GUANZHOU HU

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EDUCATION

University of Wisconsin–Madison   GPA: 4.00 / 4.00   *Aug 2020 - Present*
Ph.D. Candidate, Computer Sciences   *Madison, WI, USA*
- Advisors: Andrea Arpaci-Dusseau and Remzi Arpaci-Dusseau
- Research areas: Distributed storage systems, Operating systems, File systems

Massachusetts Institute of Technology   GPA: 4.00 / 4.00   *Sep 2019 - Jul 2020*
Special Student, Electrical Engineering & Computer Science   *Cambridge, MA, USA*

ShanghaiTech University   GPA: 3.90 / 4.00   *Sep 2016 - Jul 2020*
B. Eng., Computer Science & Technology   *Shanghai, China*
- Honors: President's Scholarship (2017, 2018), Dean's Scholarship (2019)

PUBLICATIONS

[1] MEFS: Per-File Virtualization for Userspace Persistent Memory Filesystems. Shawn Zhong, Chenhao Ye, <u>Guanzhou Hu</u>, Suyan Qu, Andrea Arpaci-Dusseau, Remzi Arpaci-Dusseau, Michael Swift. 2023. In Proceedings of the 21th USENIX Conference on File and Storage Technologies (***FAST '23***).

[2] The Storage Hierarchy is Not a Hierarchy: Optimizing Caching on Modern Storage Devices with Orthus. Kan Wu, Zhihan Guo, <u>Guanzhou Hu</u>, Kaiwei Tu, Ramnatthan Alagappan, Rathijit Sen, Kwanghyun Park, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. 2021. In Proceedings of the 19th USENIX Conference on File and Storage Technologies (***FAST '21***).

[3] Dorylus: Affordable, Scalable, and Accurate GNN Training with Distributed CPU Servers and Serverless Threads. John Thorpe, Yifan Qiao, Jonathan Eyolfson, Shen Teng, <u>Guanzhou Hu</u>, Zhihao Jia, Jinliang Wei, Keval Vora, Ravi Netravali, Miryung Kim, and Guoqing Harry Xu. 2021. In Proceedings of the 15th USENIX Symposium on Operating Systems Design and Implementation (***OSDI '21***).

[4] BORA: A Bag Optimizer for Robotic Analysis. Jian Zhang, Tao Xie, Yuzhuo Jing, Yanjie Song, <u>Guanzhou Hu</u>, Si Chen, and Shu Yin. 2020. In Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis (***SC '20***). IEEE Press, Article 12, 1–15.

[5] A Storage System Management Policy Based on Data Content Locality. Yin, Shu. and <u>Hu, Guanzhou</u>. 2019. CN. Patent number ZL 2019 1 0499391.9, licensed November 25, 2022.

ONGOING PROJECTS

Modernizing Replication Protocols for Data-heavy Workloads, Project Leader   *Sep 2022 - Present*
- Study the performance and availability characteristics of state machine replication (SMR) protocols under modern data-heavy workloads, such as cloud HTAP databases and metadata of large-scale systems, where message latency is no longer the only dominant factor.
- Design and implement *Summerset*, a distributed KV-store written in async Rust, which supports multiple SMR protocols in one modularized codebase: `https://github.com/josehu07/summerset`.
- Propose, implement, and evaluate new protocols that enhance SMR with data-centric, heterogeneity-aware techniques (e.g. erasure coding) and on emerging new hardware (e.g. persistent memory).

TEACHING EXPERIENCE

Teaching Asst. in Operating Syst. & Computer Arch.   *Aug 2020 - May 2021*
Department of Computer Sciences, UW–Madison   *Madison, WI, USA*

Teaching Asst. in Operating Syst., Computer Arch., & Discrete Math.   *Mar 2018 - Apr 2019*
School of Information Science & Technology, ShanghaiTech University   *Shanghai, China*

PRIZES & AWARDS

- Outstanding Research Award, CSST Program, UCLA   *Sep 2019*
- Second Prize, ASC Supercomputing Competition (GeekPie_HPC team leader)   *Mar 2019*
- Outstanding Teaching Assistant Award, ShanghaiTech University   *Jan 2019*
- Meritorious Winner, Mathematical Contest in Modelling (MCM)   *Apr 2018*