Yangdi Jiang | CURRICULUM VITAE

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Education

University of Alberta   *Alberta, Canada*

PHD STATISTICAL MACHINE LEARNING   *2021 - 2025*

- Advisor: Prof. Bei Jiang

University of Alberta   *Alberta, Canada*

MS STATISTICAL MACHINE LEARNING   *2019 - 2021*

- Advisor: Prof. Bei Jiang

University of Alberta   *Alberta, Canada*

BS MATHEMATICS AND FINANCE   *2013 - 2017*

- Graduation with Distinction

Professional Experience

2019-2025 **Graduate Teaching Assistant**, Dept. of Mathematical and Statistical Sciences, University of Alberta

2024-2025 **Statistical Consultant**, Training Consultant Center, University of Alberta

2020-2021 **Intern Statistician**, Replica Analytics

Publications

Published

Yinlong Huang, **Yangdi Jiang**, Bei Jiang, Ryan T. Bailey, Badrul Masud, Brian Smerdon and Monireh Faramarzi. Modelling impacts of climate change on snow drought, groundwater drought, and their feedback mechanism in a snow dominated watershed in western Canada. *Journal of Hydrology*, 2024.

Yangdi Jiang, Yi Liu, Xiaodong Yan, Anne-Sophie Charest, Linglong Kong, and Bei Jiang. Analysis of differentially private synthetic data: a general measurement error approach. *Thirty-Eighth AAAI Conference on Artificial Intelligence (AAAI)*. 10 2023.

Yangdi, Jiang, Xiaotian Chang, Yi Liu, Lei Ding, Linglong Kong, and Bei Jiang. Gaussian differential privacy on Riemannian manifolds. *Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS)*, 2023.

Yangdi Jiang, Lucy Mosquera, Bei Jiang, Linglong Kong, and Khaled El Emam. Measuring re-identification risk using a synthetic estimator to enable data sharing. *PLOS ONE*, 17(6):1-19, 06 2022.

Under Review

Yangdi Jiang, Xiaotian Chang, Lei Ding, Linglong Kong, and Bei Jiang. Efficient Differential Privacy on Manifolds via Exponential Wrapping. *Thirty-ninth Conference on Neural Information Processing Systems (NeurIPS)*, 2025.

Yangdi Jiang, Xiaotian Chang and Qirui Hu. Statistical Analysis of Fréchet Mean under Local Differential Privacy. *Thirty-ninth Conference on Neural Information Processing Systems (NeurIPS)*, 2025.

Xiaotian Chang, **Yangdi Jiang**, Yafei Wang, Bei Jiang and Linglong Kong. Intrinsic Manifold Optimization from Dependent Samples via SAA and Stochastic Vector Fields. *Thirty-ninth Conference on Neural Information Processing Systems (NeurIPS)*, 2025.

Peng Yu[†], **Yangdi Jiang**[†], Zhihua Su, Jiamei Wu, Lingchen Kong, and Bei Jiang. A Bayesian Approach to Data-driven Regression with Differential Privacy Guarantee. *Journal of Data Science*, 2025.

In Prep

Yangdi Jiang[†], Xiaotian Chang[†] and Qirui Hu. Statistical Inference of Riemannian Manifolds Data under Differentially Private Framework.

Yangdi Jiang, Xiaotian Chang, Linglong Kong, and Bei Jiang. Bayesian Deconvolution on Riemannian Manifolds with Applications to Differential Privacy.

Bei Jiang, Junxi Zhang, **Yangdi Jiang** and Linglong Kong. FDA: generating fair synthetic data with provable trade-off between fairness and faithfulness.

Patent

Yangdi Jiang, Bei Jiang, Linglong Kong and Khalid El Emam. Re-identification Risk Assessment Using a Synthetic Estimator. 2022. US Patent App. 17/400,484.

[†] *indicates equal contribution.*

Computing & Software Experience

Programming Languages: R and Python

Statistical Computing: High-performance computing (HPC), parallel processing in R and Python

Cloud & Linux Computing: Experience running large-scale statistical models on Linux-based Slurm clusters

Awards, Fellowships, & Grants

2024 **Alberta Innovates Graduate Student Scholarships**, Alberta Innovates

2021 **Dr. Josephine M. Mitchell Research Scholarship**, University of Alberta

2017 **The John Ross McGregor Scholarship in Mathematical and Statistical Science**, University of Alberta

2015-2017 **A Thorleif M Fostvedt Scholarship in Mathematics**, University of Alberta

Teaching Experience

Winter 2025 **STAT 151: Introduction to Applied Statistics I**, Lab Instructor

Fall 2024 **STAT 161: Introductory Statistics for Business and Economics**, Lab Instructor

Winter 2024 **STAT 151: Introduction to Applied Statistics I**, Lab Instructor

Fall 2023 **STAT 471: Probability I**, Teaching Assistant

Winter 2023 **STAT 361: Sampling Techniques**, Teaching Assistant

Fall 2022 **STAT 235: Introductory Statistics for Engineering**, Lab Instructor

Winter 2022 **STAT 235: Introductory Statistics for Engineering**, Lab Instructor

Fall 2021 **STAT 235: Introductory Statistics for Engineering**, Lab Instructor

Fall 2020 **STAT 368: Introduction to Design and Analysis of Experiments**, Teaching Assistant