

# ZHIYANG ZHOU

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Assistant Professor of Biostatistics

University of Wisconsin-Milwaukee

## METHODOLOGICAL RESEARCH TOPICS

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

## COLLABORATIVE RESEARCH EXPERIENCE

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Atmospheric science, cardiovascular disease, mental health, infectious disease, nutrition science.

## EMPLOYMENT

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

## EDUCATION

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

## FUNDING

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

## PUBLICATIONS

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### Peer-reviewed

12. **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. (2026). Deep neural network with a smooth monotonic output layer for dynamic risk prediction. *Statistics in Medicine*. In press.

11. 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
10. 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
9. 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
8. **Z. Zhou** & P. Sang (2022). Continuum centroid classifier for functional data. *Canadian Journal of Statistics* 50:200–220. doi:10.1002/cjs.11624
7. 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
6. **Z. Zhou** (2021). Fast implementation of partial least squares for function-on-function regression. *Journal of Multivariate Analysis* 185:104769, 2021. doi:10.1016/j.jmva.2021.104769
5. **Z. Zhou** (2019). Functional continuum regression. *Journal of Multivariate Analysis* 173:328–346. doi:10.1016/j.jmva.2019.03.006
4. **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
3. 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

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

## Preprint

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

## SERVICE

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### Editorial Board Member

*hLife* (2024–25), *Journal of Multivariate Analysis* (2024–26)

### Conference Committee Member

Program Committee for the 6th ICSA-Canada Chapter Symposium

Scientific Committee for the 5th International Applied Statistics Conference (UYIK-2024)

### Grant Reviewer

*NSERC Discovery Grants*

## Journal Reviewer

*American Journal of Public Health, Biometrics, Biostatistics & Epidemiology, Chemometrics and Intelligent Laboratory Systems, Computational Statistics, Canadian Journal of Statistics, Environmental Modeling & Assessment, hLife, IISE Transactions, Journal of Alzheimer's Disease, Journal of Applied Statistics, Journal of Computational and Graphical Statistics, Journal of Medical Internet Research, Journal of Multivariate Analysis, Knowledge-Based Systems, Mathematical Modelling and Analysis, Statistics and Computing, Statistics in Biosciences, Statistics in Medicine, Statistics & Probability Letters, Technometrics, The American Statistician, Trials*

## Conference Reviewer

*Conference on Neural Information Processing Systems (NeurIPS), International Conference on Learning Representations (ICLR)*

## INVITED PRESENTATIONS

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### 2025

The 3rd Joint Conference on Statistics and Data Science in China;  
WNAR/IMS Annual Meeting.

### 2024

The 18th International Joint Conference on Computational and Financial Econometrics (CFE) and Computational and Methodological Statistics (CMStatistics), CFE-CMStatistics 2024;  
The 7th International Conference on Econometrics and Statistics (EcoSta 2024);  
The 2nd Joint Conference on Statistics and Data Science in China;  
SFU Statistical Learning for Large Scale Data Conference;  
The 6th ICSA-Canada Chapter Symposium;  
Southeast Wisconsin Data Science (SEAWINDS) Collaborative First Annual Research Symposium.

### 2023

The 16th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2023);  
The 12th ICSA International Conference.

### 2022

The 15th 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;  
The 5th 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

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### Supervision

- **Doctoral Students:** 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 Chang-Lin Xiang and Changyu Guo as senior supervisors).
- **Undergraduate Students:** Omar Hassan (2022–23, Physics & Astronomy, umanitoba.ca, with Wouter Deconinck as the senior supervisor).

## Courses

- **University of Wisconsin-Milwaukee:** Data Management and Visualization in R (2025–26), Probability and Statistical Inference (2024–25), Applied Survival Analysis (2024, 26).
- **University of Manitoba:** Multivariate Analysis (2022–23), Introduction to Statistical Inference (2022), Statistical Inference (2022).
- **Simon Fraser University:** Statistical Theory (2019).