Xuhao Luo

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Education

University of Illinois Urbana-Champaign	Aug. 2021 - Now
Ph.D. Student in Computer Science	
University of California San Diego	Sep. 2019 - Mar. 2021
M.S. in Computer Science, *GPA: 3.82/4.00*	
University of Science and Technology of China	Sep. 2015 - Jun. 2019
B.S. in Applied Physics	

Research Publication

· **Xuhao Luo**, Ramnatthan Alagappan, Aishwarya Ganesan, **SplitFT: Fault Tolerance for Disaggregated Datacenters via Remote Memory Logging** (*EuroSys 2024*)

· **Xuhao Luo**, Weihai Shen, Shuai Mu, Tianyin Xu, **DepFast: Orchestrating Code of Quorum Systems** (*USENIX ATC 2022*)

· Zhiyuan Guo*, Yizhou Shan*(*co-first author), **Xuhao Luo**, Yutong Huang, Yiying Zhang, **Clio: A Hardware-Software Co-Designed Disaggregated Memory System** (*ASPLOS 2022*)

Experience

University of Illinois Urbana-Champaign	May. 2021 - Now
Research Assistant	*Urbana, IL, USA*

· See publications for detail

Amazon Web Service	May. 2022 - Aug. 2022
Applied Scientist Intern	*Seattle, WA, USA*

· Improved the reliability of the volume metadata updating workflow for AWS S3 volume metadata cache service.

Microsoft Research	Jun. 2020 - Sep. 2020
Research Intern	*Beijing, China*

· Designed and implemented task scheduling and dispatching system for distributed machine learning using **C++**.
· Designed and implemented **CUDA**-based high-performance inter-GPU communication channel for distributed ML within a large-scale GPU cluster.

University of California San Diego	Sep. 2019 - Dec. 2020
Research Assistant, advised by Prof. Yiying Zhang	*La Jolla, CA, USA*

· Designed and implemented a *go-back-N* based reliable network stack on both FPGA and host Linux server to support high-performance reliable network communication. Using kernel-bypass to achieve high-throughput and low-latency.
· Designed and implemented an RPC-semantic connectionless network stack to improve scalability, with a delay-based congestion control.

Agora.io	Jul. 2019 - Sep. 2019
Software Engineer Intern	*Shanghai, China*

· Participated in the development of CapSync, a distributed capability negotiation system for synchronizing media capability info between users, implemented with **C++** and **libevent**.

Honors and Awards

• ASPLOS'22 Student Travel Grant	Feb 2022
• USTC Class of 2019 Outstanding Graduates	May 2019

Services

• OSDI'23 Artifact Evaluation Committee	May 2023
• USENIX ATC'23 Artifact Evaluation Committee	May 2023

Skills

Language	C/C++, Python, Go, Java, Rust, Haskell, OpenCL, Verilog
Tools/Framework	RDMA, TensorFlow, Docker, Zookeeper, LLVM, Google Test