Zeying Zhu

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RESEARCH INTEREST

My research interests are broadly in systems and networking. Currently, I am working on approximate computing systems, such as distributed storage, network telemetry, monitoring systems, and big data analysis systems.

EDUCATION

University of Maryland, College Park, US Aug. 2023–Present

- Ph.D. in Computer Science (GPA: 4.0/4.0), Advisor: Prof. Alan Liu

Boston University, US Sept. 2021–Aug. 2023

- Ph.D. in Computer Engineering (GPA: 4.0/4.0, transferred to UMD), Advisor: Prof. Alan Liu

Xi'an Jiaotong University, China Sept. 2017–July 2021

- B.E. in Computer Science and Technology (Honors), School of Computer Science and Technology (GPA: 4.11/4.3)

PUBLICATIONS

[1] **Zeying Zhu**, Yibo Zhao, Zaoxing Liu. "In-Memory Key-Value Store Live Migration with NetMigrate", *in Proceedings of the 22nd USENIX Conference on File and Storage Technologies* (**FAST '24**), Santa Clara, CA, February 27-29, 2024. (Accept rate: 17.9%, 22 papers accepted out of 123 submitted)

[2] **Zeying Zhu**[*], Kan Wu[*], and Zaoxing Liu. "Arya: Arbitrary Graph Pattern Mining with Decomposition-based Sampling*", in Proceedings of the 20th USENIX Symposium on Networked Systems Design and Implementation* (**NSDI '23**), Boston, MA, April 17-19, 2023. (Accept rate: 16%, 46 papers accepted out of 288 submitted)

[*]Equal contribution.

WORK EXPERIENCE

Research Intern | **5G Cyberattack Detection with Sketch-based Telemetry** May 2022–Aug. 2022

Mentors: Stefan Saroiu, Alec Wolman, Azure for Operators (AFO), Microsoft, WA

- Prototyped network attack (e.g., port-scanning attack) detection with sketch-based measurement in Azure Log Analytics, Azure Sentinel, and the 5G testbed.

Research Intern | **Improving the Design and Implementation of StreamingNIC** Sept. 2020–May 2021

Mentor: Zhixiong Niu, Network Research Group, Microsoft Research Asia, Beijing

- Maintained and contributed to the Linux kernel device driver and the user library of a hardware solution to support efficient and scalable streaming networking communication for data center applications.
- Investigated performance bottlenecks of container overlay network in Linux TCP/IP network stack using perf.

RESEARCH EXPERIENCE

Research Assistant | **Sketch-based Measurement Systems for 5G and Cloud**

Advised by: Alan Liu

Research Assistant | **Key-value Store Migration with Programmable Network Acceleration**

Advised by: Alan Liu

MENTORING EXPERIENCE

- Yibo Zhao (ShanghaiTech University->PhD student at Boston University, Summer 2022-Spring 2023), Julia Hua (Boston University, Summer/Fall 2022): In-Memory Key-Value Store Live Migration with NetMigrate

TEACHING EXPERIENCE

Teaching Assistant | **EC 527 High Performance Programming with Multicore and GPUs**, Boston University Spring 2023

Instructor: Prof. Martin Herbordt

- Guest lecturer on OpenMP.

Teaching Assistant | **EC 528 Cloud Computing**, Boston University Fall 2022

Instructor: Prof. Alan Liu

SERVICES

INFOCOMM ’23 Reviewer 2023

AWARDS AND HONORS

FAST’24 Student Grant 2024

SIGCOMM’23 N2WOMEN Travel Grant 2023

Hariri Institute’s Graduate Student Fellowship, Boston University 2023

NSDI’23 Student Grant 2023

NSDI’22 Diversity Grant 2022

Distinguished Computer Engineering Fellowship, Boston University 2021

Stars of Tomorrow Internship Award, Microsoft Research Asia 2021

Outstanding Graduates, Xi’an Jiaotong University 2021

China National Scholarship (Top 1%) 2018, 2019, 2020

Outstanding Student, Xi’an Jiaotong University 2018, 2019, 2020

Silver Medal in ICPC Asia Regional Contest, Nanchang Site, Shanghai Site 2019

Silver Medal in China Collegiate Programming Contest, Qinhuangdao Site 2018

Silver Medal in China Collegiate Computer Systems and Programming Contest 2018

SKILLS

- **Programming Languages:** C/C++, Python, P4, Go, Verilog, SQL
- **Platforms/Tools:** Apache Hadoop, Docker, Kubernetes, Redis, gRPC, MPI, OpenMP, CUDA, perf, DPDK, FD.io-VPP