ZHENGJIE JI

Ph.D. Student, Department of Computer Science, Virginia Tech

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RESEARCH INTERESTS

I am a Ph.D. student in the Computer Science Department at Virginia Tech, advised by Prof. Dan Williams. My research focuses on operating systems, with an emphasis on extended Berkeley Packet Filter (eBPF) and verification. Currently, I am working on improving the eBPF verifier via enhancing static validation.

EDUCATION

Ph.D. in Computer Science, Virginia Tech	2022 - present
M.S. in Computer Science and Engineering, KTH Royal Institute of Technology	2020 - 2023
B.E. in Electrical and Computer Engineering, Shanghai Jiao Tong University	2017 - 2021

HONORS AND AWARDS

Bitshares Fellowship, Virginia Tech	2023
CCI SWVA Cyber Innovation Scholarship, Virginia Tech	2023
KTH Covid-19 Financial Aid Scholarship, KTH Royal Institute of Technology	2021
Hattrick Award, KTH Royal Institute of Technology	2020

PUBLICATIONS

CONFERENCE PAPERS

1. BPFflow - Preventing information leaks from eBPF
   Chinecherem Dimobi, Rahul Tiwari, Zhengjie Ji, Dan Williams. *Workshop on eBPF and Kernel Extensions*, 2025.

2. Eliminating eBPF Tracing Overhead on Untraced Processes
   Milo Craun, Khizar Hussain, Uddhav Gautam, Zhengjie Ji, Tanuj Rao, Dan Williams. *Workshop on eBPF and Kernel Extensions*, 2024.

3. How well does LLM generate security tests?
   Ying Zhang, Wenjia Song, Zhengjie Ji, Daphne Yao, Na Meng. *CoRR arXiv*, 2023.

4. PrivMon: A Stream-Based System for Real-Time Privacy Attack Detection for Machine Learning Models
   Myeongseob Ko, Xinyu Yang, Zhengjie Ji, Hoang Anh Just, Peng Gao, Anoop Kumar, Ruoxi Jia. *International Symposium on Research in Attacks, Intrusions and Defenses*, 2023.

5. ThreatKG: A System for Automated Open-Source Cyber Threat Knowledge Gathering and Management
   Peng Gao, Xiaoyuan Liu, Edward Choi, Sibo Ma, Xinyu Yang, Zhengjie Ji, Zilin Zhang, Dawn Song. *CoRR arXiv*, 2022.

6. A Hybrid Queuing Model for Coordinated Vehicle Platooning on Mixed-Autonomy Highways: Training and Validation
   Haoran Su, Zhengjie Ji, H. Johansson, Li Jin. *CoRR arXiv*, 2021.

DEMO PAPERS

1. A Knowledge Base Question Answering System for Cyber Threat Knowledge Acquisition
   Zhengjie Ji, Edward Choi, Peng Gao. *IEEE International Conference on Data Engineering*, 2022.

Posters

1. Poster: ThreatKG - A System for Automated Cyber Threat Knowledge Gathering and Management
   <u>Zhengjie Ji</u>*, Xiaoyuan Liu* (* equal contribution), Edward Choi, Sibo Ma, Xinyu Yang, Dawn Song, Peng Gao.
   IEEE Symposium on Security and Privacy, 2023.

PROFESSIONAL SERVICES

Artifact Evaluation Committee, *NDSS*	2026
Artifact Evaluation Committee, *FAST*	2026
Artifact Evaluation Committee, *CCS*	2025
Artifact Evaluation Committee, *USENIX*	2025

TEACHING EXPERIENCE

Teaching Assistant, CS4104 Data and Algorithm Analysis, Virginia Tech	2025
Teaching Assistant, CS3214 Computer Systems, Virginia Tech	2025
Teaching Assistant, CS2114 Software Design and Data Structures, Virginia Tech	2024
Teaching Assistant, CS5560 Fundamentals of Info Security, Virginia Tech	2024
Teaching Assistant, CS5594 Blockchain Technologies, Virginia Tech	2023
Teaching Assistant, VE492 Intro to Artificial Intelligence, Shanghai Jiao Tong University	2021

SKILLS

Languages: English / Mandarin
Programming: Rust / C / C++ / Python / Java / JavaScript / SQL
Technical Experience: Linux / eBPF / QEMU / Docker / Kubernetes / PostgreSQL / Neo4j / Elasticsearch