Mingchen Ma

mma54@wisc.edu | 1-608-770-5572
personal website: https://mmingchen.github.io/
1210 W Dayton St, Madison, WI 53706

Education

University of Wisconsin-Madison, Department of Computer Sciences — Madison, WI, USA
Ph.D. Student, Computer Science, Advisor: Christos Tzamos, Ilias Diakonikolas — *2021- present*

Nanjing University, Department of Mathematics — Nanjing, Jiangsu, China
B.S., Major: Computational Mathematics — *2016- 2020*

Research Interest

Machine Learning and Theoretic Computer Sciences
Recent Research Focus: 1. Designing provably fast and robust machine learning algorithms 2. Designing learning algorithms with low label complexity using interactive learning frameworks

Experience

Shanghai University of Finance and Economics, ITCS — Yangpu, Shanghai, China
Visiting Student, Host:Nick Gravin, Zhihao Tang and Xiao Wang — *2020- 2021*

Publications and Manuscripts

(Author orders for all papers are alphabetical)

- Active Learning of General Halfspaces: Label Queries vs Membership Queries,
  with I.Diakonikolas, D.Kane,
  Advances in Neural Information Processing Systems (NeurIPS 2024)
- Active Classification with Few Queries under Misspecification,
  with V.Kontonis, C. Tzamos,
  Advances in Neural Information Processing Systems (NeurIPS 2024)
  (Selected for Spotlight Presentation)
- Active Learning with Simple Questions,
  with V.Kontonis, C. Tzamos,
  Proceedings of the 37th Annual Conference on Learning Theory (COLT 2024)
- Fast Co-Training under Weak Dependence via Stream-Based Active Learning,
  with I.Diakonikolas, L. Ren, C.Tzamos,
  Proceedings of the 41th International Conference on Machine Learning (ICML 2024)
  (Selected for Oral Presentation)
- The Gain from Ordering for Online Learning,
  with V.Kontonis, C.Tzamos,
  Advances in Neural Information Processing Systems (NeurIPS 2023)

- Buying Information for Stochastic Optimization ,
  with C.Tzamos,
  Proceedings of the 40th International Conference on Machine Learning (ICML 2023)
  (Selected for Oral Presentation)
- Clustering with Queries under Semi-Random Noise,
  with A. Del Pia, C.Tzamos,
  Proceedings of the 35th Annual Conference on Learning Theory (COLT 2022)
- k—median: exact recovery in the extended stochastic ball model,
  with A. Del Pia,
  Mathematical Programming Series A 2022
- Proximity in Concave Integer Quadratic Programming,
  with A. Del Pia,
  Mathematical Programming Series A 2021

Awards and Honors

- NeurIPS 2023 Scholar Award, 2023
- Student Research Grants Competition (SRGC) Award, 2023
- UW Madison CS Departmental Research Fellowship, 2021
- Outstanding Graduate at Nanjing University, 2020
- Elite Program Scholarship, 2017-2018, 2018-2019
- People's Scholarship, 2018-2019
- Sumsung Scholarship, 2017-2018
- Outstanding Student at Nanjing University, 2017-2018

Talks

- Active Learning with Simple Questions, COLT 2024
- Fast Co-Training under Weak Dependence via Stream-Based Active Learning, ICML 2024
- Buying Information for Stochastic Optimization, ICML 2023
- Clustering with Queries under Semi-Random Noise, COLT 2022
- Proximity in Concave Integer Quadratic Programming, MIP 2021, IPCO 2021, INFORMS Annual Meeting

Professional Activities

- Conference Reviewer: International Conference on Learning Representations (ICLR) 2025,
  Neural Information Processing Systems (NeurIPS) 2024,
  Innovations in Theoretical Computer Science (ITCS) 2023, 2025,
  ACM Symposium on Theory of Computing (STOC) 2023
- Journal Reviewer:
  Mathematical Programming

TEACHING

- CS 726 Nolinear Optimization I, Teaching Assistant, UW-Madison, Spring 2022
- CS 513 Numerical Linear Algebra, Teaching Assistant, UW-Madison, Spring 2024

SKILLS

- **Programming Languages**: C++, MATLAB, Python, Mathematica
- **Software**: LaTeX, Microsoft Office
- **Language**: Chinese, English