

Education

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- **Ph.D Student, Tsinghua University** Beijing, China
Institute for Interdisciplinary Information Sciences Sep 2025-present
 - Advisor: Prof. Kaifeng Lyu
 - **University of California, Berkeley** Berkeley, CA
Visiting Student Aug 2023-Dec 2023
 - GPA: 4.00/4.00
 - **B.Eng, Xi'an Jiaotong University** Xian, China
Artificial Intelligence Pilot class; Qian Xuesen Honors College Sep 2021 - Jun 2025
 - GPA (cumulative): 91.53

Research Interests

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- Optimization and Training Dynamics of Neural Networks (Scaling laws; Implicit Bias)
 - Generalization Paradigms of Foundation Models (Reasoning; Self-Improvement)
 - Geometric Learning (Graph Neural Networks, Graph Spectral Theory)

Publication List

(*: equal contribution; $\alpha\beta$: alphabet ordering)

1. *Larger Datasets Can Be Repeated More: A Theoretical Analysis of Multi-Epoch Scaling in Linear Regression*
Tingkai Yan*, **Haodong Wen***, Binghui Li*, Kairong Luo, Wenguang Chen, Kaifeng Lyu
ICLR 2026
2. *How Learning Rate Decay Wastes Your Best Data in Curriculum-Based LLM Pretraining*
Kairong Luo, Zhenbo Sun, **Haodong Wen**, Xinyu Shi, Jiarui Cui, Chenyi Dang, Kaifeng Lyu, Wenguang Chen
ICLR 2026
3. *Adam Reduces a Unique Form of Sharpness: Theoretical Insights Near the Minimizer Manifold*
Xinghan Li* $^{\alpha\beta}$, **Haodong Wen*** $^{\alpha\beta}$, Kaifeng Lyu
NeurIPS 2025
4. *A Multi-Power Law for Loss Curve Prediction Across Learning Rate Schedules*
Kairong Luo, **Haodong Wen**, Shengding Hu, Zhenbo Sun, Zhiyuan Liu, Maosong Sun, Kaifeng Lyu, Wenguang Chen
ICLR 2025
5. *Exploring the Robustness of In-Context Learning with Noisy Labels*
Cheng chen*, Xinzhi Yu*, **Haodong Wen***, Jingsong Sun, Guanzhang Yue, Yihao Zhang, Zeming Wei
ICASSP 2025

Honors and Awards

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- Megvil all-round Scholarship (2/56), 2021-2022, 2022-2023
 - Merit Student, 2021-2022, 2022-2023