

DONG HUANG

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EDUCATION

Tsinghua University, Department of Statistics and Data Science	Sept. 2023 – June 2028
Ph.D. in Statistics Advisor: Pengkun Yang	
Tsinghua University, Department of Mathematical Sciences	Sept. 2019 – June 2023
B.S. in Mathematics	

PUBLICATIONS

- **Dong Huang**, Jianbo Sun, Pengkun Yang, (α - β)
“Prompt Perturbation for Reliable LLM Evaluation over Comparison Graphs,”
Statistical Learning and Data Science (SLADS), 2026. [\[journal\]](#)[\[arxiv\]](#)
Awarded the Outstanding Poster Award at the 10th Tsinghua-Peking Statistics Forum.
- **Dong Huang**, Chenyang Tian, Pengkun Yang, (α - β)
“Sharp Statistical Limits and Algorithm for Attributed Graph Alignment,”
The 43rd International Conference on Machine Learning, 2026. [\[arxiv\]](#)
- **Dong Huang**, Pengkun Yang, (α - β)
“Sample Complexity of Correlation Detection in the Gaussian Wigner Model,”
The 42nd International Conference on Machine Learning, volume 267, pages 26020-26040, 2025. [\[conference\]](#)[\[arxiv\]](#)
- **Dong Huang**, Xianwen Song, Pengkun Yang, (α - β)
“Information-Theoretic Thresholds for the Alignments of Partially Correlated Graphs,”
short version: *The 37th Annual Conference on Learning Theory*, 2494-2518, 2024. [\[conference\]](#)
long version: *IEEE Transactions on Information Theory*, 71(12): 9674-9697, 2025. [\[journal\]](#) [\[arxiv\]](#)
- Yucong Lin, Silu Li, Jiaxing Xu, Jiawei Xu, **Dong Huang**, Wendi Zheng, Yuan Cao, Junwei Lu
“Graph Over-Parameterization: Why the Graph Helps the Training of Deep Graph Convolutional Network,”
Neurocomputing, Volume 534, pp. 77-85, 2023. [\[journal\]](#)

MANUSCRIPT

- **Dong Huang**, Pengkun Yang, (α - β)
“Testing Correlation in Graphs by Counting Bounded Degree Motifs,”
submitted. [\[arxiv\]](#)
- **Dong Huang**, Pengkun Yang, (α - β)
“Information-Theoretic and Computational Limits of Correlation Detection under Graph Sampling,”
submitted. [\[arxiv\]](#)
Awarded 2026 IMS Hannan Graduate Student Travel Award.
- Shuyang Gong, **Dong Huang**, Zhangsong Li, (α - β)
“Fundamental Limits of Community Detection in Contextual Multi-Layer Stochastic Block Models,”
submitted. [\[arxiv\]](#)
- Xinyuan Fan*, **Dong Huang***, Tianpai Luo*, Pengkun Yang, Weichi Wu,
“Learning Global Temporal Dynamics in Sparse Networks via Cycle Counts,”
submitted.
- **Dong Huang**, Xianwen Song, Pengkun Yang, (α - β)
“Alignments in the Partially Correlated Graphs of Unknown Size,”
working paper.
- **Dong Huang**, Yicheng Li, (α - β)
“Fundamental Limits of Differentially Private Graphon Estimation,”
working paper.
- Yijie Wang*, Wenjie Zou*, **Dong Huang**, Hongyi Sun, Pengkun Yang
“CLASP-ST: Cluster-Anchored Spectral Alignment for Spatial Transcriptomics,”
working paper.

α - β denotes alphabetical order, and * denotes co-first authorship.

RESEARCH INTEREST

My research interests are in statistics, probability and theoretical computer science.

SELECTED AWARDS AND HONORS

Young Elite Scientists Sponsorship Program, by China Association for Science and Technology	2026-2027
Outstanding Poster Award at the 10th Tsinghua-Peking Statistics Forum	2026
IMS Hannan Graduate Student Travel Award	2026
Comprehensive Scholarship of Tsinghua University	2020, 2022, 2024, 2025
Excellent Teaching Assistant of Tsinghua University	2024
Outstanding Graduates of Tsinghua University	2023
First Prize in National College Student Mathematics Competition	2020

TEACHING

2025 Fall, Mathematical Analysis & Advanced Linear Algebra (Undergraduate, Department of Statistics and Data Science), Academic Advisor, Tsinghua University.

2023 Fall and 2024 Fall, Elementary Probability Theory, Teaching Assistant, Tsinghua University.

2024 Spring and 2025 Spring, Multivariate Statistical Analysis, Teaching Assistant, Tsinghua University.

SKILLS

L^AT_EX, Python, R, Mathematica, Matlab.

TALKS

The 4th Joint Conference on Statistics and Data Science in China (Guiyang, China)	July 2026
Tsinghua Statistics Colloquium (Beijing, China)	Nov. 2025
Beijing-Tianjin-Hebei Youth Probability Statistics Academic Seminar (Beijing, China)	June 2025
The 2nd Joint Conference on Statistics and Data Science in China (Kunming, China)	July 2024
International Conference on Frontiers of Data Science (Hangzhou, China)	July 2024
Tsinghua Statistics Colloquium (Beijing, China)	Nov. 2023
National Conference of Young Scholars in Probability and Statistics (Xuzhou, China)	Oct. 2023