Canyi Chen

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Experience

2023 – **Postdoc Researcher**, *Department of Biostatistics, University of Michigan*

Education

2018 – 2023 **PhD in Statistics**, *Renmin University of China*, Beijing
Dissertation: "Distributed Statistical Algorithms for Nonsmooth Problems: Theories and Applications"

2014 – 2018 **BSc in Mathematics and Applied Mathematics**, *Beijing Normal University*, Beijing

Research Interests

○ High-dimensional data analysis; Non-Linear dependence measure

Publications

Journal Articles

1. **Chen, C.** & Zhu, L. Distributed Decoding from Heterogeneous 1-Bit Compressive Measurements. *Journal of Computational and Graphical Statistics* **32,** 884–894. doi:`10.1080/10618600.2022.2118751` (Aug. 2022).

2. **Chen, C.,** Xu, W. & Zhu, L. Distributed Estimation in Heterogeneous Reduced Rank Regression: With Application to Order Determination in Sufficient Dimension Reduction. *Journal of Multivariate Analysis* **190,** 104991. doi:`10.1016/j.jmva.2022.104991` (July 2022).

3. **Chen, C.,** Gu, Y., Zou, H. & Zhu, L. Distributed Sparse Composite Quantile Regression in Ultrahigh Dimensions. *Statistica Sinica.* doi:`10.5705/ss.202022.0095` (2024).

4. Zhang, Y., **Chen, C.** & Zhu, L. Sliced Independence Test. *Statistica Sinica.* doi:`10.5705/ss.202021.0203` (2022).

5. Song, P., **Chen, C.,** Lou, Y., Jiang, H., Li, W. & Zhu, L. Assessing Effectiveness of Integrated Strategies for Preventing and Controlling the Outbreak of COVID-19 and Predicting Impact of Opening Exit Channels to Leave Hubei Province. *Chinese Journal of Applied Probability and Statistics* **36,** 321–330. doi:`10.3969/j.issn.1001-4268.2020.03.007` (June 2020).

6. He, Y., **Chen, C.** & Xu, W. Distributed Estimation of High-Dimensional Linear Quantile Regression. *Statistics and Its Interface.* In press (2022).

7. **Chen, C.** Scalable and Globally Convergent Algorithm for Sufficient Dimension Reduction. *Statistics and Its Interface.* In press. doi:10.4310/23-SII798 (2023).

8. Chen, B. & **Chen, C.** Fast Optimization Methods for High-Dimensional Row-sparse Multivariate Quantile Linear Regression. *Journal of Statistical Computation and Simulation.* In press. doi:10.1080/00949655.2023.2232504 (2023).

Preprints

9. **Chen, C.,** Chen, B., Kong, L. & Zhu, L. *Robust Multi-Task Learning in High Dimensions under Memory Constraint* submitted. 2023.

10. **Chen, C.** & Zhu, L. *Distributed Estimation and Gap-Free Analysis of Canonical Correlations* submitted. 2023.

11. **Chen, C.** *Robust and Efficient Sparse Learning over Networks: A Decentralized Surrogate Composite Quantile Regression Approach* submitted. 2023.

12. Qiao, N. & **Chen, C.** *Fast and Robust Low-Rank Learning over Networks: A Decentralized Matrix Quantile Regression Approach* submitted. 2023.

13. Chen, B. & **Chen, C.** *Convoluted Support Matrix Machine in High Dimensions* submitted. 2023.

14. **Chen, C.** & Zhu, Z. *Byzantine-Robust Distributed High-Dimensional Composite Quantile Regression with Near-Oracle Rate* submitted. 2023.

15. Hao, W., **Chen, C.** & Song, P. X.-K. *A Class of Directed Acyclic Graphs with Mixed Data Types in Mediation Analysis* submitted. Nov. 2023. arXiv:2311.17867 [stat].

16. Al-Hinai, M., **Chen, C.,** Jansen, E. C., Peterson, K. E., Song, P. X.-K. & Baylin, A. *Vitamin D is Associated with Sleep Disturbance and Cognitive Function in Older Adults* 2024.

Open-source Software

○ SIT: Association Measurement Through Sliced Independence Test (SIT)

Grant Proposals

2020 **Canonical Correlation Analysis of Functional Data**, *Renmin University of China*

2016 **Asymptotics of the Derrida–Retaux Branch System**, *National Students' Innovation and Entrepreneurship Training Program*

Fellowships, Honors, and Awards

2023 **National Scholarship of China**

2023 **Outstanding Graduate of Renmin University of China**

2023 **Wu Yuzhang Scholarship Finalist**

2022 **Jingdong Special Scholarship Finalist**

2019 – 2023 **Academic First Class Scholarship**

2018 **Academic Second Class Scholarship**

2020 − 2021	**Study Excellence Scholarship**
2020	**Merit Student**
2019	**Third Class Scholarship for Social Work and Volunteer Service**
2020	**The best presented poster, Distributed Decoding from Heterogeneous 1-Bit Compressive Measurements, *Statistics and Data Science Young Scholars Forum*, Beijing. [pdf]**
2016	**National Second Prize in National Undergraduate Mathematical Modeling Contest**
2017	**Jingshi First Class Competition Scholarship**
2015 − 2017	**National Inspirational Scholarship**
2016	**Jingshi First Class Scholarship**
2015, 2017	**Jingshi Second Class Scholarship**
2015	**Merit Student**

Volunteer Experience

Teaching Assistant

Fall 2019	**Computer Skills in Data Science – PhD Level**
Fall 2019	**Asymptotic Statistics – PhD Level**
Fall 2019	**Natural Language Processing – PhD Level**

Anonymous Referee

Statistica Sinica (22, 23), *IEEE Transactions on Neural Networks and Learning Systems (23, 24)*

Voluntary Teacher

2016	**Pengshui, Chongqing, China**
2017	**Yongding, Fujian, China**

Seminars & Presentations

Data Science Frontiers Forum, Southwestern University of Finance and Economics, Chengdu, China, July 2021 (invited speaker)

The 7th International Conference on Statistical Optimization and Learning, Beijing Jiaotong University, Beijing, China, December 2022 (invited speaker)

Skills

Programming languages: Python, R, C++, Bash, LATEX, MATLAB, SQL
Languages: Chinese, English, Eastern Min