Ziyue Qiu

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Address: 5000 Forbes Ave, Pittsburgh, PA

Education

Carnegie Mellon University, Pittsburgh, PA, US   Aug 2022 - Present
- Ph.D. in Computer Science and Technology (Advisors Greg Ganger, George Amvrosiadis)
- M.S. in Computer Science (Research) (en route), May 2025

University of Science and Technology of China, Anhui, China   Sep 2018 - Jul 2022
- Bachelor of Engineering in Computer Science and Technology
- Special Class for the Gifted Young (under 16 years old)
- Hua Xia Talent Program in Computer Science and Technology

- GPA (overall): 3.92/4.3 (90.7/100), ranking: 9/251 **(top 4%)**

Peer Reviewed Publications

Ziyue Qiu, Juncheng Yang, Mor Harchol-Baltel. "**Why Increasing the Hit Ratio can Hurt Cache Throughput?**" Queueing Systems: Theory and Applications (**QUESTA**), Special Issue: 40 Years of QUESTA (to appear).

Ziyue Qiu, Hojin Park, Jing Zhao, Yukai Wang, Arnav Balyan, Gurmeet Singh, Yangjun Zhang, Jack (Suqiang) Song, Gregory R. Ganger, George Amvrosiadis. "**Moirai: Optimizing Placement of Data and Compute in Hybrid Clouds**." The 31st ACM Symposium on Operating Systems Principles (**SOSP'25**)

Ziyue Qiu, Juncheng Yang, Mor Harchol-Bartel. "**Can Increasing the Hit Ratio Hurt Cache Throughput?**" The 17th EAI International Conference on Performance Evaluation Methodologies and Tools (**ValueTools'24**) *Best Student Paper Award*

Ziyue Qiu, Juncheng Yang, Juncheng Zhang, Cheng Li, Xiaosong Ma, Qi Chen, Mao Yang, Yinlong Xu. "*FrozenHot* **Cache: Rethinking Cache Management for Modern Hardware.**" Proceedings of the 18th European Conference on Computer Systems (**EuroSys'23**)

Qinghan Chen, Muhammad Haekal Muhyidin Al-Araby, Ziyue Qiu, Zhuofan Chen, Rashmi Vinayak, Juncheng Yang. "**Demystifying and Improving Lazy Promotion in Cache Eviction.**" Proceedings of the 52nd International Conference on Very Large Data Bases (**VLDB'26**) (to appear).

Hojin Park, Ziyue Qiu, Gregory R. Ganger, George Amvrosiadis. "**Reducing Cross-Cloud/Region Costs with the Auto-Configuring *MACARON* Cache**." The 30th ACM Symposium on Operating Systems Principles (**SOSP'24**)

Chunxu Tang, Bin Fan, Jing Zhao, Chen Liang, Yi Wang, Beinan Wang, Ziyue Qiu, Lu Qiu, Bowen Ding, Shouzhuo Sun, Saiguang Che, Jiaming Mai, Shouwei Chen, Yu Zhu, Jianjian Xie, Yutian (James) Sun, Yao Li, Yangjun Zhang, Ke Wang, Mingmin Chen. "**Data Caching for Enterprise-Grade Petabyte-Scale OLAP.**" 2024 USENIX Annual Technical Conference (**USENIX ATC'24**)

Juncheng Yang, Yazhuo Zhang, Ziyue Qiu, Yao Yue, K. V. Rashmi. "**FIFO Queues are All You Need for Cache Eviction.**" The 29th ACM Symposium on Operating Systems Principles (**SOSP'23**)

Juncheng Yang, <u>Ziyue Qiu</u>, Yazhuo Zhang, Yao Yue, K. V. Rashmi. "**FIFO Can be Better than LRU: the Power of Lazy Promotion and Quick Demotion.**" The 19th Workshop on Hot Topics in Operating Systems (**HotOS'23**).

Work Experience

Contractor@ Uber   Jul 2023 - present

Evaluating and Refining Cloudlake's Efficiency on Uber's Platform

Talks

[2025/10] Presented "Moirai: Optimizing Placement of Data and Compute in Hybrid Clouds" at SOSP'25

[2024/11] Invited to present Uber work at Salesforce Database Team reading group

[2024/07] Co-presented "Data Caching for Enterprise-Grade Petabyte-Scale OLAP" at USENIX ATC'24

[2023/05] Presented "FrozenHot Cache: Rethinking Cache Management for Modern Hardware" at EuroSys'24

Services

External reviewer - ICDCS'25

Artifact Evaluation committee - SIGCOMM'24, EuroSys'25, SIGCOMM'25, FAST'26, NSDI'26

Teaching

2024 Teaching Assistant, 18-746 Storage Systems (Fall), CMU

2021 Teaching Assistant, Mathematical Logic (Spring), USTC

Selected Awards & Honors

Travel grants/scholarship:
- EuroSys'23, HotOS'23, ATC'24, SOSP'24

Scholarship:
- China National Scholarship (Top 1%)   2021
- SGY Sihua Scholarship (4/50)   2020
- Hua Xia Talent Program First Prize Scholarship (12/251 students major in CS)   2020
- SGY Class of 87 Innovation Scholarship (10/1,000)   2019

Skills

- Adept in Assembly Language, C/C++, Python, Verilog (3-year experience)
- Proficient in Java, JavaScript

Fun Facts

I enjoy Ultimate Frisbee, rock climbing, Texas poker, stand-up comedy, and—oh, can't forget—systems too.