JIAWEI WANG

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EDUCATION



September 2017 - Fuls 2020

August 2021 - Present



University of Science and Technology of ChinaSeptember 2017 - July 2020Master of Engineering in Computer Science and TechnologyAdvisor: Research professor Cheng Li and Professor Xinyu FengThesis: A Language for Fine-Grained Consistency in Distributed Systems: Design and Implementation



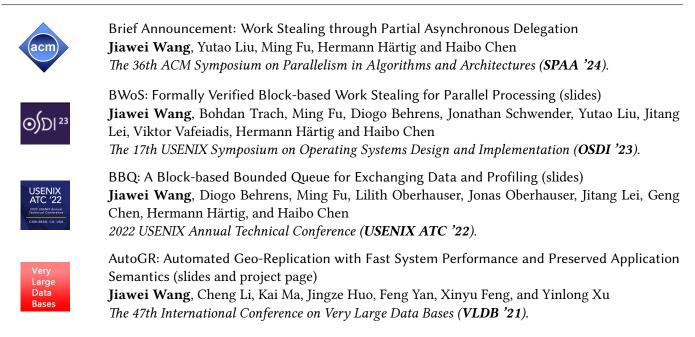
University of Science and Technology of China Bachelor of Engineering in Computer Science and Technology Advisor: Doctor *Ming Fu* and Professor *Xinyu Feng* Thesis: Formalizing SPARCv8 Instruction Set Architecture in Coq

September 2013 - June 2017

RESEARCH INTERESTS

I am interested in *concurrency*. My research focuses on how to make the program run correctly and fast under a concurrent environment. Specifically, I am interested in *system scalability, parallel processing systems, multi-core concurrency,* and *concurrent data structures* combined with *formal verification* techniques.

PUBLICATIONS





Formalizing SPARCv8 Instruction Set Architecture in Coq Jiawei Wang, Ming Fu, Lei Qiao, and Xinyu Feng *Science of Computer Programming (SCP)*, February 2020. ©Elsevier. (Journal version of the *SETTA'17* paper)



Formalizing SPARCv8 Instruction Set Architecture in Coq (slides)
Jiawei Wang, Ming Fu, Lei Qiao, and Xinyu Feng
The 3rd International Symposium on Dependable Software Engineering: Theories, Tools, and Applications (SETTA '17). ©Springer.
Best Paper Award Honorable Mention

EXPERIENCE

W HUAWEI	Huawei Sanyapo Project August 2023 - December 2023 • Design and implement a tracing system of a commercial OS
W HUAWEI	Huawei OS Kernel Lab <i>April 2023 - May 2023</i> • Design and implement a multi-priority readers-writer lock for a commercial OS
👐 HUAWEI	 Huawei NICE Project January 2023 - February 2023 Joined the NICE project and participated in the Datacom HPF2.0 and Wireless DP projects Designed and implemented a demo of a packet forwarding framework Developed a high-performance multi-threaded memory pool for Wireless L2 Parallelization Apply BBQ into Wireless L2 Parallelization
W HUAWEI	 Huawei Sanyapo Project May 2022 - September 2022 Develop a high-performance lock-free memory allocation library Develop a crash-tolerant queue for cross-process communication with virtualization Apply BBQ into the logging component of a commercial OS Apply BBQ into 5G core network UDG of the cloud product line
 HUAWEI	Industrial Ph.D. Student in Safe and Scalable System Software Concurrentcy Group, Huawei Dresden Research Center <i>September 2021 - Present</i>
Microsoft Research	Research assistant in System Research Group, Microsoft Research Asia February 2021 - August 2021 Advisors: Fan Yang and Mike Chieh-Jan Liang

• AI for compiler optimization, AI for cache replacement policy



Research assistant in OS Kernel Lab, Huawei Hangzhou Research Institute July 2020 - November 2020

- Verify memory replacement algorithms of an in-house OS (e.g., RCU, RLU, EBR)
- Implement and verify lock-free data structures under weak memory models



Teaching assistant for *Compiler Principles*, USTC (2019, Fall Semester) Teaching assistant for *Compiler Principles*, USTC (2018, Fall Semester) Teaching assistant for *Computer Programming II*, USTC (2018, Summer Semester) Teaching assistant for *Computer Programming II*, USTC (2018, Spring Semester)

C-) Alibaba Cloud

Research assistant in R&D department of cloud storage, Alibaba Cloud July 2016 - October 2016

• Design and implement the front-end server for Function Compute Service (Serverless)

TECHNICAL STRENGTHS



HONORS & AWARDS

Silver Medal, Huawei Central Software Institute Innovation Contest	2023
Outstanding Innovation Breakthrough Award, Huawei Dresden Research Center	2023
Future Stars Award, Huawei Dresden Research Center	2022
Outstanding Ph.D. Student, Huawei Dresden Research Center	2022
Bronze Medal, Huawei Central Software Institute Innovation Contest	2022
Timely Incentive Award, Huawei Dresden Research Center	2022
Second Prize Fellowship of University of Science and Technology of China	2018
First Prize Fellowship of University of Science and Technology of China	2017
Best paper award honorable mention for the paper presented at SETTA'17	2017
Outstanding Bachelor Thesis (top 5%), USTC	2017
New student fellowship of University of Science and Technology of China	2013
First prize of Chinese Physics Olympiad, Hebei, China	2012