JIANG MUHUI

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EDUCATION

The Hong Kong Polytechnic University, Hong Kong *July 2016 - December 2021 (Expected)*
Doctor of Philosophy
Department of Computing
Supervisor: Daniel Xiapu Luo

Tongji University, Shanghai, China *September 2012 - June 2016*
Bachelor of Engineering
Department of Software Engineering

Uppsala University, Uppsala, Sweden *August 2014 - January 2015*
Exchange Student
Department of Information Technology

RESEARCH INTEREST

My current research interests include software security, system security, IoT security, and network security. More specifically, I am interested in reverse engineering, binary analysis, firmware rehosting, fuzzing techniques, and DDoS.

PUBLICATIONS

ECMO: Peripheral Transplantation to Rehost Embedded Linux Kernels (Conditionally Accepted)
Proceedings of the ACM Conference on Computer and Communications Security (CCS 2021)
Muhui Jiang, Lin Ma, Yajin Zhou, Qiang Liu, Cen Zhang, Zhi Wang, Xiapu Luo, Lei Wu, Kui Ren

FirmGuide: Boosting the Capability of Rehosting Embedded Linux Kernels through Model-Guided Kernel Execution
Proceedings of the 36th IEEE/ACM International Conference on Automated Software Engineering (ASE 2021)
Qiang Liu, Cen Zhang, Lin Ma, **Muhui Jiang**, Yajin Zhou, Lei Wu, Wenbo Shen, Xiapu Luo, Yang Liu, Kui Ren

Parema: An Unpacking Framework for Demystifying VM-based Android Packers
Proceedings of the ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA 2021)
Lei Xue, Yuxiao Yan, Luyi Yan, **Muhui Jiang**, Xiapu Luo, Dinghao Wu, Yajin Zhou

An Empirical Study on ARM Disassembly Tools
Proceedings of the ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA 2020)
Muhui Jiang, Yajin Zhou*, Xiapu Luo, Ruoyu Wang, Yang Liu, Kui Ren

PERDICE: Towards Discovering Software Inefficiencies Leading to Cache Misses and Branch Mispredictions

Proceedings of the 42nd Annual Computer Software and Applications Conference (COMPSAC 2018)
Ting Chen, Wanyu Huang, **Muhui Jiang**, Xiapu Luo, Lei Xue, Ying Wang, Xiaosong Zhang

AutoFlowLeaker: Circumventing Web Censorship through Automation Services
Proceedings of the 36th IEEE International Symposium on Reliable Distributed Systems (SRDS 2017)
Shengtuo Hu, Xiaobo Ma, **Muhui Jiang**, Xiapu Luo, and Man Ho Au

Characterizing the Impacts of Application Layer DDoS Attacks
Proceedings of IEEE International Conference on Web Services (ICWS 2017)
Muhui Jiang, Chenxu Wang, Xiapu Luo, MiuTung Miu, Ting Chen

Are HTTP/2 Servers Ready Yet?
Proceedings of the 37th IEEE International Conference on Distributed Computing Systems (ICDCS 2017)
Muhui Jiang, Xiapu Luo, TungNgai Miu, Shengtuo Hu, and Weixiong Rao

TECHNICAL STRENGTHS

Reverse Engineering	IDA Pro, Binary Ninja, Hopper, Angr, Ghidra, Radare2
	Capstone, Unicore, Keystone
Binary Analysis	ARM Architecture, QEMU, Valgrind

WORK EXPERIENCE

International Intern   *April 2015 - December 2015*
GPI NetOpsDev Department, CCOE, eBay Inc.
Manager: Kaiqi Chen

Research Administration Assistant   *March 2016 - June 2016*
Department of Computing, PolyU.
Supervisor: Daniel Xiapu Luo

TEACHING EXPERIENCE

2019−2020: Teaching Assistant
COMP5122: E-commerce Fundamentals and Development, Department of Computing, PolyU

2018−2019: Teaching Assistant
COMP5353: Internet Security: Principles and Practice, Department of Computing, PolyU.
COMP6705: Advanced Topics in System Modeling and Evaluation, Department of Computing, PolyU.

2017−2018: Teaching Assistant
COMP4334: Principles and Practice of Internet Security, Department of Computing, PolyU.
COMP2322: Computer Networking, Department of Computing, PolyU.

2016−2017: Teaching Assistant
COMP4334: Principles and Practice of Internet Security, Department of Computing, PolyU.
COMP5353: Internet Security: Principles and Practice, Department of Computing, PolyU.