




Computer Science Department
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Yuhong Zhong

RESEARCH INTERESTS

Software systems, memory tiering, CXL, storage systems, eBPF

EDUCATION

- 2022-Present **Columbia University**, New York, NY
Ph.D., Computer Science
Advisor: Asaf Cidon
- 2019-2021 **Columbia University**, New York, NY
M.S., Computer Science
- 2015-2019 **Harbin Institute of Technology**, Harbin, China
B.Eng., Computer Science and Technology

PUBLICATIONS

1. **Memtrade: Marketplace for Disaggregated Memory Clouds**
Hasan Al Maruf, **Yuhong Zhong**, Hongyi Wang, Mosharaf Chowdhury, Asaf Cidon, Carl Waldspurger
SIGMETRICS 2023 (ACM International Conference on Measurement and Modeling of Computer Systems)
Acceptance rate: 10%
2. **XRP: In-Kernel Storage Functions with eBPF**
Yuhong Zhong, Haoyu Li, Yu Jian Wu, Ioannis Zarkadas, Jeffrey Tao, Evan Mesterhazy, Michael Makris, Junfeng Yang, Amy Tai, Ryan Stutsman, Asaf Cidon
OSDI 2022 (USENIX Symposium on Operating Systems Design and Implementation)
Acceptance rate: 19%
Jay Lepreau Best Paper Award
3. **BPF for Storage: An Exokernel-Inspired Approach**
Yuhong Zhong*, Hongyi Wang*, Yu Jian Wu*, Asaf Cidon, Ryan Stutsman, Amy Tai, Junfeng Yang (* equal contribution)
HotOS 2021 (ACM Workshop on Hot Topics in Operating Systems)
Acceptance rate: 25%

AWARDS

- 2023 **Memorable Paper Award Finalist**, Non-Volatile Memories Workshop (NVMW) 2023

- 2022 **Jay Lepreau Best Paper Award**, USENIX OSDI 2022
- 2019 **Outstanding Graduate Award**, Harbin Institute of Technology

TEACHING

- 2020 Fall **EECS E6897: Topics in Distributed Storage Systems**, Columbia University
Teaching Assistant
 Instructor: Asaf Cidon
 Graduate-level research seminar course (~10 students) on distributed systems. The topics include file systems, consistency and consensus, synchronization, replication, erasure coding, caching, memory disaggregation, deduplication, and systems + machine learning.

WORK EXPERIENCE

- 2023-Present **Microsoft** Redmond, WA
Software Design Engineer (Contractor, Hired Through Populus Group), Azure Systems Research
 Mentor: Daniel S. Berger
 Evaluating the performance of CXL memory devices and designing software systems for CXL.
- 2021-2022 **VMware** Palo Alto, CA
Member of Technical Staff, vSAN Group
 Developed transaction and crash recovery support for SplinterDB, which are integrated into vSAN Express Storage Architecture.
- 2020 **TuSimple** Tucson, AZ
Software Engineer Intern, Sensor Software Team
 Built visualization tools and new features for the data-processing pipeline of self-driving trucks.

TALKS

- Limitations of PEBS for Tracking Main Memory Requests**
- 05/2023 Open Compute Project (OCP), Composable Memory System
- 03/2023 Azure Systems Research Group (Host by Prof. Mark D. Hill), Microsoft
- XRP: In-Kernel Storage Functions with eBPF**
- 09/2023 Cornell Systems Seminar
- 03/2023 Microsoft Research Asia ACE Talk Series
- 03/2023 Non-Volatile Memory Workshop (NVMW) 2023
- 10/2022 Meta Systems Talk
- 09/2022 eBPF Summit 2022
- 07/2022 USENIX OSDI 2022
- BPF for Storage: An Exokernel-Inspired Approach**
- 06/2021 ACM HotOS 2021

ACADEMIC SERVICE

2023 **Reviewer:** ACM Transactions on Architecture and Code Optimization (TACO)

MENTORING

2023 **Ryan Wee**, Columbia University

2023 **Phoebe Lu**, Columbia University

2023 **Helen Chu**, Columbia University

2022-2023 **Shruti Verma**, Columbia University (Now: M.S. student in CS at Stanford University)

OUTREACH

2023-Present **Co-Organizer:** Queers in STEM (*qSTEM*) at Columbia University

2022 **Reviewer:** Pre-Application Review Program for PhD Applicants (PAR), Columbia University