

Sishuai Gong

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Lawson 2161, 305 N. University Street, West Lafayette, IN 47907

Department of Computer Science, Purdue University

EDUCATION

Ph.D candidate in Computer Science
Purdue University, West Lafayette, IN, U.S.A
Advisor: [Pedro Fonseca](#)

Aug 2019 - Present

Bachelor in Computer Science
University of Science and Technology of China, Hefei, China

Sept 2015 - Jun 2019

RESEARCH INTERESTS

I am broadly interested in operating system research. My recent research focuses on improving the safety and reliability of real-world kernels with novel kernel testing (e.g., concurrency testing) techniques.

PUBLICATIONS

- **VeriSMo: A Verified Security Module for Confidential VMs**
Ziqiao Zhou, Anjali, Weiteng Chen, **Sishuai Gong**, Chris Hawblitzel, Weidong Cui
In Proceeding of the 18th USENIX Symposium on Operating Systems Design and Implementation (OSDI), 2024
- **Snowcat: Efficient Kernel Concurrency Testing using a Learned Coverage Predictor**
Sishuai Gong, Dinglan Peng, Deniz Altınbüken, Pedro Fonseca, Petros Maniatis
In Proceedings of the 29th ACM Symposium on Operating Systems Principles (SOSP), 2023
- **KIT: Testing OS-level Virtualization for Functional Interference Bugs**
Congyu Liu, **Sishuai Gong**, Pedro Fonseca
In Proceedings of the 28th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS), 2023
- **Snowboard: Finding Kernel Concurrency Bugs through Systematic Inter-thread Communication Analysis**
Sishuai Gong, Deniz Altınbüken, Pedro Fonseca, Petros Maniatis
In Proceedings of the 28th ACM Symposium on Operating Systems Principles (SOSP), 2021
- **On-Demand-Fork: A Microsecond Fork for Memory-Intensive and Latency-Sensitive Applications**
Kaiyang Zhao, **Sishuai Gong**, Pedro Fonseca
In Proceedings of the 16th European Conference on Computer Systems (EuroSys), 2021
- **InspectorGadget: A Framework for Inferring TCP Congestion Control Algorithms and Protocol Configurations**
Sishuai Gong, Usama Naseer, Theophilus Benson
In Proceedings of the IFIP Network Traffic Measurement and Analysis Conference (TMA), 2020

HONORS AND AWARDS

- [Google Cloud Research Innovator](#) 2024
- [Bilsland Dissertation Fellowship](#) 2024
- Purdue's nominee for the Google and Microsoft Ph.D. Fellowship 2021
- Outstanding Bachelor Thesis Award by USTC (Top ~3%) 2019
- Merit Student Scholarship honored by USTC 2017 & 2018
- Freshmen Scholarship honored by USTC 2015

EXPERIENCE

- **Research Intern** May 2022 - Jul 2022
Microsoft Research, Redmond, WA, U.S.A
Mentor: Ziqiao Zhou and Weidong Cui
- **Teaching Assistant** Summer 2020, Fall 2019
Purdue University, West Lafayette, IN, U.S.A
CS240: Programming in C, CS180: Foundations of Computer Science
- **Research Intern** Summer 2020
Brown University, Providence, RI, U.S.A
Advisor: Theophilus Benson

PROFESSIONAL SERVICES

- **Reviewer**, USENIX ATC, 2024