# YU LIANG

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## Research Interests:

System and Software Security, Operating Systems, Compilers, DBMS, Agentic AI Systems

## Employment

**Ph.D. Full-time Research Assistant**                    May 2024 – Present  
**Ph.D. Software Engineer Intern**                    May 2024 – Aug 2024  
Meta Platforms, Inc.

## Education:

**Ph.D.**                    Aug 2019 – Aug 2025  
Pennsylvania State University                    Advisor: Dr. Peng Liu  
Major: Informatics

**Master**                    Aug 2018 – Aug 2019  
Pennsylvania State University                    Advisor: Dr. Jian Xu  
Major: Engineering Science and Mechanics

## Publications:

1. Detecting Logical Bugs of DBMS with Coverage-based Guidance, **Yu Liang**, Song Liu, and Hong Hu, **USENIX Security 2022**
2. Who Goes First? Detecting Go Concurrency Bugs via Message Reordering, Ziheng Liu, Shihao Xia, **Yu Liang**, Linhai Song, and Hong Hu, **ASPLOS 2022**
3. Let the DOCTOR Decide Whom to Test: Adaptive Testing Strategies to Tackle the COVID-19 Pandemic, **Yu Liang**, Amulya Yadav, **AAMAS 2021**
4. Parser Knows Best: Testing DBMS with Coverage-Guided Grammar-Rule Traversal, **Yu Liang**, Hong Hu, arXiv
5. Optimal and Non-Discriminative Rehabilitation Program Design for Opioid Addiction Among Homeless Youth. Amulya Yadav, Roopali Singh, Nikolas Siapoutis, Anamika Barman-Adhikari, & **Yu Liang, IJCAI 20**
6. Tackling Sequential Attacks in Security Games, Thanh H. Nguyen, Amulya Yadav, Branislav Bosansky, **Yu Liang, GameSEC 19**

## SKILLS:

- System Security (fuzzing, program analysis), Agentic AI System, Database Management System (DBMS)