

Zhiyuan Fan

fanzy@mit.edu ◇ fan-zhiyuan.org ◇ 范致远

EDUCATION

- **Massachusetts Institute of Technology.** Sept. 2023 - present
- Ph.D. student in Computer Science, advised by Gabriele Farina.
- **Tsinghua University.** Sept. 2019 - June. 2023
- **Bachelor of Computer Science and Technology.**
- Institute for Interdisciplinary Information Science. (Also known as Yao Class, founded by Prof. Andrew Yao in 2005.)
- Overall GPA 3.91/4.00, Top 25%.
- Relevant Courses: Machine Learning (A), Algorithm Design (A+), Theory of Computation (A+), Fundamentals of Cryptography (A+), Game Theory (A), Mathematics for Computer Science (A), Causal and Statistical Learning (A).
- **Yao Award**, Silver Medal. *Yao Award is established to recognize the outstanding performances of Yao Class students.*

RESEARCH INTERESTS

- Practical and Provable Approaches to Mastering or Finding Equilibria in Competitive Games

PUBLICATIONS

(* stands for equal contribution)

- **On the Universal Near Optimality of Hedge in Combinatorial Settings**
Zhiyuan Fan*, Arnab Maiti*, Kevin Jamieson, Lillian J. Ratliff & Gabriele Farina
Accepted at the 39th Annual Conference on Neural Information Processing Systems (NeurIPS 2025).
Spotlight.
- **Efficient Near-Optimal Algorithm for Online Shortest Paths in Directed Acyclic Graphs with Bandit Feedback**
Arnab Maiti*, Zhiyuan Fan*, Kevin Jamieson, Lillian J. Ratliff & Gabriele Farina
Accepted at the 38th Annual Conference on Learning Theory (COLT 2025).
- **On the Optimality of Dilated Entropy and Lower Bounds for Online Learning in Extensive-Form Games.**
Zhiyuan Fan, Christian Kroer & Gabriele Farina
Accepted at the 38th Annual Conference on Neural Information Processing Systems (NeurIPS 2024).
- **Achieving Constant Regret in Linear Markov Decision Processes.**
Weitong Zhang*, Zhiyuan Fan*, Jiafan He & Quanquan Gu
Accepted at the 38th Annual Conference on Neural Information Processing Systems (NeurIPS 2024).
- **Efficient Algorithms for Sparse Moment Problems without Separation.**
Zhiyuan Fan & Jian Li. (alphabet order)
Accepted at the 36th Annual Conference on Learning Theory (COLT 2023).
- **On the Interplay Between Misspecification and Sub-optimality Gap in Linear Contextual Bandits.**
Weitong Zhang, Jiafan He, Zhiyuan Fan & Quanquan Gu.
Accepted at the 40th International Conference on Machine Learning (ICML 2023).
- **OpenFE: Automated Feature Generation beyond Expert-level Performance.**
Tianping Zhang, Zheyu Zhang, Zhiyuan Fan, Haoyan Luo, Fengyuan Liu, Wei Cao & Jian Li.
Accepted at the 40th International Conference on Machine Learning (ICML 2023).
- **The Exact Complexity of Pseudorandom Functions and the Black-Box Natural Proof Barrier.**
Zhiyuan Fan, Jiayu Li & Tianqi Yang. (alphabet order)
Accepted at the 54th Annual ACM Symposium on Theory of Computing (STOC 2022).
Best Student Paper co-winner.

AWARDS AND HONORS

• Yao Award , Silver Medal (3/62)	2022
• STOC 2022 , Danny Lewin Best Student Paper Award	2022
• Scholarship of Tsinghua University	
- Scientific Innovation Excellence Award	2022
- Academic Excellence Award (twice)	2021, 2022
• International Collegiate Programming Contest	
- ICPC Asia Shanghai Regional Contest, Gold Medal (rank 2)	2019
- ICPC Asia-East Continent Final Contest, Gold Medal	2019
• China Collegiate Programming Contest	
- CCPC Qinghuangdao Regional Contest, Gold Medal (rank 2)	2019
• Chinese National Olympiad in Informatics, Gold Medal (twice)	2017, 2018

TEACHING EXPERIENCE

• Teaching Assistant of Nonlinear Optimization at MIT	2025
• Teaching Assistant of Topics in Multiagent Learning at MIT	2024
• Teaching Assistant of Fundamentals of Cryptography at Tsinghua University	2023

PROFESSIONAL ACTIVITIES AND SERVICE

- **Conference Reviewing:** ICLR 2025, 2026; ICML 2025; Neurips 2024, 2025; ALT 2024, 2025, 2026

SKILLS

- **Programming Languages:** C++, Python, Go, SQL, MATLAB
- **Tools and Frameworks:** PyTorch, Matplotlib, $\text{\LaTeX}$, Git, MySQL