

Renfei Zhou

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA, USA 2024–Present
Ph.D. in Computer Science co-advised by [William Kuszmaul](#) and [Guy Blelloch](#)
Tsinghua University, Beijing, China 2020–2024
B.Eng. in Computer Science, Yao Class, Institute for Interdisciplinary Information Sciences
• Thesis: Time Lower Bounds for Classical Open-Addressing

SELECTED PUBLICATIONS

Authors are in alphabetical order.

[Tight Bounds for Classical Open Addressing](#)

Michael A. Bender, William Kuszmaul, **Renfei Zhou**. To appear in *Proc. FOCS*, 2024.

[Dynamic Dictionary with Subconstant Wasted Bits per Key](#)

Tianxiao Li, Jingxun Liang, Huacheng Yu, **Renfei Zhou**. In *Proc. SODA*, 2024.

[New Bounds for Matrix Multiplication: from Alpha to Omega](#)

Virginia Vassilevska Williams, Yinzhan Xu, Zixuan Xu, **Renfei Zhou**. In *Proc. SODA*, 2024.
Covered in [Quanta Magazine](#).

[Faster Matrix Multiplication via Asymmetric Hashing](#)

Ran Duan, Hongxun Wu, **Renfei Zhou**. In *Proc. FOCS*, 2023.
Covered in [Quanta Magazine](#).

[Dynamic “Succincter”](#)

Tianxiao Li, Jingxun Liang, Huacheng Yu, **Renfei Zhou**. In *Proc. FOCS*, 2023.

[Tight Cell-Probe Lower Bounds for Dynamic Succinct Dictionaries](#)

Tianxiao Li, Jingxun Liang, Huacheng Yu, **Renfei Zhou**. In *Proc. FOCS*, 2023.
Covered in [Quanta Magazine](#).

OTHER PUBLICATIONS

Authors are in alphabetical order.

[Bidder Selection Problem in Position Auctions: A Fast and Simple Algorithm via Poisson Approximation](#)

Nick Gravin, Yixuan Even Xu, **Renfei Zhou**. In *Proc. ACM Web Conference (WWW)*, 2024. **Oral**.

[Listing 6-Cycles](#)

Ce Jin, Virginia Vassilevska Williams, **Renfei Zhou**. In *Proc. SODA*, 2024.

[On the Perturbation Function of Ranking and Balance for Weighted Online Bipartite Matching](#)

Jingxun Liang, Zhihao Gavin Tang, Yixuan Even Xu, Yuhao Zhang, **Renfei Zhou**. In *Proc. ESA*, 2023.

SELECTED AWARDS AND SCHOLARSHIPS

- **Outstanding Bachelor Thesis Award (Tsinghua University)** 2024
Awarded to 4 students in Yao Class each year
- **China National Scholarship** 2023
Awarded to 4–5 students in Yao Class each year
- **Yao Award (Silver Medal)** 2023
Awarded to 3 students in Yao Class each year
- **China Collegiate Programming Contest Finals** 2021
Gold award, 3rd place (with teammates Yixuan Even Xu and Binwei Yan)
- **ACM International Collegiate Programming Contest, Asia Regional Contest, Jinan Site** 2020
Gold medal, 1st place (with teammates Binwei Yan and Zheyu Zhang)
- **International Olympiad in Informatics China Team Selection** 2020
5th place
- **China National Olympiad in Informatics** 2019
Gold medal, 11th place

SERVICE

- Conference reviewing: SODA (2024, 2025), FOCS 2024, ICALP 2024, ISAAC 2024
- **Randomized Algorithms (CMU)** Fall 2024
Teaching assistant (Instructor: William Kuszmaul)
- **Yao Class Research Seminar** 2023–2024
Co-organizer; invited speaker
- **Yao Class Course-Review Seminar** 2020–2023
Co-organizer; main speaker for multiple courses
- **Theory of Computation (Tsinghua University)** Spring 2022
Teaching assistant (Instructor: Ran Duan)

RESEARCH VISITS AND INTERNSHIPS

- **Massachusetts Institute of Technology** Spring 2023
Visiting student advised by Virginia Vassilevska Williams
- **Huawei TCS Lab, Shanghai, China** Summer 2021
Summer research internship, advised by Zhihao Gavin Tang
- **Megvii Technology, Beijing, China** Winter 2020
Winter research internship