Haixu Wang

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Research Interests: Functional data analysis, Biostatistics, Neural networks, Network analysis, Machine learning, Computational neuroscience, Data science, Bayesian analysis.

Education

Simon Fraser University, Burnaby, B.C., Canada

Ph.D. Candidate, Statistics, 2017–2023 (Parental leave: 2020-2021)

- Thesis: *Machine Learning in Functional Data Analysis*
- Supervisor: Dr. Jiguo Cao

Simon Fraser University, Burnaby, B.C., Canada

M.S., Statistics, 2015–2017

- Thesis: *Modeling Neural Spike Trains with Particle Markov Chain Monte Carlo and Smoothing*
- Supervisor: Dr. Jiguo Cao and Dr. Michelle Zhou

Simon Fraser University, Burnaby, B.C., Canada

B.S., Statistics, August, 2015

Publication

- Wang, H. and Cao, J., 2022, "Nonlinear Prediction for Functional Time Series", in revision for *Environmetrics*.
- Wang, H. and Cao, J., 2022, "pCODE: Estimating Parameters of ODE Models", in revision for *The R Journal*.
- Wang, H. and Cao, J., 2021, "Functional Nonlinear Learning", submitted to *Journal of Computational and Graphical Statistics*.
- Wang, H. and Cao, J., 2021, "Functional Principal Component Analysis for Multiple Variables on Different Riemannian Manifolds", in revision for *Journal of Agricultural, Biological and Environmental Statistics*.
- Wang, H. and Cao, J., 2020, "Estimating Time-varying Directed Neural Networks", *Statistics and Computing*, **20**, 1209–1220.
- Ithurbide, M., Wang, H., Fassier, T., Li, Z., Pires, J., Larsen, T., Cao, J., Rupp, R., and Friggens, N., 2022, "Multivariate analysis of milk metabolite measures shows potential for deriving new resilience phenotypes", submitted to *Journal of Dairy Science*.

Project

- Wang, H. and Cao, J., 2020, "pCODE: a R package for estimating ODE models" available on CRAN, GITHUB, and Rshiny.

Invited Conference Talks and Presentations

- Wang, H. and Cao, J., "Functional Nonlinear Learning", 2022 International Workshop on Complex Functional Data Analysis, Shanghai, China, 2022.
- Wang, H. and Cao, J., "Functional Nonlinear Learning", 2022 Annual Meeting of the Statistical Society of Canada, Online, 2022.
- Wang, H. and Cao, J., "Functional Nonlinear Learning", 2021 Canada Statistical Science Institute showcase, Online, 2021.
- Wang, H. and Cao, J., "Estimating time-varying directed neural networks", 2019 International Chinese Statistical Association conference, Tianjin, China, 2019.

Teaching

- *Simon Fraser University: Teaching Assistant 2017-2022*
  - Statistics Workshop.
  - STAT 100: Chance and Data Analysis
  - STAT 201: Statistics for the Life Sciences
  - STAT 203: Introduction to Statistics for the Social Sciences
  - STAT 270: Introduction to Probability and Statistics
  - STAT 305: Introduction to Biostatistical Methods for Health Sciences
  - STAT 485: Applied Time Series Analysis
- *Tianjin University: 2021 Summer*
  - Online course on functional data analysis and parameter estimation of differential equations.

Employment

- **Graduate Teaching Assistant**, *Simon Fraser University*, 2017-Current.
- **Graduate Research Assistant**, *Simon Fraser University*, 2017-Current.
- **Data Scientist Intern**, *Pacific Blue Cross*, Burnaby, B.C., Canada. 2017–2018

Awards

- PhD Graduate Fellowship, Simon Fraser University, 2021-2022
- PhD Graduate Fellowship, Simon Fraser University, 2020-2021
- PhD Graduate Fellowship, Simon Fraser University, 2019-2010
- Graduate and Postdoctoral Fellowship, Simon Fraser University, 2019-2020
- PhD Graduate Fellowship, Simon Fraser University, 2018-2019
- PhD Graduate Fellowship, Simon Fraser University, 2017-2018