

CHENXINGYU ZHAO (FRANK)

cxyzhao@cs.washington.edu

<https://homes.cs.washington.edu/~cxyzhao/>

EDUCATION

University of Washington

Ph.D., Computer Science

M.Sc., Computer Science

Advisor: Arvind Krishnamurthy

Seattle, U.S.

2020.9 - Present

2022.12

Peking University

Bachelor of Science, Computer Science

Advisor: Tong Yang

Beijing, China

2015.9 - 2020.6

RESEARCH INTERESTS

Areas: Computer Networking, Computer Systems, Storage

Focus: Building evolvable and efficient I/O stacks with emerging hardware

PUBLICATIONS

- SG-IOV: Socket-Granular I/O Virtualization for SmartNIC-Based Container Networks**
Chenxingyu Zhao, Hongtao Zhang, Jaehong Min, Shengkai Lin, Wei Zhang, Kaiyuan Zhang, Ming Liu, Arvind Krishnamurthy
ACM International Conference on Architectural Support for Programming Languages and Operating Systems, **ASPLOS** 2026.
- White-Boxing RDMA with Packet-Granular Software Control**
Chenxingyu Zhao, Jaehong Min, Ming Liu, Arvind Krishnamurthy
USENIX Symposium on Networked Systems Design and Implementation, **NSDI** 2025.
- DBO: Fairness for Cloud-Hosted Financial Exchanges**
Eashan Gupta, Prateesh Goyal, Ilias Marinos, Chenxingyu Zhao, Radhika Mittal, Ranveer Chandra
ACM Special Interest Group on Data Communication, **SIGCOMM** 2023.
- Leed: A Low-Power, Fast Persistent Key-Value Store on SmartNIC JBOFs**
Zerui Guo, Hua Zhang, Chenxingyu Zhao, Yuebin Bai, Michael Swift, Ming Liu
ACM Special Interest Group on Data Communication, **SIGCOMM** 2023.
- eZNS: An Elastic Zoned Namespace for Commodity ZNS SSDs**
Jaehong Min, Chenxingyu Zhao, Ming Liu, Arvind Krishnamurthy
USENIX Symposium on Operating Systems Design and Implementation, **OSDI** 2023.
- Dremel: Adaptive Configuration Tuning of RocksDB KV-Store**
Chenxingyu Zhao, Tapan Chugh, Jaehong Min, Ming Liu, Arvind Krishnamurthy
ACM Special Interest Group on Measurement and Evaluation, **SIGMETRICS** 2022.
- Gimbal: Enabling Multi-tenant Storage Disaggregation on SmartNIC JBOFs**
Jaehong Min, Ming Liu, Tapan Chugh, Chenxingyu Zhao, Andrew Wei, In Hwan Doh, Arvind Krishnamurthy
ACM Special Interest Group on Data Communication, **SIGCOMM** 2021.
- Programmable Calendar Queues for Packet Scheduling**
Naveen Sharma, Chenxingyu Zhao, Ming Liu, Arvind Krishnamurthy, Changhoon Kim, Anirudh Sivaraman
USENIX Symposium on Networked Systems Design and Implementation, **NSDI** 2020.

9. Fast and Accurate Graph Stream Summarization

Xiangyang Gou, Lei Zou, Chenxingyu Zhao, Tong Yang
IEEE International Conference on Data Engineering, **ICDE** 2019.

Preprint

10. ShadowServe: Interference-Free KV Cache Fetching for Distributed Prefix Caching

Xingyu Xiang, Raj Joshi, Yuhang Liu, Jiayi Yao, Chenxingyu Zhao, Junchen Jiang, Yang Zhou, Eddie Kohler, Minlan Yu

arXiv preprint arXiv:2509.16857, 2025.

11. Laconic: Streamlined Load Balancers for SmartNICs

Tianyi Cui, Chenxingyu Zhao, Wei Zhang, Kaiyuan Zhang, Arvind Krishnamurthy

arXiv preprint arXiv:2403.11411, 2024.

12. Quark: A High-Performance Secure Container Runtime for Serverless Computing

Chenxingyu Zhao, Yulin Sun, Ying Xiong, Arvind Krishnamurthy

arXiv preprint arXiv:2309.12624, 2023.

13. TSoR: TCP Socket over RDMA Container Network for Cloud Native Computing

Yulin Sun, Qingming Qu, Chenxingyu Zhao, Arvind Krishnamurthy, Hong Chang, Ying Xiong

arXiv preprint arXiv:2305.10621, 2023.

WORK EXPERIENCE

Microsoft Research, Redmond

Seattle, U.S.

Research intern working on RDMA congestion control

Advisors: Prateesh Goyal, Abdul Kabbani, Behnaz Arzani

2022.6 - 2022.9

ByteDance

Beijing, China

Research intern working on a chatbot for network anomaly detection and self-healing

Advisors: Yi Wang, Chuanxiong Guo

2020.5 - 2020.9

TEACHING EXPERIENCE

1. CSE 5990: Systems for Building Foundation Models, Teaching Assistant (with Stephanie Wang), 2025 Fall
2. CSE 452: Distributed Systems, Teaching Assistant (with Arvind Krishnamurthy), 2025 Spring

PATENT

1. Storage System and Operation Method Thereof

Jaehong Min, Arvind Krishnamurthy, Chenxingyu Zhao

US20250156312A1

MENTORING

1. Yibo Wu (Undergraduate, University of Wisconsin → Present, 2025 Summer)
2. Hongtao Zhang (Undergraduate, University of Wisconsin → Ph.D., University of Washington, 2024 Summer)
3. Fenghao Dong (Undergraduate, Peking University → Ph.D., Carnegie Mellon University, 2023 Summer)
4. Yiran Lei (Undergraduate, Tsinghua University → Ph.D., Carnegie Mellon University, 2022 Summer)