Yan Dai

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EDUCATION

Massachusetts Institute of Technology Operations Research Center   2024 — Now

PhD student in Operations Research co-advised by Prof. Patrick Jaillet and Prof. Negin Golrezaei.

Tsinghua University Andrew C. Yao Class   2020 — 2024

Bachelor of Engineering in Computer Science and Technology. GPA: 3.99/4.00.

RESEARCH EXPERIENCES

Massachusetts Institute of Technology ORC (Cambridge, MA)   Sep. 2024 — Now

Research assistant of Prof. Patrick Jaillet and Prof. Negin Golrezaei.

Tsinghua University Andrew C. Yao Class (Beijing, China)   Feb. — Jun. 2024

Bechelor's thesis advised by Prof. Longbo Huang.

University of Washington School of CSE (Seattle, WA)   Jun. — Aug. 2023

Visiting student hosted by Prof. Simon S. Du.

Massachusetts Institute of Technology LIDS (Cambridge, MA)   Feb. — May 2023

Visiting student hosted by Prof. Suvrit Sra.

University of Southern California CS Department (Remote)   Feb. — Dec. 2022

Remote visitor of Prof. Haipeng Luo.

Tsinghua University Andrew C. Yao Class (Beijing, China)   Jun. — Dec. 2021

Research assistant of Prof. Longbo Huang.

PUBLICATIONS

(* stands for equal contribution. Listed reverse chronologically.)

Journal Publications and Working Drafts

[12] Yan Dai, Negin Golrezaei, and Patrick Jaillet. "Incentive-Aware Dynamic Resource Allocation under Long-Term Cost Constraints." [Preprint]
1st Place in Student Research Competition (SRC), ACM SIGMETRICS'25.

[11] **[COLT'25]** Yan Dai, Moïse Blanchard, and Patrick Jaillet. "Non-Monetary Mechanism Design without Distributional Information: Using Scarce Audits Wisely." [Preprint]

[10] **[POMACS & SIGMETRICS'25]** Yan Dai and Longbo Huang. "Adversarial Network Optimization under Bandit Feedback: Maximizing Utility in Non-Stationary Multi-Hop Networks." [ACM Journal Page]
Best Paper Award of conference ACM SIGMETRICS'25.

Conference Publications

[9] **[ICLR'25]** Yu Chen*, Jiatai Huang*, Yan Dai*, and Longbo Huang. "uniINF: Best-of-Both-Worlds Algorithm for Parameter-Free Heavy-Tailed MABs." **Spotlight.** [Preprint] [OpenReview]

[8] **[COLT'24]** Yan Dai, Qiwen Cui, and Simon S. Du. "Refined Sample Complexity for Markov Games with Independent Linear Function Approximation." [Preprint] [Proceeding (Extended Abstract)]

[7] **[ICML'24]** Kwangjun Ahn, Zhiyu Zhang, Yunbum Kook, and Yan Dai. "Understanding Adam Optimizer via Online Learning of Updates: Adam is FTRL in Disguise." [Preprint] [Proceeding]

[6] **[NeurIPS'23]** Yan Dai*, Kwangjun Ahn*, and Suvrit Sra. "Curious Role of Normalization in Sharpness-Aware Minimization." [Preprint] [OpenReview] [Proceeding]

[5] **[ICML'23]** [Yan Dai](), Haipeng Luo, Chen-Yu Wei, and Julian Zimmert. "Refined Regret for Adversarial MDPs with Linear Function Approximation." [Preprint] [Proceeding]

[4] **[ICML'23]** Jiatai Huang*, [Yan Dai*](), and Longbo Huang. "Banker Online Mirror Descent: A Universal Approach for Delayed Online Bandit Learning." [Preprint] [Proceeding]

[3] **[ICLR'23]** [Yan Dai](), Ruosong Wang, and Simon S. Du. "Variance-Aware Sparse Linear Bandits." [Preprint] [OpenReview]

[2] **[NeurIPS'22]** [Yan Dai](), Haipeng Luo, and Liyu Chen. "Follow-the-Perturbed-Leader for Adversarial Markov Decision Processes with Bandit Feedback." [Preprint] [OpenReview] [Proceeding]

[1] **[ICML'22]** Jiatai Huang*, [Yan Dai*](), and Longbo Huang. "Adaptive Best-of-Both-Worlds Algorithm for Heavy-Tailed Multi-Armed Bandits." [Preprint] [Proceeding]

RESEARCH AWARDS AND SCHOLARSHIPS

Research Awards

- Best Paper Award *(1 paper per year)* of ACM SIGMETRICS'25. Jun. 2025
- 1st Place in Student Research Competition (SRC), ACM SIGMETRICS'25. Jun. 2025

Fellowship and Scholarship

- Outstanding Graduate named by Beijing *(5%)*, by Tsinghua *(2%)*, and by Yao Class *(10%)*. Jun. 2024
- Presidential Scholarship *(top scholarship for Tsinghua undergrads; 10/16,000+)*, Tsinghua. Nov. 2023
- Andrew C. Yao Award – Gold Medal *(top scholarship for seniors; 1 student)*, Yao Class. Sep. 2023

Competitive Programming

- Gold Medal *(1st place with perfect score)*, Asia-Pacific Informatics Olympiad (APIO). May 2019
- Gold Medal *(5th place)*, Chinese National Olympiad in Informatics (NOI). Jul. 2018
- Gold Medal, IOI China Team Selection Competition (CTSC). May 2018

Miscellaneous

- 1st Place, MIT Intramurals League on Water Polo. Apr. 2023
- 2nd Place, National Collegiate Water Polo Championships. Jun. 2021
- 1st Place, Tsinghua Swimming Competition on Men's 100m Butterfly. Nov. 2021
- 3rd Place, Tsinghua Swimming Competition on Men's 200m Medley. Nov. 2021

PROFESSIONAL SERVICES

Journal Reviewing. Journal of Machine Learning (JMLR), IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), Performance Evaluation.

Conference Reviewing. COLT 2025, ICML 2025 / 2023, NeurIPS 2025 / 2024 / 2023 / 2022, ICLR 2025 / 2024, AISTATS 2025 / 2023 / 2022, AAAI 2026, ALT 2023.