesian Young Statisticians Meeting (BaYSM) 2023. *May - November 2023*

Internal & Miscellaneous:

J-FAB committee member for UM School of Public Health *September 2023 - August 2024*

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*

TEACHING & MENTORING

While at University of Michigan:

Biostatistics 602: Biostatistical Inference. *Winter 2024*

While at UCLA:

Instructor for OHDSI Tutorials at the 2023 Global Symposium. *Fall 2023*

Mentor for the 2022 *B.I.G. summer research program*. *Summer 2022*

While at Duke University:

Instructor of Record for
STA101: Data Analysis/Statistical Inference *Summer 2021*

Lab instructor and teaching assistant for
STA199: Introduction to Data Science *Fall 2020*

<i>STA723: Statistics Case Studies.</i>	<i>Spring 2020</i>
<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>

Invited Talks and Presentations

Oral Presentations:

Invited talk at CFE-CMStatistics 2024 (scheduled).	<i>December 2024</i>
Contributed talk at ISBA World Meetings 2024 (scheduled).	<i>July 2024</i>
Invited talk at Ecosta 2024 (scheduled).	<i>July 2024</i>
Invited talk at the Online Seminar on Spatial and spatio-temporal Point processes and beyond (OSSP).	<i>April 2024</i>
Invited talk at the Statistical Methods for Infectious Diseases Across Scales Workshop (by Penn State University).	<i>April 2024</i>
Recent publications highlight talk at OHDSI community meeting.	<i>March 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 EcoSta 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.

June 2018

Poster presentation at Women in Machine Learning Workshop (WiML) 2017.

December 2017