Xinkai Wang

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Education

Shanghai Jiao Tong University	Sep. 2021 - Present
2nd year Ph.D. Student, Computer Science	*Supervisor: Prof. Chao Li*
Shanghai Jiao Tong University	Sep. 2017 - June 2021
Bachelor of Engineering, Computer Science	
With Zhiyuan Honors Program of Engineering	

Publications

Conferences

[C1] **Xinkai Wang**, Yuancheng Li, Hao He, Chao Li, Xiaofeng Hou, Jing Wang, Quan Chen, Jingwen Leng, Minyi Guo, and Leibo Wang, "Not All Resources are Visible: Exploiting Fragmented Shadow Resources in Shared-State Scheduler Architecture". ACM Symposium on Cloud Computing (SoCC 2023)

[C2] **Xinkai Wang**, Chao Li, Lu Zhang, Xiaofeng Hou, Quan Chen, and Minyi Guo, "Exploring Efficient Microservice Level Parallelism", International Parallel and Distributed Processing Symposium (IPDPS 2022)

[C3] Lu Zhang, Chao Li, **Xinkai Wang**, Weiqi Feng, Zheng Yu, Quan Chen, Jingwen Leng, Minyi Guo, Pu Yang, and Shang Yue, "FIRST: Exploiting the Multi-Dimensional Attributes of Functions for Power-Aware Serverless Computing". International Parallel and Distributed Processing Symposium (IPDPS 2023)

Under Review

[R1] **Xinkai Wang**, Chao Li, Lu Zhang, Xiaofeng Hou, Quan Chen, and Minyi Guo, "Efficient Hardware-Assisted Profiling Framework in Cloud", Submitted to ASPLOS 2024

Patents

[P1] Chao Li, **Xinkai Wang**, Lu Zhang, Zhexuan Chen, Quan Chen, Minyi Guo, "Request scheduler for multi-dimensional dynamic microservice-based applications", Chinese Patent, 2023-03.

[P2] Chao Li, Lu Zhang, Weiqi Feng, Zheng Yu, **Xinkai Wang**, Minyi Guo, "Power management for serverless functions based on intermediate representation", Chinese Patent, 2021-06.

Honors and Awards

IPDPS 2023 Travel Grant	2023
Outstanding Graduate of Shanghai Jiao Tong University, Zhiyuan Honor Degree of Bachelor, Outstanding Thesis of Bachelor	2021
Zhiyuan Honor Scholarship, Zhongchuan Scholarship, First-class Scholarship, YangYuanqing Excellent Student Scholarship, Merit Student, etc.	Undergrad.

Research Experiences

Research Assistant, SAIL Lab, Supervised by Prof. Chao Li

May. 2022 - Dec. 2022, Shanghai Jiao Tong University

I worked on resource visibility enhancement of shared-state scheduler architecture and published a paper on SoCC 2023 [C1].

Sep. 2020 - Oct. 2021, Shanghai Jiao Tong University

I worked on microservice architecture optimization and published a paper on IPDPS 2022 [C2].

Sep. 2021 - Oct. 2022, Shanghai Jiao Tong University

I worked on multi-dimensional power management for serverless functions and published a paper on IPDPS 2023 [C3].

Industry Experiences

Research Intern, Alibaba
Feb. 2023 - Aug. 2023, Hangzhou

I worked on hardware-assisted profiling and automated diagnosing in production and submitted a paper to ASPLOS 2024 [R1].

Research Intern, Microsoft Research Asia
Feb. 2022 - May. 2022, Beijing

I worked on power-aware VM management in production.

Teaching Experiences

Teaching Assistant @CS236 - Cloud Computing Technology
Fall semester, 2021-2022, Shanghai Jiao Tong University

I scheduled the projects of cloud computing on the public cloud.

Teaching Assistant @CS359 - Computer Architecture
Fall semester, 2019, Shanghai Jiao Tong University

I finished the homework grading of the courses.

Services

Volunteer Experiences

Volunteer of the 2nd Excellent Young Scholar Forum of CSE Department	2020
Tutors of the Freshmen of CSE Department	Sep. 2021 - Present

Review Experiences

Sub-reviewer of ISCA, MICRO, HPCA, ASPLOS, and ICDCS.

Professional activities

Student member of IEEE, ACM, and CCF

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Talks

Exploring Efficient Microservice Level Parallelism
Conference talk, IPDPS 2022, Virtual

Exploiting the Multi-Dimensional Attributes for Power-Aware Serverless Computing
Conference talk, IPDPS 2023, Florida, USA

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Skills

Programming skills: C/C++, Python, Java
Softwares: Latex, Docker, Kubernetes
Extracurriculars: Badminton, Basketball
Languages: Chinese(native), English (fluent)