

# Siyuan Dong

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## SUMMARY

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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

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<b>Peking University</b>	Beijing, China
Bachelor of Science, Computer	July 2024
Bachelor of Economics (second degree)	July 2024
<b>University of California – Berkeley</b>	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

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- [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. "Un-biased Real-time Traffic Sketching." IEEE Transactions on Network Science and Engineering (2023).

## WORKS IN PROGRESS

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- [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

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**University of Michigan** Ann Arbor, MI  
Research guided by Prof. Lin Ma 2024 - Present

*Database Management System.*

**Peking University** Beijing, China  
Research guided by Prof. Tong Yang and Prof. Bin Cui 2021 - Present

*Data Stream Processing and Algorithm Design.*

**University of California – Berkeley** Berkeley, CA  
Research in NetSys Lab supervised by Prof. Sylvia Ratnasamy 2023 - Present

*The design and implementation of networked systems.*

## LEADERSHIP EXPERIENCE

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**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.