Weihao Lu

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🌐 https://luweihao.github.io/

Employment History

2025.2 – 2026.2   🔖 **Research Fellow**
Department of Statistics and Data Science, National National University of Singapore.
Principal Investigator: Yingcun Xia.

Education

2020.9 – 2024.12   🔖 **Ph.D. in Statistics**
Department of Statistics and Data Science, Tsinghua University.
Advisor: Qian Lin.

2015.9 – 2019.6   🔖 **B.S. in Statistics**
School of Mathematics and Statistics, Wuhan University.

Research Interest

Large-dimensional spectral algorithms, minimax risks in non-parametric regression.

Research Publications

Journal Articles

1. Haobo Zhang, **Weihao Lu**†, and Qian Lin, "The phase diagram of kernel interpolation in large dimensions," *Biometrika*, vol. 112, no. 1, asae057, Nov. 2024, ISSN: 1464-3510. 🔗 DOI: `10.1093/biomet/asae057`.

Conference Proceedings

1. **Weihao Lu**, Haobo Zhang, Yicheng Li, and Qian Lin, "On the saturation effects of spectral algorithms in large dimensions," in *Advances in Neural Information Processing Systems (NeurIPS)*, vol. 37, Curran Associates, Inc., 2024, pp. 7011–7059. 🔗 URL: `https://proceedings.neurips.cc/paper_files/paper/2024/file/0d3496dd0cec77a999c98d35003203ca-Paper-Conference.pdf`.

2. Haobo Zhang, Yicheng Li, **Weihao Lu**, and Qian Lin, "On the optimality of misspecified kernel ridge regression," in *International Conference on Machine Learning (ICML)*, vol. 202, PMLR, 2023, pp. 41 331–41 353. 🔗 URL: `https://proceedings.mlr.press/v202/zhang23x.html`.

Preprints

1. **Weihao Lu**, Jialin Ding, Haobo Zhang, and Qian Lin, *On the pinsker bound of inner product kernel regression in large dimensions*, (Annals of Statistics, major revision), 2024. 🔗 URL: `https://arxiv.org/abs/2409.00915`.

2. Haobo Zhang, Yicheng Li, **Weihao Lu**, and Qian Lin, *Optimal rates of kernel ridge regression under source condition in large dimensions*, (Journal of Machine Learning Research, minor revision), 2024. 🔗 URL: `https://arxiv.org/abs/2401.01270`.

3 **Weihao Lu**, Haobo Zhang, Yicheng Li, Manyun Xu, and Qian Lin, *Optimal rate of kernel regression in large dimensions*, 2023. 🔗 URL: https://arxiv.org/abs/2309.04268.

Awards

2023   🔖 **Top Ten Papers Award**, Ninth National Graduate Statistics Forum, Renmin University of China.

🔖 **Best Poster Award**, Peking-Tsinghua Joint Statistics Colloquium, Peking University.

🔖 **First Prize**, Seventh National Statistics Doctoral Academic Forum, Guangzhou University.

🔖 **Second Prize for Academic Papers**, First National Doctoral Academic Forum on Mathematics and Statistics, Liaoning University.

2024   🔖 **NeurIPS 2024 Scholar Award**

Teaching Assistants

2020 Fall and 2021 Fall   🔖 Elementary Probability Theory.

2021 Spring   🔖 Reliability Data and Survival Analysis.

2022 Spring, 2023 Spring, and 2024 Spring   🔖 Mathematical Statistics.

Academic Services

🔖 Conference Reviewer AISTATS