DONG HUANG

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EDUCATION

Tsinghua University, Department of Statistics and Data Science — Beijing, China
Ph.D. in Statistics Advisor: Prof. Pengkun Yang — Sept. 2023 – Present

Tsinghua University, Department of Mathematical Sciences — Beijing, China
B.S. in Mathematics — Sept. 2019 – June 2023

ACADEMIC EXPERIENCE

Yale University, Department of Statistics and Data Science — New Haven, United States
Visiting Ph.D. Student Host: Prof. Shuangping Li — Aug. 2026 – Jan. 2027

PUBLICATIONS

- Xinyuan Fan*, **Dong Huang***, Tianpai Luo*, Pengkun Yang, Weichi Wu.
"Learning Global Temporal Dynamics in Sparse Networks via Cycle Counts."
The 40th Annual Conference on Neural Information Processing Systems (NeurIPS), 2026, to appear.
- **Dong Huang**, Jianbo Sun, Pengkun Yang, (α–β).
"Prompt Perturbation for Reliable LLM Evaluation over Comparison Graphs."
Statistical Learning and Data Science, Article 100022, 2026. [journal] [arXiv]
Outstanding Poster Award at the 10th Tsinghua-Peking Statistics Forum.
- **Dong Huang**, Chenyang Tian, Pengkun Yang, (α–β).
"Attributed Network Alignment: Statistical Limits and Efficient Algorithm."
Proceedings of the 43rd International Conference on Machine Learning, PMLR 306:47661–47702, 2026. [conference] [arXiv]
- **Dong Huang**, Pengkun Yang, (α–β).
"Sample Complexity of Correlation Detection in the Gaussian Wigner Model."
Proceedings of the 42nd International Conference on Machine Learning, PMLR 267:26020–26040, 2025. [conference] [arXiv]
- **Dong Huang**, Xianwen Song, Pengkun Yang, (α–β).
"Information-Theoretic Thresholds for the Alignments of Partially Correlated Graphs."
IEEE Transactions on Information Theory, 71(12):9674–9697, 2025. [journal]
Conference version in *Proceedings of the 37th Conference on Learning Theory*, PMLR 247:2494–2518, 2024. [conference] [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, 534:77–85, 2023. [journal]

PREPRINTS

- **Dong Huang**, Shuangping Li, (α–β).
  "The Lower Tail of Triangle Counts in Sparse Random Graphs."
  arXiv:2610.32879, 2026. [arXiv]
- **Dong Huang**, Ankang Jiao, Shuangping Li, Zhangsong Li, (α–β).
  "Graph Matching in Random Geometric Graphs I: Efficient Algorithms."
  arXiv:2610.16675, 2026. [arXiv]
- **Dong Huang**, Shuangping Li, (α–β).
  "Detecting Random Geometric Graphs with General Kernel."
  arXiv:2610.12765, 2026. [arXiv]
- Shuyang Gong, **Dong Huang**, Zhangsong Li, (α–β).
  "Fundamental Limits of Community Detection in Contextual Multi-Layer Stochastic Block Models."
  arXiv:2602.08173, 2026. [arXiv]
- **Dong Huang**, Pengkun Yang, (α–β).
  "Sample Complexity of Correlation Detection in Erdős–Rényi Graphs."
  arXiv:2601.13966, 2026. [arXiv]
  2026 IMS Hannan Graduate Student Travel Award.
- **Dong Huang**, Pengkun Yang, (α–β).
  "Testing Correlation in Graphs by Counting Bounded Degree Motifs."
  arXiv:2510.25289, 2025. [arXiv]

(α–β) denotes alphabetical author order. ($*$) denotes equal contribution.

RESEARCH INTERESTS

Statistics, probability, and theoretical computer science.

SELECTED AWARDS AND HONORS

Young Elite Scientists Sponsorship Program – Doctoral Student Special Program, 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
Outstanding Teaching Assistant of Tsinghua University	2024
Outstanding Graduate of Tsinghua University	2023
First Prize in the National College Student Mathematics Competition	2020

TEACHING

Mathematical Analysis and Advanced Linear Algebra, Academic Advisor, Tsinghua University	Fall 2025
Elementary Probability Theory, Teaching Assistant, Tsinghua University	Fall 2023, Fall 2024
Multivariate Statistical Analysis, Teaching Assistant, Tsinghua University	Spring 2024, Spring 2025

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 and 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

SKILLS

LaTeX, Python, R, Mathematica, MATLAB.