

Yuchen Zhou

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EDUCATION/EXPERIENCE

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|---|-------------------|
| University of Pennsylvania <i>Postdoc, Statistics and Data Science, Wharton School, Advisor: Prof. Yuxin Chen</i> | 01/2022-present |
| Princeton University <i>Postdoc, Electrical and Computer Engineering, Advisor: Prof. Yuxin Chen</i> | 05/2021-12/2021 |
| University of Wisconsin-Madison <i>Ph.D., Statistics, Advisors: Prof. Anru Zhang and Prof. Yazhen Wang</i> | 08/2016 - 05/2021 |
| Peking University <i>B.S., Mathematics and Applied Mathematics, Advisor: Prof. Liwei Wang</i> | 09/2012 - 07/2016 |

RESEARCH INTERESTS

High-Dimensional Statistical Inference
Tensor Data Analysis
Statistical Learning Theory
Spectral Methods
Nonconvex Optimization

PUBLICATIONS

- Yuchen Zhou**, Yuxin Chen. Heteroskedastic Tensor Clustering. *Submitted to Journal of the Royal Statistical Society, Series B (JRSSB)*, arXiv preprint arXiv:2311.02306, 2023.
- Yuchen Zhou**, Yuxin Chen. Deflated HeteroPCA: Overcoming the Curse of Ill-conditioning in Heteroskedastic PCA. *Submitted to Annals of Statistics*. arXiv preprint arXiv:2303.06198, 2023.
- Dong Xia, Anru Zhang, **Yuchen Zhou (alphabetical order)**. Inference for Low-rank Tensors – No Need to Debias. *Annals of Statistics*, 2022.
- Yuchen Zhou**, Anru Zhang, Lili Zheng, Yazhen Wang. Optimal High-Order Tensor SVD via Tensor-Train Orthogonal Iteration. *IEEE Transactions on Information Theory*, 2022.
(This paper received IMS Hannan Graduate Student Travel Award, 2021.)
- T. Tony Cai, Anru Zhang, **Yuchen Zhou (alphabetical order)**. Sparse Group Lasso: Optimal Sample Complexity, Convergence, and Statistical Inference. *IEEE Transactions on Information Theory*, 2022.
- Pixu Shi[†], **Yuchen Zhou[†]**, Anru Zhang ([†]: **equal contributions**). High-dimensional Log-Error-in-Variable Regression with Applications to Microbial Compositional Data Analysis. *Biometrika*, 2022.
(This paper received Biometrics Early-Stage Investigator Award by the Biometrics Section of the American Statistical Association, 2019.)
- Anru Zhang, **Yuchen Zhou (alphabetical order)**. On the Non-asymptotic and Sharp Lower Tail Bounds of Random Variables. *STAT*, 2020.
- Chen Dan, Hong Wang[†], Hongyang Zhang[†], **Yuchen Zhou[†]**, Pradeep Ravikumar ([†]: **equal contributions**). Optimal Analysis of Subset-Selection Based ℓ_p Low-Rank Approximation. *Advances in Neural Information Processing Systems (NeurIPS)*, 2019.
- Wenlong Mou, **Yuchen Zhou**, Jun Gao, Liwei Wang. Data Training, Data-dependent Regularization, and Generalization Bounds. *International Conference on Machine Learning (ICML)*, 2018.
- Chen Dan, Kristoffer Arnsfelt Hansen, He Jiang, Liwei Wang, **Yuchen Zhou (alphabetical order)**. Low Rank Approximation of Binary Matrices: Column Subset Selection and Generalizations. *43rd International Symposium on Mathematical Foundations of Computer Science (MFCS)*, 2018.

WORKING PAPER

1. **Yuchen Zhou**, Yuxin Chen. Heteroskedastic Spectral Clustering for High-dimensional Sub-Gaussian Mixture Models. *In preparation*.

TEACHING EXPERIENCE

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|--|---------------------------------|
| TA of Stat 710 - Mathematical Statistics | Spring 2020 |
| TA of Stat 309 - Intro to Math Statistics & Probability I | Spring 2019/Fall 2018 |
| TA of Stat 371 - Introductory Applied Statistics For The Life Sciences | Spring 2017 |
| TA of Stat 324 - Introductory Applied Statistics For Engineers | Fall 2019/Spring 2018/Fall 2016 |

TALK/POSTER PRESENTATIONS

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| Poster presentation, Cornell Young Researcher Workshop | 09/2023 |
| Contributed talk, Joint Statistical Meetings (JSM) | 08/2023 |
| Invited talk, ICSA Applied Statistics Symposium | 06/2023 |
| Poster presentation, Conference on Recent Advances in Statistics and Data Science, Rutgers University | 05/2023 |
| Poster presentation, Statistical Foundations of Data Science and their Applications, Princeton University | 05/2023 |
| Invited talk, ICSA China Conference | 07/2022 |
| Poster presentation, the workshop "Perspectives in Statistical Modeling and Inference," University of Pennsylvania | 12/2021 |
| Poster presentation, Neural Information Processing Systems (NeurIPS) | 12/2019 |
| Poster presentation, Joint Statistical Meetings (JSM) | 08/2019 |
| Poster presentation, International Conference on Machine Learning (ICML) | 07/2018 |

PROFESSIONAL ACTIVITIES

Reviewer for Annals of Statistics, Journal of the American Statistical Association (JASA), Biometrika, IEEE Transactions on Information Theory, Information and Inference: A Journal of the IMA, Journal of Machine Learning Research (JMLR), IEEE Transactions on Signal Processing, Journal of Statistical Planning and Inference, International Symposium on Information Theory (ISIT), Linear and Multilinear Algebra, STAT, IEEE Transactions on Cybernetics, Computational Optimization and Applications, NeurIPS and ICML

HONORS

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| Gold Medal Young Researcher Poster Competition Award, Conference on Recent Advances in Statistics and Data Science, Rutgers University | 05/2023 |
| IMS Hannan Graduate Student Travel Award | 03/2021 |
| Student Research Grants Competition – Travel Award, University of Wisconsin-Madison | 01/2020 |
| NeurIPS Travel Award | 12/2019 |
| Paper [6] received Biometrics Early-Stage Investigator Award by the Biometrics Section of the American Statistical Association | 08/2019 |
| ICML Travel Award | 07/2018 |
| First Prize for Outstanding Academic Performance, Peking University | 09/2014 |
| First Prize Scholarship, Peking University | 09/2014 |
| Selected to the National Training Team for the International Mathematical Olympiad | 01/2012 |