Yuxin Yang

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BIOGRAPHY

Yuxin Yang is a first-year Ph.D. student in Computer Science at UC Santa Cruz (UCSC). His research interests include **CXL Shared Memory, Index Structures, and Memory Systems**.

EDUCATION

Huazhong University of Science and Technology (Average Score: 88.9/100) Wuhan, Hubei, China
B.E. in Computer Science Sept. 2018 - Jun. 2022

Huazhong University of Science and Technology (Average Score: 87.3/100) Wuhan, Hubei, China
M.S. in Computer Architecture Sept. 2022 - Jun. 2025

RESEARCH EXPERIENCE

A hybrid index structure for memory systems
Wuhan, Huazhong University of Science and Technology Oct. 2022 - Apr. 2025

- Introduced ALT-index, a novel hybrid index structure for concurrent memory systems.
- ALT-index improved performance by up to 1.9–2.3× compared with existing indexes.
- Paper accepted by ICDE 2025.

A resizing scheme for file systems
Wuhan, Huazhong University of Science and Technology Oct. 2023 - Dec. 2024

- Designed a head-shrinking scheme for a flash-friendly file system.
- Improved average resizing time from 60 to 15 minutes.

Low-latency metadata service for distributed file systems
Wuhan, Huazhong University of Science and Technology Mar. 2022 - Sept. 2022

- Proposed Duplex, a high-performance metadata service with an index structure.
- Improved performance by up to 7.6× / 2.3× compared to existing solutions.
- Paper accepted by ICCD 2023 (Best Paper Nomination).

PUBLICATIONS

- **Yuxin Yang**, Fang Wang*, Mengya Lei, Peng Zhang, Dan Feng. ALT-index: A Hybrid Learned Index for Concurrent Memory Database Systems. In Proceedings of the International Conference on Data Engineering **(ICDE 2025)**.
- Chao Dong, Fang Wang*, **Yuxin Yang**, Mengya Lei, Jianshun Zhang, Dan Feng. Low-Latency and Scalable Full-path Indexing Metadata Service for Distributed File Systems. In Proceedings of the International Conference on Computer Design **(ICCD 2023) (Best Paper Nomination)**.

HONORS & AWARDS

Best Paper Nomination (ICCD 2023) Washington, DC, USA

TECHNICAL SKILLS

Programming Languages:C, C++, Python, Java