Zhiyang Zhou, Ph.D., Asst. Prof.

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- https://zhiyanggeezhou.github.io/



Academic Interests

- Deep learning/deep neural networks;
- Functional/longitudinal data analysis;
- Survival analysis;
- Tensor data analysis;
- Design of experiments.

Employment

2021 – **Assistant Professor (Tenure-Track)**, University of Manitoba, Canada.

2020 – 2021 Postdoctoral Trainee, Northwestern University, United States. Supervisor: Lihui Zhao, Associate Professor.

2019 **Sessional Instructor**, Simon Fraser University, Canada.

Education

Ph.D. in Statistics, Simon Fraser University, Canada.

Supervisor: Richard A. Lockhart, Professor, Fellow of Royal Society of Canada.

Thesis: Supervised Basis Functions Applied to Functional Regression and Classification.

2009 – 2012 M.Sc. in Probability & Statistics, Nankai University, China. Supervisor: Runchu Zhang, Professor.

2005 – 2009 **B.Sc. in Statistics**, Beijing Normal University, China.

Publications

- Deng, Y., Liu, L., Jiang, H., Peng, Y., Wei, Y., **Zhou**, **Z.**, Zhong, Y., Zhao, Y., Yang, X., Yu, J., Lu, Z., Kho, A., Ning, H., Allen, N. B., Wilkins, J. T., Liu, K., Lloyd-Jones, D. M., & Zhao, L. (2022). Comparison of state-of-the-art neural network survival models with the pooled cohort equations for cardiovascular disease risk prediction [Accepted]. *BMC Medical Research Methodology*.
- **Zhou**, **Z.**, & Sang, P. (2022). Continuum centroid classifier for functional data. *Canadian Journal of Statistics*, 50, 200–220. & https://doi.org/10.1002/cjs.11624
- Zhao, Y., Wang, Y., Liu, J., Xia, H., Xu, Z., Hong, Q., **Zhou**, **Z.**, & Petzold, L. (2021). Empirical quantitative analysis of COVID-19 forecasting models. The 9th Workshop on Data Mining in Biomedical Informatics and Healthcare (DMBIH'21) in Conjunction with IEEE International Conference on Data Mining (ICDM'21). 6 https://doi.org/10.1109/ICDMW53433.2021.00069
- **Zhou**, **Z.** (2021). Fast implementation of partial least squares for function-on-function regression. *Journal of Multivariate Analysis*, 185, 104769. 6 https://doi.org/10.1016/j.jmva.2021.104769

- **Zhou**, **Z.**, & Zhang, R. (2014). A generalized general minimum lower order confounding criterion for nonregular designs. *Journal of Statistical Planning and Inference*, 148, 95–100.
- Wang, W., Gong, D., **Zhou**, **Z.**, & Guo, Y. (2012). Robustness of the aerosol weekly cycle over Southeastern China. *Atmospheric Environment*, *61*, 409–418.
 - https://doi.org/10.1016/j.atmosenv.2012.07.029

Research Grants

2022 – 2027 Principal Investigator, NSERC Discovery Grant (with Discovery Launch Supplement).

2021 – 2027 Principal Investigator, University of Manitoba Research Startup Fund.

Invited Presentations

2023 | ICSA International Conference.

International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2022).

- Biostatistics and Bioinformatics Round, George & Fay Yee Centre for Healthcare Innovation.
- Northwestern Biostatistics Seminar Series, Feinberg School of Medicine.
- ICSA-Canada Chapter Symposium.
- ICSA Applied Statistics Symposium.
- Machine Learning Special Interest Group Meeting, George & Fay Yee Centre for Healthcare Innovation.

2021 NIC-ASA & ICSA Midwest Chapter Joint Fall Meeting.

ICSA Applied Statistics Symposium.

Teaching

- University of Manitoba: STAT 3100 Introduction to Statistical Inference (2022), STAT 3690 Multivariate Analysis (2022–23), STAT 4100 Statistical Inference (2022).
- Simon Fraser University: STAT 450 Statistical Theory (2019 Fall).

Supervision

- Master Students: Ke Wang (2022–, Statistics, U Manitoba).
- Undergraduate Students: Omar Hassan (2022–, Physics and Astronomy, U Manitoba, co-supervisd by Prof. Wouter Deconinck).

Miscellaneous

Award

Best Paper Award, the 9th Workshop on Data Mining in Biomedical Informatics and Healthcare (DMBIH'21) in Conjunction with IEEE International Conference on Data Mining (ICDM'21).

2019 **Excellence in Teaching**, Simon Fraser University Faculty of Science.

Miscellaneous (continued)

Reviewer

- **Journals**: Biometrics, Biostatistics and Epidemiology, Canadian Journal of Statistics, Chemometrics and Intelligent Laboratory Systems, Computational Statistics, IISE Transations, Journal of Computational and Graphical Statistics, Journal of Medical Internet Research, Journal of Multivariate Analysis, Knowledge-Based Systems, Mathematical Modelling and Analysis, Statistics in Medicine, Statistics and Probability Letters, Technometrics, Trials.
- **Conferences**: Conference on Neural Information Processing Systems (NeurIPS), International Conference on Learning Representations (ICLR).