Ta-Wei Tu 塗大為

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Education

Stanford University Sept. 2023 – Present
Ph.D. in Computer Science. Advisor: Aaron Sidford. *Stanford, CA, USA*

National Taiwan University Sept. 2018 – June 2022
B.Sc. in Computer Science and Information Engineering *Taipei, Taiwan*

Publications

Following the convention in theoretical computer science, author names are ordered alphabetically.

[1] Aaron Bernstein, Joakim Blikstad, Thatchaphol Saranurak, and Ta-Wei Tu. Maximum flow by augmenting paths in $n^{2+o(1)}$ time. In *65th IEEE Annual Symposium on Foundations of Computer Science, FOCS 2024*. IEEE, 2024, arXiv:2406.03648.

[2] Jiale Chen, Aaron Sidford, and Ta-Wei Tu. Entropy regularization and faster decremental matching in general graphs. In *arXiv Preprint*, 2023, arXiv:2312.09077.

[3] Joakim Blikstad, Sagnik Mukhopadhyay, Danupon Nanongkai, and Ta-Wei Tu. Fast algorithms via dynamic-oracle matroids. In *Proceedings of the 55th Annual ACM Symposium on Theory of Computing, STOC 2023*, pages 1229–1242. ACM, 2023, arXiv:2302.09796.

[4] Ta-Wei Tu. Subquadratic weighted matroid intersection under rank oracles. In *33rd International Symposium on Algorithms and Computation, ISAAC 2022*, volume 248 of *LIPIcs*, pages 63:1–63:14. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2022, arXiv:2212.00508.

Research and Professional Experience

Research Intern, Max Planck Institute for Informatics Aug. 2022 – Dec. 2022
- Studied matroid intersection algorithms and graph algorithms. Advisor: Danupon Nanongkai.

Software Engineering Intern, Google Taipei June 2021 – Sept. 2021
- Worked on gRPC core transport based on Android binders.

Research Assistant, National Taiwan University Feb. 2021 – June 2022
- Studied algorithm design. Advisor: Hsueh-I Lu.

Research Assistant, National Taiwan University Sept. 2020 – Jan. 2021
- Studied RISC-V vector extension. Advisor: Wei-Chung Hsu.

Academic Talks

Fast Algorithms via Dynamic-Oracle Matroids
- STOC 2023, Orlando, FL

Subquadratic Weighted Matroid Intersection under Rank Oracles
- ISAAC 2023, Virtual

Selected Awards & Honors

Mr. K. K. Lee Engineering Graduate Fellowship, Stanford University 2023
18th Place, ICPC World Finals 2020
Champion, ICPC Asia-Pacific Regional Contest, Taipei Site 2018, 2020
Champion, National Collegiate Programming Contest of Taiwan 2018, 2019, 2020

Services

Subreviwer for ESA 2024, ICALP 2024, STOC 2024, ESA 2023, ICALP 2023