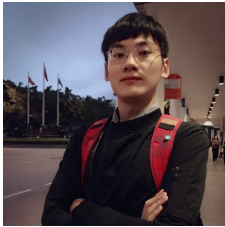


# 时清凯

副教授、博导

所在单位: 南京大学 计算机学院 软件新技术全国重点实验室  
电子邮箱: QINGKAI SHI AT NJU DOT EDU DOT CN  
个人主页: <https://qingkai.shi.github.io>



## 简介

时清凯, 南京大学计算机学院副教授, 博士生导师, 紫金学者, 入选国家级高层次青年人才计划。2020 年于香港科技大学获得博士学位, 曾任源伞科技联合创始人、蚂蚁集团技术专家、美国普渡大学博士后研究员。目前主要从事编译技术及基于编译的软件安全技术研究, 研究成果广泛发表于程序设计语言 (如 PLDI, OOPSLA)、软件工程 (如 ICSE, ESEC/FSE)、网络安全 (如 SP, CCS) 等 CCF A 类会议或期刊, 曾获 ACM SIGSOFT 或 SIGPLAN 杰出论文奖 4 次、Google 论文奖、Hong Kong PhD Fellowship, 曾三次参与全国软件大会原型竞赛均获一等奖。

## 过往经历

南京大学, 副教授	2023.8 至今
美国普渡大学, 博士后研究员	2021.8 - 2023.7
蚂蚁集团, 技术专家, (源伞科技被蚂蚁集团收购后, 转入蚂蚁集团)	2020.7 - 2021.8
深圳市源伞科技有限公司, 联合创始人	2015.9 - 2020.7
香港科技大学, 博士	2015.9 - 2020.7

## 奖励荣誉

ACM SIGPLAN 杰出论文奖	2024
ACM SIGSOFT 杰出论文奖	2024
国家级高层次青年人才	2022
谷歌论文奖	2022
ACM SIGPLAN 杰出论文奖	2022
ACM SIGSOFT 杰出论文奖	2019
全国软件大会软件原型竞赛一等奖	2016, 2018a, 2018b
Hong Kong PhD Fellowship	2015

## 代表性论文

**Datalog-Based Language-Agnostic Change Impact Analysis for Microservices.**  
Qingkai Shi, Xiaoheng Xie, Xianjin Fu, Peng Di, Huawei Li, Ang Zhou, and Gang Fan.  
Proceedings of the ACM/IEEE International Conference on Software Engineering (ICSE’ 25). 2025.

**Lifting Network Protocol Implementation to Precise Format Specification with Security Applications.**  
Qingkai Shi, Junyang Shao, Yapeng Ye, Mingwei Zheng, and Xiangyu Zhang.  
Proceedings of the ACM Conference on Computer and Communications Security (CCS’ 23). 2023.

**Extracting Protocol Format as State Machine via Controlled Static Loop Analysis.**  
Qingkai Shi, Xiangzhe Xu, and Xiangyu Zhang.  
Proceedings of the USENIX Security Symposium (SEC’ 23). 2023.

**Indexing the Extended Dyck-CFL Reachability for Context-Sensitive Program Analysis.**  
Qingkai Shi, Yongchao Wang, Peisen Yao, and Charles Zhang.  
Proceedings of the ACM on Programming Languages (OOPSLA’ 22). 2022.

## Path-Sensitive Sparse Analysis without Path Conditions.

Qingkai Shi, Peisen Yao, Rongxin Wu, and Charles Zhang.

Proceedings of the ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI' 21). 2021.

## Pipelining Bottom-up Data Flow Analysis.

Qingkai Shi and Charles Zhang.

Proceedings of the ACM/IEEE International Conference on Software Engineering (ICSE' 20). 2020.

## Conquering the Extensional Scalability Problem for Value-Flow Analysis Frameworks.

Qingkai Shi, Rongxin Wu, Gang Fan, and Charles Zhang.

Proceedings of the ACM/IEEE International Conference on Software Engineering (ICSE' 20). 2020.

## Pinpoint: Fast and Precise Sparse Value Flow Analysis for Million Lines of Code.

Qingkai Shi, Xiao Xiao, Rongxin Wu, Jinguo Zhou, Gang Fan, and Charles Zhang.

Proceedings of the ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI' 18). 2018.

## Verifying Synchronization for Atomicity Violation Fixing.

Qingkai Shi, Jeff Huang, Zhenyu Chen, and Baowen Xu.

IEEE Transactions on Software Engineering (TSE' 16). 2016.

## Measuring the Diversity of a Test Set with Distance Entropy.

Qingkai Shi, Zhenyu Chen, Chunrong Fang, Yang Feng, and Baowen Xu.

IEEE Transactions on Reliability (TR' 16). 2016.

其他论文参见个人主页：<https://qingkaishi.github.io>

## 代表性专利

---

软件缺陷检测方法、设备、系统及计算机可读媒介。

- 美国专利号：20190108003
- 相关中国专利号：201811013103, 201811013000, 201811015751, 2018110146864

## 学术服务

---

期刊审稿人：

- ACM Computing Surveys
- ACM Transactions on Software Engineering and Methodology
- IEEE Transactions on Software Engineering
- IEEE Transactions on Dependable and Secure Computing
- IEEE Transactions on Reliability
- IEEE Transactions on Emerging Topics in Computing

会议程序委员会委员：

- ACM SIGPLAN Conference on Object Oriented Programming, Systems, Languages, and Applications (OOPSLA'26)
- ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA'25)
- ACM Conference on Computer and Communications Security (CCS'24, CCS'25)
- IEEE/ACM International Conference on Automated Software Engineering (ASE'24, ASE'25)
- IEEE Symposium on Security and Privacy (SP'25)

## 教学经历

---

《数据结构》	2024, 2025
《编译原理》	2024, 2025
《程序设计语言的解释器与虚拟机》	2025