

Yanpeng Yu

Introduction

I am a third-year PhD student at the department of computer science, Yale University, under the supervision of Professor Anurag Khandelwal and Professor Lin Zhong. My research interests include memory disaggregation, operating systems, distributed systems, and computer networks.

Education

- 2021–present **Ph.D., Computer Science**, Yale University, USA.
- 2017–2021 **B.Sc., Computer Science**, Peking University, China.

Publications

- 2023 [in submission] **Yanpeng, Yu**, Seung-seob Lee, Anurag Khandelwal, and Lin Zhong. **GCS: Generalized Cache Coherence For Efficient and Scalable Synchronization**. *arXiv preprint arXiv:2301.02576*, 2023.
[In this paper, we argued for a co-design for cache-coherence and synchronization primitives to achieve better performance scaling of multi-threaded applications on large-scale shared memory systems \(e.g., disaggregated shared memories, or inter-host shared memories enabled by CXL\).](#)
- 2021 Seung-seob Lee, **Yanpeng, Yu**, Yupeng Tang, Anurag Khandelwal, Lin Zhong, and Abhishek Bhattacharjee. MIND: In-network memory management for disaggregated data centers. In *Proceedings of the ACM SIGOPS 28th Symposium on Operating Systems Principles, SOSP '21*, 2021.
[In this paper, we showed that emerging programmable network switches can enable an efficient shared memory abstraction for disaggregated architectures by placing memory management logic \(e.g., allocation, protection, translation and coherence\) in the network fabric.](#)

Projects & Awards

- 2019 **GPU-based Triangle Counting Algorithm on Large Scale Graph**, 2019.
We achieved the 3-rd place in the China Computer Federation Big Data & Computing Intelligence Contest. Supervised by professor Lei Zou at Peking University.
- 2019 **FPGA-based CNN Accelerator**, 2019.
Supervised by professor Guangyu Sun at Peking University.

Teaching

- 2023 **Teaching Assistant**, CPSC 438/538 *Big Data Systems: Trends & Challenges*, Yale University.
- 2022 **Teaching Assistant**, CPSC 437 *Introduction to Database Systems*, Yale University.