

# Shuai Shao

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<https://sh-shao.github.io/>

## Education

Expected May 2026	<b>University of Connecticut, USA</b> Ph.D. in computer science and engineering Advisor: Tingting Yu GPA: 3.85/4.00
January 2021	<b>Hebei University of Science and Technology, China</b> 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

ASE'23	<b>Information retrieval-based fault localization for concurrent programs</b> <i>Shuai Shao, Tingting Yu. IEEE/ACM International Conference on Automated Software Engineering</i>
ISSREW'21	<b>ReSwitcher: automatically refactoring java programs for switch expression</b> <i>Yang Zhang, Chaoshuai Li, Shuai Shao. IEEE International Symposium on Software Reliability Engineering Workshops</i>
ISSTA'20	<b>FineLock: automatically refactoring coarse-grained locks into fine-grained locks</b> <i>Yang Zhang, Shuai Shao, Shiqing Ma, Juan Zhai. ACM SIGSOFT International Symposium on Software Testing and Analysis</i>
IEEE Access	<b>Refactoring Java programs for customizable locks based on bytecode transformation</b> <i>Yang Zhang, Shuai Shao, Huan Liu, Jing Qiu, Dongwen Zhang, Guanghua Zhang. IEEE Access, 2020</i>

*Manuscripts Under Review / Submitted:*

OOPSLA'26	<b>SymGPT: Auditing Smart Contracts via Combining Symbolic Execution with Large Language Models</b> <i>Shihao Xia, Mengting He, Shuai Shao, Tingting Yu, Yiyi Zhang, Nobuko Yoshida, Linhai Song. Proceedings of the ACM on Programming Languages (revision submitted)</i>
ISSTA'26	<b>ConFL: Explainable Concurrent Fault Localization via Hierarchy-Guided LLM Reasoning</b> <i>Shuai Shao, Dingbang Wang, Yiming Zeng, Tingting Yu. ACM SIGSOFT International Symposium on Software Testing and Analysis (submitted)</i>
EMSE	<b>Identifying Concurrency Bug Reports via Linguistic Patterns</b> <i>Shuai Shao, Lu Xiao, Tingting Yu. Empirical Software Engineering (under review)</i>

*Preprints:*

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

## Teaching Experience

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*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

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Reviewer, Journal of Software: Evolution and Process

External Reviewer, ICPE 2025