

Sishuai Gong

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Department of Computer Science, Purdue University

RESEARCH INTERESTS

Operating systems, system reliability & security, machine learning for system code understanding

EDUCATION

Purdue University

Ph.D in Computer Science

Advisor: [Pedro Fonseca](#)

West Lafayette, IN, USA

Aug 2019 - June 2025 (expected)

University of Science and Technology of China

B.S. in Computer Science

Hefei, China

Sept 2015 - Jun 2019

WORK EXPERIENCE

Purdue University

Research Assistant

Mentor: [Pedro Fonseca](#)

West Lafayette, IN, USA

Aug 2019 - Present

Microsoft Research

Research Intern

Mentor: [Ziqiao Zhou](#) and [Weidong Cui](#)

Redmond, WA, U.S.A

May 2022 - Jul 2022

Brown University

Research Intern

Advisor: [Theophilus Benson](#) (now at CMU)

Providence, RI, U.S.A

Summer 2019

HONORS AND AWARDS

- Jay Lepreau Best Paper Award at OSDI 2024
- [Google Cloud Research Innovator](#) 2024
- [Purdue Bilsland Dissertation Fellowship](#) 2024
- Purdue's nominee for the Google and Microsoft Ph.D. Fellowship 2021
- Outstanding Bachelor Thesis Award at USTC (Top ~3%) 2019

PUBLICATIONS

CONFERENCES

- [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)
([Jay Lepreau Best Paper Award](#))
- [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)

BOOK

- **Machine Learning Techniques for Cybersecurity**
Elisa Bertino, Sonam Bhardwaj, Fabrizio Cicala, **Sishuai Gong**, Imtiaz Karim, Charalampos Katsis, Adrian Shuai Li, Ashraf Y. Mahgoub
In the book series: Synthesis Lectures on Information Security, Privacy, and Trust, Springer Nature, 2023

PROFESSIONAL SERVICES

- **External Review Committee:** USENIX ATC 2024

TEACHING EXPERIENCE

- **Teaching Assistant**, Department of Computer Science, Purdue University West Lafayette, IN, U.S.A
CS240: Programming in C (Instructor: Gustavo Rodriguez-Rivera) Fall 2022
CS240: Programming in C (Instructor: Gustavo Rodriguez-Rivera) Summer 2021
CS240: Programming in C (Instructor: Kihong Park) Summer 2020
CS180: Foundations of Computer Science (Instructor: Vernon Rego) Fall 2019