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KAIHANG JI

EDUCATION

Peking University (PKU), 2014-2018
Bachelor of Science in Computer Science, advised by Prof. Yao Guo
GPA of Core Courses: 3.4/5.0
National University of Singapore (NUS), 2018-Present
Ph.D. candidate in Computer Science, advised by Prof. Zhenkai Liang
GPA of Core Courses: 4.9/5.0

RESEARCH INTEREST

System Security: Binary Analysis, Audit Log Analysis
Dynamic Binary Taint Analysis, Binary Similarity, Malware Analysis, Audit Log Behavior Abstraction, APT/Intrusion Detection

PUBLICATION

WATSON: Abstracting Behaviors from Audit Logs via Aggregation of Contextual Semantics (**NDSS'21**) (Non-first author)
FlowMatrix: GPU-Assisted Information-Flow Analysis through Matrix-Based Representation (**Conditional Accecpted by Usenix Security'22**) (First author)

PROJECT

Co-operated with **Kaspersky**: Malware authorship attribution (Student Leader)   08/2018-07/2019

ACADEMIC SERVICE

External Reviewer: NDSS'21, NDSS'20, AsiaCCS'20, EuroSP'20

WORK EXPERIENCE

National University of Singapore (Research Intern)   06/2017-08/2017
    WannaCry Behavior Analysis; Assist implementation of TaintInduce (Accepted by **NDSS'19**)
System and Network Center of Shanghai Library (Research Intern)   02/2016-03/2016
    Knowledge-Graph-based Genealogy Analysis

HONORS & STUDENT SERVICE

Honors & Awards:
    Student Travel Grant for S&P 20, USENIX Security 20   2020
    Research Scholarship @ NUS   2018
    SenseTime Enterprise Reward @ HackPKU2016   2016
    Meritorious Award in The Mathematical Contest in Modeling (MCM)   2015
    1st place at University Freshman Debate Competition @ PKU   2015
Student Service:
    CTO of TECC (Technology & Education: Connecting Cultures) Beijing   2017
    Leader of PKU EECS Debate Team   2016

TEACHING ASSISTANT (TUTORIAL)

Practice in System Security (CS4238)   01/2021-05/2021
Practice in System Security (CS4238)   08/2020-12/2020
Practice in System Security (CS4238)   01/2020-05/2020
Web Security (CS5331)   08/2019-12/2019
Practice in System Security (CS4238)   01/2019-05/2019
Web Security (CS5331)   08/2018-12/2018

ACADEMIC CONFERENCES

The 29th USENIX Security Symposium   08/2020
The 41st IEEE Symposium on Security and Privacy, Oakland   05/2020
The 22nd International Symposium on Research in Attacks, Intrusions and Defenses, RAID   10/2019

SKILLS

Program Language
    C, C++, Assembly language, Python, Java, PHP
Applications
    Binary analysis tools: DynamoRIO, IDA Pro, Angr, Panda, DECAF, etc.
    Others: TensorFlow, Cuda, Git, Latex, etc.

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季凯航

教育经历	**北京大学**	2014-2018
	计算机科学理学学士 导师：郭耀	
	核心课程 GPA：3.4/4.0	
	新加坡国立大学	2018-至今
	计算机科学博士在读 导师：梁振凯	
	核心课程 GPA：4.9/5.0	

研究方向 系统安全：二进制代码分析、系统日志分析
动态二进制污点分析、二进制代码相似性分析、恶意代码分析、系统日志行为聚类、APT/入侵检测

学术成果 WATSON: Abstracting Behaviors from Audit Logs via Aggregation of Contextual Semantics
(**NDSS'21**)(非第一作者)
FlowMatrix: GPU-Assisted Information-Flow Analysis through Matrix-Based
Representation(**Conditional Accecpted by Usenix Security'22**)（第一作者）

| 课题项目 | **卡巴斯基**合作项目：恶意软件作者身份归属分析 校方学生带头人 | 2018.8 - 2019.7 |

学术服务 外部审稿人：NDSS'21, NDSS'20, AsiaCCS'20, EuroSP'20

实习经历	**新加坡国立大学** 暑期科研实习	2017.6 - 2017.8
	WannaCry 勒索病毒行为研究；辅助实现 TaintInduce（发表于 NDSS'19）	
	上海图书馆系统网络中心 实习研究员	2016.2 - 2016.3
	基于知识图谱的家谱关联数据分析	

荣誉&学生工作

荣誉：
学生会议旅行津贴：S&P 20, USENIX Security 20	2020
研究奖学金 @ 新加坡国立大学	2018
商汤科技企业奖 @ HackPKU2016	2016
美国数学建模大赛 M 奖	2015
北京大学新生辩论赛冠军	2015

学生工作：
| 北京科技教育交流协会 CTO | 2017 |
| 北京大学信息科学技术学院辩论队 领队 | 2016 |

授课型助教	Practice in System Security (CS4238)	2021.1-2021.5
	Practice in System Security (CS4238)	2020.8-2020.12
	Practice in System Security (CS4238)	2020.1-2020.5
	Web Security (CS5331)	2019.8-2019.12
	Practice in System Security (CS4238)	2019.1-2019.5
	Web Security (CS5331)	2018.8-2018.12

参会经历	29th USENIX Security Symposium	2020.8
	41st IEEE Symposium on Security and Privacy, Oakland	2020.5
	22nd International Symposium on Research in Attacks, Intrusions and Defenses, RAID	2019.10

个人技能
编程语言： C, C++, 汇编, Python, Java, PHP
二进制代码分析工具： DynamoRIO, IDA Pro, Angr, Panda, DECAF 等
其他： TensorFlow, Cuda, Git, Latex 等