Siyuan Dong

dongsiyuan@pku.edu.cn

Peking University, No.5 Yiheyuan Road

(+86) 16687098927

Beijing, China

SUMMARY

I am a CS Ph.D. student at University of Michigan, Ann Arbor, advised by Prof. Lin Ma. I have immersed myself in research for two years and studied widely in database and networking system, developing strong capacities in conducting research and writing high-quality papers. I finished my Bachelor's degree in Computer Science and Technology at Peking University, where I worked on approximate algorithms in data streams and computer network systems with Prof. Tong Yang. I also finished my Bachelor's degree in Economics at Peking University.

EDUCATION

Peking University	Beijing, China
Bachelor of Science, Computer	July 2024
Bachelor of Economics (second degree)	July 2024
University of California – Berkeley	Berkeley, CA
Exchange Student	Jan. 2023 - Aug. 2023

Highlights
- Three first-author papers published on ICDE and SIGKDD, respectively.
- Two co-author papers published on TKDE and TNSE, respectively.
- One first-author paper submitted to SIGMOD.
- Two co-author papers submitted to NSDI and HotNets, respectively.
- Straight A/A+ at UC Berkeley.

PUBLICATIONS

[1] **Siyuan Dong**, Zhuochen Fan, Tianyu Bai, Tong Yang, Hanyu Xue, Peiqing Chen and Yuhan Wu. "M4: A Framework for Per-Flow Quantile Estimation". In 2024 IEEE 40th International Conference on Data Engineering (ICDE).

[2] Yuhan Wu, **Siyuan Dong (Co-first)**, Yi Zhou, Yikai Zhao, Fangcheng Fu, Tong Yang, Chaoyue Niu, Fan Wu, and Bin Cui. "Kvsagg: Secure aggregation of distributed key-value sets". In 2023 IEEE 39th International Conference on Data Engineering (ICDE).

[3] Yuhan Wu, Shiqi Jiang, **Siyuan Dong (Co-first)**, Zheng Zhong, Jiale Chen, Yutong Hu, Tong Yang, Steve Uhlig, and Bin Cui. "MicroscopeSketch: Accurate Sliding Estimation Using Adaptive Zooming." In Proceedings of the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, pp. 2660-2671. 2023.

[4] Zhuochen Fan, Yubo Zhang, **Siyuan Dong**, Yi Zhou, Fangyi Liu, Tong Yang, Steve Uhlig, and Bin Cui. "HoppingSketch: More Accurate Temporal Membership Query and Frequency Query." IEEE Transactions on Knowledge and Data Engineering (2022).

[5] Yuhan Wu, Shiqi Jiang, Yifei Xu, **Siyuan Dong**, Kaicheng Yang, Peiqing Chen, and Tong Yang. "Unbiased Real-time Traffic Sketching." IEEE Transactions on Network Science and Engineering (2023).

WORKS IN PROGRESS

[6] **Siyuan Dong**, Yuxuan Tian, Wenhan Ma, Tong Yang, Chenye Zhang, Yuhan Wu, Kaicheng Yang and Yaojing Wang. "Detecting Flow Gaps in Data Streams", submitted to SIGMOD 2025.

[7] Silvery Fu, **Siyuan Dong**, Jamsheed Mistri, Steve McCanne, Amy Ousterhout and Sylvia Ratnasamy. "Jut: A Framework for Just-in-Time Data Access", submitted to NSDI 2024.

[8] Silvery Fu, Dylan Reimer, **Siyuan Dong**, Yifei Zhu, and Sylvia Ratnasamy. "Comverse: A Federative-by-Design Platform for Community Computing." arXiv preprint arXiv:2308.15219 (2023).

RESEARCH EXPERIENCE

University of Michigan
Research guided by Prof. Lin Ma

Ann Arbor, MI
2024 - Present

Database Management System.

Peking University
Research guided by Prof. Tong Yang and Prof. Bin Cui

Beijing, China
2021 - Present

Data Stream Processing and Algorithm Design.

University of California – Berkeley
Research in NetSys Lab supervised by Prof. Sylvia Ratnasamy

Berkeley, CA
2023 - Present

The design and implementation of networked systems.

LEADERSHIP EXPERIENCE

Peking University

Beijing, China

- *Director, Culture and Sports Department of EECS college*   2022 - 2023

  Built up the department from scratch. Held various cultural and sports activities to enrich students' campus lives.

- *Vice Chairman, Student Union of EECS college*   2022 - 2023

  Running the Student Union of over 100 students. Led various cultural events and computer competitions.

- *Director, Administration Center in Culture and Sports Department of PKU*   2021 - 2022

  Department operation. Organized various important evening parties in university.

- *Division Chief, External Liaison Division in Student Union of EECS college*   2021 - 2022

  Worked with companies sponsoring college events. Led various social college events.