

Yueqi Chen

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RESEARCH INTERESTS

My research interests include Operating System Security and Vulnerability Analysis. I am actively working on exploitability assessment, especially for vulnerabilities in infrastructure software systems, (e.g., OS kernel and cryptography library).

EDUCATION

Ph.D in Information Sciences, Pennsylvania State University, 2017 - Present, Advisor: Xinyu Xing
B.S. in Computer Science and Technology, Nanjing University, 2013 - 2017

EXPERIENCES

Research Assistant, Pennsylvania State University, 2017 Fall - Present, Advisor: Xinyu Xing
Research Intern, Baidu X-Lab, 2019 Summer, Mentor: Peng Li, Shengjiang Guo, Yueqiang Cheng
Research Intern, JD.com Silicon Valley R&D Center, 2018 Summer, Mentor: Yueh-Hsun Lin

PUBLICATIONS

OS Security

1. [**ACM CCS 2020**] A Systematic Study of Elastic Objects in Kernel Exploitation
Y. Chen, Z. Lin, X. Xing
2. [**BlackHat Europe 2019**] Hands Off and Putting SLAB/SLUB Feng Shui in a Blackbox.
Y. Chen, X. Xing, J. Su
3. [**ACM CCS 2019**] SLAKE: Facilitating Slab Manipulation for Exploiting Vulnerabilities in the Linux Kernel.
Y. Chen, X. Xing
4. [**USENIX Security 2019**] KEPLER: Facilitating Control-flow Hijacking Primitive Evaluation for Linux Kernel Vulnerabilities.
W. Wu, Y. Chen, X. Xing, W. Zou
5. [**USENIX Security 2018**] FUZE: Towards Facilitating Exploit Generation for Kernel Use-After-Free Vulnerabilities.
W. Wu, Y. Chen, J. Xu, X. Xing, W. Zou, X. Gong

Side-channel Detection

6. [**OOPSLA 2020**] Exposing Cache Timing Side-channel Leaks through Out-of-order Symbolic Execution
S. Guo, Y. Chen*, J. Yu, M. Wu, Z. Zuo, P. Li, Y. Cheng
** indicates equal contribution*

7. **[ICSE 2020]** Towards the Detection of Inconsistencies in Public Security Vulnerability Reports.
S. Guo, **Y. Chen***, P. Li, Y. Cheng, H. Wang, M. Wu, Z. Zuo
** indicates equal contribution*

AI for security

8. **[USENIX Security 2019]** Towards the Detection of Inconsistencies in Public Security Vulnerability Reports.
Y. Dong, W. Guo, **Y. Chen**, X. Xing, Y. Zhang, G. Wang
9. **[ASE 2019]** RENN: Efficient Reverse Execution with Neural-Network Alias Analysis.
D. Mu, W. Guo, A. Cuevas, **Y. Chen**, Jinxuan Gai, Xinyu Xing, Bing Mao

TALKS

1. Facilitate Linux Kernel Exploitation Step by Step
Feb 5th, 2020, Tel Aviv, Israel, **BlueHat IL 2020**
2. Towards Exploitability Assessment for Linux Kernel Vulnerabilities
Nov 25th, 2019, Amsterdam, Netherlands, **Vrije Universiteit Amsterdam**
Nov 22nd, 2019, Oxford, UK, **University of Oxford**
3. Vulnerability Exploitability Assessment and Mitigation Design Defects in Linux Kernel,
Oct 19th, 2019, Hangzhou, China, **CLK 2019**

HONORS & AWARDS

1. BlackHat USA, Student Scholarship, 2020
2. IBM PhD Fellowship Award, 2020
3. IST Graduate Student Travel Grant Award, 2019
4. The 28th USENIX Security Symposium, Student Travel Grant Award, 2019
5. FUZE is awarded one of the ten technical events of JD.COM, 2018
6. 2018 DEF CON CTF, r3kapig, Final
7. BlackHat USA, Student Scholarship, 2018
8. The 39th IEEE Symposium on Security and Privacy, Student Travel Grant Award, 2018
9. 2017 NSA codebreaker Challenge, Team member, Rank 5, 2017

COMMUNITY SERVICES

1. External reviewer:
2020: USENIX Security, ACM CCS, ACSAC
2019: ACM CCS, ESORICS, ACSAC, ISC
2018: ACM AsiaCCS, IEEE CNS

TEACHING

1. CYBER 362 - Cyber Analysis Studio, Teaching Assistant, Fall 2019
2. IST 456 - Information Security Management, Teaching Assistant, Spring 2019
3. SRA 221 - Overview of Information Security, Teaching Assistant, Fall 2018