

Xuhao Luo

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Education

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

Research Publication

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- **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, Yiyang Zhang, **Clio: A Hardware-Software Co-Designed Disaggregated Memory System** (*ASPLOS 2022*)

Experience

Amazon Web Service <i>Applied Scientist Intern</i>	May. 2022 - Aug. 2022 <i>Seattle, WA, USA</i>
<ul style="list-style-type: none">· Improved the reliability of the volume metadata updating workflow for AWS S3 volume metadata cache service.· Implemented and evaluated a volume metadata updating prototype using Amazon Quantum Ledger Database (QLDB).	
University of Illinois Urbana-Champaign <i>Research Assistant</i>	May. 2021 - Now <i>Urbana, IL, USA</i>
<ul style="list-style-type: none">· DepFast: Built a framework to implement and reason about fail-slow tolerant distributed systems in an easy and effective way.· SplitFT: Built a new fault-tolerant approach for storage-centric cloud databases by replicating logs on remote nodes using RDMA.	
Microsoft Research <i>Research Intern</i>	Jun. 2020 - Sep. 2020 <i>Beijing, China</i>
<ul style="list-style-type: none">· 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 <i>Research Assistant, advised by Prof. Yiyang Zhang</i>	Sep. 2019 - Dec. 2020 <i>La Jolla, CA, USA</i>
<ul style="list-style-type: none">· Designed and implemented a <i>go-back-N</i> 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 <i>Software Engineer Intern</i>	Jul. 2019 - Sep. 2019 <i>Shanghai, China</i>
<ul style="list-style-type: none">· Participated in the development of CapSync, a distributed capability negotiation system for synchronizing media capability info between users, implemented with C++ and libevent.	

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