

# Hongyi Zhou

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## Personal Information

Institution: Department of Mathematics, Tsinghua University  
Research Interest: Large language models, Reinforcement learning, Deep learning, Functional data analysis, Semi-parametric models.

## Education

**Tsinghua University** Beijing  
Department of Mathematics, Ph.D., Statistics, Supervisor: Prof. Ying Yang 2021.9 - present  
GPA : 3.83/4.0

**London School of Economics and Political Science** London  
Department of Statistics, Visiting Research Student, Supervisor: Prof. Chengchun Shi 2024.9 - 2025.8

**Tsinghua University** Beijing  
Department of Mathematics, B.S., Applied Mathematics 2017.9 - 2021.6  
GPA : 3.64/4.0

## Publications and Preprints

(\*Equal contribution)

1. **Hongyi Zhou**, Wenqing Su, Qixian Zhong, Ying Yang. (2025). Ordinary Differential Equation for Survival Analysis with Functional Covariates, **Statistica Sinica**. DOI:10.5705/ss.202024.0180.
2. **Hongyi Zhou**, Josiah Hanna, Jin Zhu, Ying Yang, Chengchun Shi. (2025). Demystifying the Paradox of Importance Sampling with an Estimated History-Dependent Behavior Policy in Off-Policy Evaluation, **International Conference on Machine Learning (ICML)**.
3. **Hongyi Zhou\***, Jin Zhu\*, Pingfan Su, Kai Ye, Ying Yang, Shakeel Gavioli-Akilagun, Chengchun Shi. (2025). AdaDetectGPT: Adaptive Detection of LLM-Generated Text with Statistical Guarantees, **Conference on Neural Information Processing Systems (NeurIPS)**.
4. Erhan Xu\*, Kai Ye\*, **Hongyi Zhou\***, Luhan Zhu, Francesco Quinzan, Chengchun Shi. (2025). Doubly Robust Alignment for Large Language Models, **Conference on Neural Information Processing Systems (NeurIPS)**.
5. Jin Zhu\*, Jingyi Li\*, **Hongyi Zhou**, Yinan Lin, Zhenhua Lin, Chengchun Shi. (2025). Balancing Interference and Correlation in Spatial Experimental Designs: A Causal Graph Cut Approach, **International Conference on Machine Learning (ICML)**.
6. Kai Ye\*, **Hongyi Zhou\***, Jin Zhu\*, Francesco Quinzan, Chengchun Shi. (2025). Robust Reinforcement Learning from Human Feedback for Large Language Models Fine-Tuning, **ICML Workshop**.

7. Li Wang\*, Hongyi Zhou\*, Weidong Ma, Ying Yang. (2024). Expected Projection-Averaging of Conditional Distribution Function-based Measures for Independence Test and Feature Screening, **Journal of Multivariate Analysis**, 205, 105378.
8. Fei Ye, Hongyi Zhou, Ying Yang. (2023). Asymptotic Properties of Relative Error Estimation for Accelerated Failure Time Model with Divergent Number of Parameters, **Statistics and Its Interface**, 17(1), 107–125.
9. Hongyi Zhou\*, Jin Zhu\*, Kai Ye, Erhan Xu, Ying Yang, Chengchun Shi. (2025). Towards prompt-robust machine-generated text detection, submitted to ICLR 2026.

## Talks

1. The 26th Beijing–Tianjin–Hebei Young Scholars Symposium on Probability and Statistics, Nankai University, Tianjin. AdaDetectGPT: Adaptive Detection of LLM-Generated Text with Statistical Guarantees. 2025.6.
2. Bear Club Online Doctoral Students Workshop. ([Bilibili](#)) AdaDetectGPT: Adaptive Detection of LLM-Generated Text with Statistical Guarantees. 2025.6.

## Project and Teaching

NSFC: Functional data and complex structure analysis, Participant	2020.1-2024.12
NSFC: Statistical methods in complex network data analysis, Participant	2023.1- present
Calculus I, II, Teaching Assistant	2020 - 2024
Linear Regression Analysis, Teaching Assistant	2024

## Awards

National Scholarship for Graduate Students of High-Level Universities (CSC Scholarship) China Scholarship Council 2024–2025	
26th Beijing–Tianjin–Hebei Youth Symposium on Probability and Statistics – “Zhong Ji- aqing Excellent Paper Award” Chinese Mathematical Society, Probability and Statistics Division 2025.6	
First Prize, University-Level Excellent Teaching Assistant Award 2021.10	Tsinghua University
First Prize, National High School Mathematics Competition (Shanghai)	2016

## Skills

- Language Skills : ILETS 7.5 ;
- Coding : Python, R, MATLAB.