

Education

<ul style="list-style-type: none">• Ph.D Student, Tsinghua University <i>Institute for Interdisciplinary Information Sciences</i><ul style="list-style-type: none">• Advisor: Prof. Kaifeng Lyu• University of California, Berkeley <i>Visiting Student</i><ul style="list-style-type: none">• GPA: 4.00/4.00• B.Eng, Xi'an Jiaotong University <i>Artificial Intelligence Pilot class; Qian Xuesen Honors College</i><ul style="list-style-type: none">• GPA (cumulative): 91.53	<p>Beijing, China <i>Sep 2025-present</i></p> <p>Berkeley, CA <i>Aug 2023-Dec 2023</i></p> <p>Xian, China <i>Sep 2021 - Jun 2025</i></p>
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Research Interests

- 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

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