

# Jilin Hu

+1 2176931146 | hujilin@zju.edu.cn  
1999-08

## EDUCATION

### University of Illinois Urbana-Champaign

Sep 2024 - Sep 2025

Visiting Scholar in Computer Science

Advisor: Talia Ringer

### Zhejiang University

Sep 2021 - Jun 2026

Ph.D. (expected Jun 2026) in Computer Science

Hangzhou, China

Advisor: Yongwang Zhao

### Xi'an Jiaotong University

Sep 2017 - Jun 2021

B.S. in Physics (Honors Program)

Xi'an, China

## INTERESTS

Formal verification, Automatic theorem proving, Large language models, Proof synthesis, Operating systems, Specification synthesis, Trusted Execution Environment.

## RESEARCH PUBLICATIONS

**Jilin Hu**, Fanlang Zeng, Yongwang Zhao, Zhuoruo Zhang, Leping Zhang, Jianhong Zhao, Rui Chang, Kui Ren, "*ProveriT: A Parameterized, Composable, and Verified Model of TEE Protection Profile*," in IEEE Transactions on Dependable and Secure Computing, doi: 10.1109/TDSC.2024.3375311.

Focus on the correctness of the GlobalPlatform protection profile of the TEE. Use Isabelle/HOL to formally specify it and prove its rationale. Report bugs that are confirmed by GlobalPlatform.

Zhuoruo Zhang, **Jilin Hu**, Chenyang Yu, Rui Chang and Yongwang Zhao, "*VeriReach: A Formally Verified Algorithm for Reachability Analysis in Virtual Private Cloud Networks*," 2023 IEEE International Conference on Web Services (ICWS), Chicago, IL, USA, 2023, pp. 71-77, doi: 10.1109/ICWS60048.2023.00022.

Verify a reachability analysis algorithm on the Huawei virtual private cloud using Isabelle. Also use Tamarin to verify a small protocol.

**Jilin Hu**, Yongwang Zhao, "*Tacco: A Framework for Ensuring the Security of Real-World TEEs via Formal Verification*" (under review)

## PROFESSIONAL EXPERIENCES

### Research assistant, University of Illinois Urbana Champaign, U.S.

Jan 2024

- Currently working on LLM for Formal methods. Focus on using large language models to automatically generate the specification in Isabelle.
- Do research on automatic theorem proving. Specifically, use LLM to aid the proof synthesis in Isabelle to mitigate the proof burden.

### Project leader, Zhejiang University, China

Dec 2022 - Dec 2023

- Lead master's students in formally specifying and verifying a commercial TEE from Xiaomi Corporation.
- Use Isabelle/HOL to ensure its information-flow property and assisted Xiaomi in requiring the CC EAL 5+ certificate.

### Research assistant, Xi'an Jiaotong University, China

Feb 2019 - Jul 2019

- Work with the AI Security lab advised by Professor Chao Shen. I focused on model stealing using the neural network's decision boundaries.

## SKILLS LIST

**English:** Went to Michigan State University as an exchange student. Communicate with people fluently.

**Programming Language:** Use Isabelle and Python fluently, also use C/C++.