

# Sishuai Gong

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## RESEARCH INTERESTS

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Operating system, system reliability & security, software testing, machine learning for system

## EDUCATION

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Purdue University	West Lafayette, IN, USA
Ph.D in Computer Science	Aug 2019 - Jun 2025 (expected)
Advisor: <a href="#">Pedro Fonseca</a>	
University of Science and Technology of China	Hefei, Anhui, China
B.S. in Computer Science	Sept 2015 - Jun 2019

## WORK EXPERIENCE

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Purdue University	West Lafayette, IN, USA
Research Assistant	Aug 2019 - Present
Advisor: <a href="#">Pedro Fonseca</a>	
Microsoft Research	Redmond, WA, USA
Research Intern	May 2022 - Jul 2022
Mentor: <a href="#">Ziqiao Zhou</a> and <a href="#">Weidong Cui</a>	
Brown University	Providence, RI, USA
Research Intern	Aug 2018 - Sept 2018
Advisor: <a href="#">Theophilus Benson</a> (now at CMU)	

## HONORS AND AWARDS

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

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### 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

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External Review Committee: USENIX ATC 2024

## TEACHING EXPERIENCE

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Teaching Assistant, Purdue University	West Lafayette, IN, USA
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