ZHIYANG ZHOU

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Assistant Professor of Biostatistics
University of Wisconsin-Milwaukee

METHODOLOGICAL RESEARCH TOPICS

Functional/longitudinal data analysis, deep learning, transfer learning, survival analysis, tensor data analysis, design of experiments.

COLLABORATIVE RESEARCH EXPERIENCE

I have collaborated with investigators across a wide range of research areas, including the atmospheric science, cardiovascular disease, diabetes, geriatric health, infectious diseases, mental health, and nutrition science.

EMPLOYMENT

University of Wisconsin-Milwaukee, U.S. *2023–*
Assistant Professor of Biostatistics (Tenure-track)
University of Manitoba, Canada *2021–23*
Assistant Professor of Statistics (Tenure-track)
Northwestern University, U.S. *2020–21*
Research Scholar
Simon Fraser University, Canada *2019*
Sessional Instructor

EDUCATION

Simon Fraser University, Canada *2015–20*
Ph.D. in Statistics
Supervisor: Richard Lockhart, Professor, Fellow of Royal Society of Canada
Nankai University, China *2009–12*
M.Sc. in Probability and Statistics
Supervisor: Runchu Zhang, Professor
Beijing Normal University, China *2005–09*
B.Sc. in Statistics

FUNDING

Natural Sciences and Engineering Research Council of Canada (NSERC)
Principal Investigator, NSERC Discovery Grants Individual Program *2022–27*
Principal Investigator, NSERC Discovery Launch Supplements *2022–23*

PUBLICATIONS

Peer-Reviewed

14. H. Golandouz, M. Doupe, **Z. Zhou**, & L. Lix. (2026). Evaluating accuracy and fairness of machine-learning osteoporosis case definitions in linked administrative data. *International Journal of Population Data Science* 11:5:3553. DOI:10.23889/ijpds.v11i5.3553; PMCID:PMC13426580.

13. **Z. Zhou**, Y. Deng, L. Liu, H. Jiang, Y. Peng, X. Yang, Y. Zhao, H. Ning, N. Allen, J. Wilkins, K. Liu, D. Lloyd-Jones, & L. Zhao. (2025). Deep neural network with a smooth monotonic output layer for dynamic risk prediction. *Statistics in Medicine* 45:e70401. DOI:10.1002/sim.70401; PMID:41640287; PMCID:PMC12873558.

12. J. Liu, **Z. Zhou**, X. Cheng, D. Zhang, L. Li, & N. Vangeepuram. (2024). Food insecurity trends and disparities according to immigration status in the US households, 2011–2021. *Preventive Medicine* 187:108121. DOI:10.1016/j.ypmed.2024.108121; PMID:39208951; PMCID:PMC12056756.

11. J. Liu, **Z. Zhou**, X. Cheng, & N. Vangeepuram. (2023). Geographic and sociodemographic variations in prevalence of mental health symptoms among US youths, 2022. *American Journal of Public Health* 113:1116–1119. DOI:10.2105/AJPH.2023.307355; PMID:37672739; PMCID:PMC10484142.

10. Y. Deng, L. Liu, H. Jiang, Y. Peng, Y. Wei, **Z. Zhou**, Y. Zhong, Y. Zhao, X. Yang, J. Yu, Z. Lu, A. Kho, H. Ning, N. B. Allen, J. T. Wilkins, K. Liu, D. M. Lloyd-Jones, & L. Zhao (2023). Comparison of state-of-the-art neural network survival models with the pooled cohort equations for cardiovascular disease risk prediction. *BMC Medical Research Methodology* 23:22. DOI:10.1186/s12874-022-01829-w; PMID:36694118; PMCID:PMC9872364.

9. **Z. Zhou** & P. Sang (2022). Continuum centroid classifier for functional data. *Canadian Journal of Statistics* 50:200–220. DOI:10.1002/cjs.11624.

8. Y. Zhao, Y. Wang, J. Liu, H. Xia, Z. Xu, Q. Hong, **Z. Zhou**, & L. Petzold (2021). Empirical quantitative analysis of COVID-19 forecasting models. *2021 International Conference on Data Mining Workshops (ICDMW)* 517–526. (Best Paper Award) DOI:10.1109/ICDMW53433.2021.00069.

7. **Z. Zhou** (2021). Fast implementation of partial least squares for function-on-function regression. *Journal of Multivariate Analysis* 185:104769. DOI:10.1016/j.jmva.2021.104769.

6. **Z. Zhou** (2019). Functional continuum regression. *Journal of Multivariate Analysis* 173:328–346. DOI:10.1016/j.jmva.2019.03.006.

5. **Z. Zhou** & R. Zhang (2014). A generalized general minimum lower order confounding criterion for nonregular designs. *Journal of Statistical Planning & Inference* 148:95–100. DOI:10.1016/j.jspi.2013.12.003.

4. W. Wang, D. Gong, **Z. Zhou**, & Y. Guo (2012). Robustness of the aerosol weekly cycle over Southeastern China. *Atmospheric Environment* 61:409–418. DOI:10.1016/j.atmosenv.2012.07.029.

Under Review

3. **Z. Zhou** & L. Zhao. (2025). Parsimonious joint model of survival outcome and multiple longitudinal risk factors.

Preprint

2. Y. Yang, & **Z. Zhou** (2025). Transfer learning for function linear regression via control variates. arXiv:2601.17217

1. **Z. Zhou**, & R. Lockhart. (2020). Partial least squares for sparsely observed curves with measurement errors. arXiv:2003.11542

SERVICE

Editorial Board Member
hLife (2024–28), *Journal of Multivariate Analysis* (2024–26)
Conference Committee Member
Scientific Committee for the International Applied Statistics Conference (UYIK, 2024–26)
Program Committee for ICSA-Canada Chapter 2024 Symposium
Grant Reviewer
NSERC Discovery Grants
Journal Reviewer
American Journal of Public Health, *Annals of Statistics*, *Biometrics*, *Biostatistics and Epidemiology*, *Chemometrics and Intelligent Laboratory Systems*, *Computational Statistics*, *Canadian Journal of Statistics*, *Electronic Journal of Statistics*, *Environmental Modeling and Assessment*, *hLife*, *IISE Transations*, *Innovation in Aging*, *Journal of Alzheimer's Disease*, *Journal of Applied Statistics*, *Journal of Computational and Graphical Statistics*, *Journal of Medical Internet Research*, *Journal of Multivariate Analysis*, *Journal of Statistical Theory and Practice*, *Knowledge-Based Systems*, *Mathematical Modelling and Analysis*, *Statistical Methods in Medical Research*, *Statistics and Computing*, *Statistics in Biosciences*, *Statistics in Medicine*, *Statistics and Probability Letters*, *Technometrics*, *The American Statistician*, *Trials*
Conference Reviewer
Conference on Neural Information Processing Systems (NeurIPS), *International Conference on Learning Representations (ICLR)*
Committee Member @uwm.edu
Codification Committee (2026–28), Non-Academic Misconduct Hearing Committee (Dean of Students Office, 2025–26)
Committee Member @manitoba.ca
Graduate Committee (Dept. Stat., 2022–23), IT Committee (Dept. Stat., 2022–23), Research & Seminar Committee (Dept. Stat., 2021–22), Statistical Consulting Committee (Dept. Stat., 2022–23), Executive Committee (Faculty of Science, 2022–23)
Others
Official Nominator for the VinFuture Prize

INVITED PRESENTATIONS

2027: Lifetime Data Science (LiDS) Conference.
2026: ICSA China Conference.
2025: Joint Conference on Statistics and Data Science in China; WNAR/IMS Annual Meeting.
2024: International Joint Conference on Computational and Financial Econometrics (CFE) and Computational and Methodological Statistics (CMStatistics), CFE-CMStatistics 2024; International Conference on Econometrics and Statistics (EcoSta 2024); Joint Conference on Statistics and Data Science in China; SFU Statistical Learning for Large Scale Data Conference; ICSA-Canada Chapter Symposium; Southeast Wisconsin Data Science (SEAWINDS) Collaborative First Annual Research

Symposium.
2023: International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2023); ICSA International Conference.
2022: International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2022); Biostatistics and Bioinformatics Round, George & Fay Yee Centre for Healthcare Innovation; Biostatistics Seminar Series, Northwestern University; ICSA-Canada Chapter Symposium; Machine Learning Special Interest Group Meeting, George & Fay Yee Centre for Healthcare Innovation; ICSA Applied Statistics Symposium.
2021: NIC-ASA & ICSA Midwest Chapter Joint Fall Meeting; ICSA Applied Statistics Symposium.

TEACHING

Supervision

- **Doctoral Students**: Sanaa Mohammed Sami Raja Mahmoud (2025–, Nursing, uwm.edu, with Dr. Jennifer Doering as the major supervisor), Donald Cramer (2023–, Biostatistics, uwm.edu).
- **Master Students**: Liliana Kasta (2024–25, Biostatistics, uwm.edu), Ian Nadolski (2023–25, Biostatistics, uwm.edu), Kelly Wikoff (2023–24, Biostatistics, uwm.edu) Ke Wang (2022–24, Statistics, umanitoba.ca), Yuting Kang (2023–25, Math, ctgu.edu.cn, with Drs. Chang-Lin Xiang and Changyu Guo as major supervisors).
- **Undergraduate Students**: Omar Hassan (2022–23, Physics & Astronomy, umanitoba.ca, with Dr. Wouter Deconinck as the major supervisor).

Courses

- **University of Wisconsin-Milwaukee**: Introduction to Biostatistics (2026), Data Analysis & Scientific Communication Incorporating Use of Generative AI (2026), Data Management and Visualization in R (2025–27), Probability and Statistical Inference (2024–25, 27), Applied Survival Analysis (2024, 26, 28).
- **University of Manitoba**: Multivariate Analysis (2022–23), Introduction to Statistical Inference (2022), Statistical Inference (2022).
- **Simon Fraser University**: Statistical Theory (2019).