

Shuai Shao

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Education

Expected August 2026	University of Connecticut, USA Ph.D. in Computer Science and Engineering Advisor: Tingting Yu
January 2021	Hebei University of Science and Technology, China M.S. in Computer Science and Engineering Advisor: Yang Zhang

Research Interests

My research interests include concurrent programming, static analysis, software refactoring, and LLMs for software engineering. My current work focuses on leveraging large language models for automated explainable fault localization in concurrent programs.

Publications

ISSTA'26	ConFL: Explainable Concurrent Fault Localization via Hierarchy-Guided LLM Reasoning Shuai Shao, Dingbang Wang, Yiming Zeng, Tingting Yu. <i>ACM SIGSOFT International Symposium on Software Testing and Analysis (Accepted)</i>
OOPSLA'26	SymGPT: Auditing Smart Contracts via Combining Symbolic Execution with Large Language Models Shihao Xia, Mengting He, Shuai Shao, Tingting Yu, Yiying Zhang, Nobuko Yoshida, Linhai Song. <i>Proceedings of the ACM on Programming Languages</i>
ASE'23	Information retrieval-based fault localization for concurrent programs Shuai Shao, Tingting Yu. <i>IEEE/ACM International Conference on Automated Software Engineering</i>
ISSREW'21	ReSwitcher: automatically refactoring java programs for switch expression Yang Zhang, Chaoshuai Li, Shuai Shao. <i>IEEE International Symposium on Software Reliability Engineering Workshops</i>
ISSTA'20	FineLock: automatically refactoring coarse-grained locks into fine-grained locks Yang Zhang, Shuai Shao, Shiqing Ma, Juan Zhai. <i>ACM SIGSOFT International Symposium on Software Testing and Analysis (Tool Demo)</i>
IEEE Access	Refactoring Java programs for customizable locks based on bytecode transformation Yang Zhang, Shuai Shao, Huan Liu, Jing Qiu, Dongwen Zhang, Guanghua Zhang. <i>IEEE Access</i> , 2020

Manuscripts Under Review / Submitted:

EMSE	Identifying Concurrency Bug Reports via Linguistic Patterns Shuai Shao, Lu Xiao, Tingting Yu. <i>Empirical Software Engineering (Under Review)</i>
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Preprints:

arXiv	Auditgpt: Auditing smart contracts with chatgpt Shihao Xia, Shuai Shao, Mengting He, Tingting Yu, Linhai Song, Yiying Zhang. <i>arXiv:2404.04306</i> , 2024
arXiv	Enhancing IR-based Fault Localization using Large Language Models Shuai Shao, Tingting Yu. <i>arXiv:2412.03754</i> , 2024

Teaching Experience

Teaching Assistant, Spring 2026

CSE 3400/5850 Introduction to Cryptography and Cybersecurity

Teaching Assistant, Fall 2025

CSE 3400/5850 Introduction to Cryptography and Cybersecurity

Service

Artifact Evaluation Committee, ASE 2026

Artifact Evaluation Committee, ISSTA 2026

Reviewer, Journal of Software: Evolution and Process

External Reviewer, ICPE 2025