

Wenxue Li

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RESEARCH INTERESTS

I am broadly interested in datacenter networking and distributed systems, with particular focuses on network protocols, high-speed networking, and networked system for AI.

EDUCATION

Hong Kong University of Science and Technology, Hong Kong SAR *Sept. 2021 - Present*
Ph.D. Candidate in Computer Science and Engineering
Advisor: Prof. Kai Chen

Zhejiang University, Hangzhou, China *Sept. 2016 - July 2021*
Bachelor Degree in Electronic Science and Technology

PUBLICATIONS

* indicates co-first authors

Conference Publications

[C8] Xudong Liao, Yijun Sun, Han Tian, Xinchun Wan, Yilun Jin, Zilong Wang, Zhenghang Ren, Xinyang Huang, **Wenxue Li**, Kin Fai Tse, Zhizhen Zhong, Guyue Liu, Ying Zhang, Xiaofeng Ye, Yiming Zhang, Kai Chen. [MixNet: A Runtime Reconfigurable Optical-Electrical Fabric for Distributed Mixture-of-Experts Training](#). In the 39th annual conference of the ACM Special Interest Group on Data Communication (**SIGCOMM**), Coimbra, Portugal, September 8-11, 2025.

[C7] **Wenxue Li**, Xiangzhou Liu, Yunxuan Zhang, Zihao Wang, Wei Gu, Tao Qian, Gaoxiong Zeng, Shoushou Ren, Xinyang Huang, Zhenghang Ren, Bowen Liu, Junxue Zhang, Bingyang Liu, Kai Chen. [Revisiting RDMA Reliability for Lossy Fabrics](#). In the 39th annual conference of the ACM Special Interest Group on Data Communication (**SIGCOMM**), Coimbra, Portugal, September 8-11, 2025.

[C6] Bowen Liu, Xinyang Huang, Qijing Li, Zhuobin Huang, Yijun Sun, **Wenxue Li**, Junxue Zhang, Ping Yin, Kai Chen. [CEIO: A Cache-Efficient Network I/O Architecture for NIC-CPU Data Paths](#). In the 39th annual conference of the ACM Special Interest Group on Data Communication (**SIGCOMM**), Coimbra, Portugal, September 8-11, 2025.

[C5] Jinbin Hu*, **Wenxue Li***, Xiangzhou Liu, Junfeng Wang, Bowen Liu, Ping Yin, Jianxin Wang, Jiawei Huang, Kai Chen. [FLB: Fine-grained Load Balancing for Lossless Datacenter Networks](#). In the 2025 USENIX Annual Technical Conference (**ATC**), Boston, MA, USA, July 2025.

[C4] Zhenghang Ren, Yuxuan Li, Zilong Wang, Xinyang Huang, **Wenxue Li**, Kaiqiang Xu, Xudong Liao, Yijun Sun, Bowen Liu, Han Tian, Junxue Zhang, Mingfei Wang, Zhizhen Zhong, Guyue Liu, Ying Zhang, Kai Chen. [Enabling Efficient GPU Communication over Multiple NICs with FuseLink](#). In the 19th USENIX Symposium on Operating Systems Design and Implementation (**OSDI**), Boston, MA, USA, July 2025.

[C3] **Wenxue Li***, Junyi Zhang*, Yufei Liu, Gaoxiong Zeng, Zilong Wang, Chaoliang Zeng, Pengpeng Zhou, Qiaoling Wang, Kai Chen. [Cepheus: Accelerating Datacenter Applications with High-Performance Roce-Capable Multicast](#). In the 30th IEEE International Symposium on High-Performance Computer Architecture (**HPCA**), Edinburgh, Scotland, March 2024.

[C2] **Wenxue Li**, Chaoliang Zeng, Jinbin Hu, Kai Chen. [Towards Fine-grained and Practical Flow Control for Datacenter Networks](#). In the 31st IEEE International Conference on Network Protocols (**ICNP**), Reykjavik, Iceland, October 2023.

[C1] Zilong Wang, Layong Luo, Qingsong Ning, Chaoliang Zeng, **Wenxue Li**, Xinchun Wan, Peng Xie, Tao Feng, Ke Cheng, Xiongfei Geng, Weicheng Ling, Kejia Huo, Pingbo An, Kui Ji, Shideng Zhang, Bin Xu, Ruiqing Feng, Tao Ding, Kai Chen, Chuanxiong Guo. [SRNIC: A Scalable Architecture for RDMA NICs](#). In the 20th USENIX Symposium on Networked Systems Design and Implementation (NSDI), Boston, MA, USA, April 2023.

Journal Publications

[J2] **Wenxue Li**, Junyi Zhang, Yufei Liu, Gaoxiong Zeng, Zilong Wang, Chaoliang Zeng, Pengpeng Zhou, Qiaoling Wang, Kai Chen. [High-Performance RoCE-Capable Multicast for Commodity RDMA Datacenters](#). In IEEE/ACM Transactions on Networking (ToN), 2025

[J1] **Wenxue Li**, Chaoliang Zeng, Jinbin Hu, Kai Chen. [FlowSail: Fine-grained and Practical Flow Control for Datacenter Networks](#). In IEEE/ACM Transactions on Networking (ToN), 2024

Workshop Publications

[W4] Xiangzhou Liu, **Wenxue Li**, Kai Chen. [Enabling Packet Spraying over Commodity RNICs with In-Network Support](#). In 7th Asia-Pacific Workshop on Networking (APNet), Shanghai, China, August 7-8, 2025.

[W3] Yuxuan Li, Zhenghang Ren, **Wenxue Li**, Xiangzhou Liu, Kai Chen. [Congestion Control for AI Workloads with Message-Level Signaling](#). In 7th Asia-Pacific Workshop on Networking (APNet), Shanghai, China, August 7-8, 2025.

[W2] **Wenxue Li**, Xiangzhou Liu, Yuxuan Li, Yilun Jin, Han Tian, Zhizhen Zhong, Guyue Liu, Ying Zhang, Kai Chen. [Understanding Communication Characteristics of Distributed Training](#). In 8th Asia-Pacific Workshop on Networking (APNet), Sydney, Australia, August 2024.

[W1] **Wenxue Li**, Chaoliang Zeng, Jinbin Hu, Kai Chen. [Scaling Switch-driven Flow Control with Aquarius](#). In the 7th Asia-Pacific Workshop on Networking (APNet), Hong Kong SAR, June 2023.

EXPERIENCES

Research Intern, Huawei Hong Kong Research Center Hong Kong SAR	June 2024 - July 2025
Software Engineer Intern, ByteDance Hangzhou, China	July 2020 - June 2021

SKILLS

Programming C/C++, Python, Golang, P4
Tools NS3, OpenMPI, Pytorch, L^AT_EX
Languages Mandarin (native), English (fluent)

PROFESSIONAL SERVICES

Journal Reviewer ACM Transactions on Privacy and Security (TOPS)	2024
Teaching Assistant <i>COMP3511</i> Operating System	2025 Spring
<i>COMP4621</i> Cloud Computing and Big Data Systems	2022 Spring
<i>COMP3511</i> Operating System	2022 Fall
<i>COMP5621</i> Computer Networks	2023 Fall

HONORS

SIGCOMM 2025 Travel Grants	2025
HPCA 2024 Travel Grants	2024
HKUST Research Travel Grants	2023 Fall, 2024 Winter, 2024 Fall
Postgraduate Studentship, HKUST	2021-2025
First-class Scholarship, ZJU	2019
Zhejiang Daily - Alibaba New Media Scholarship, ZJU	2019
Outstanding Student Leader, ZJU	2018