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Runtao He (Lotus)

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EDUCATION

Purdue University, West Lafayette, Indiana 2026 – Present

Doctor of Philosophy, Computer Science, Advisor: Elisa Bertino

Hangzhou Dianzi University, Hangzhou, Zhejiang 2022 – 2026

Bachelor, Intelligent Security (Cyber Security), Zhuoyue Honors College

PROFESSIONAL EXPERIENCE

UCLA, California, USA May 2025 – Jun 2026

Research Intern, remote

I worked with Professor Yuan Tian on the topic of systematizing the BCSD researches. My works include diving deep into the BCSD papers from decades ago to recent ones, conducting reproduction experiments to evaluate the efficiency of each tool. As the co-lead of this research, I also draw the plans and designed our own experiments. We are coming up with new findings and open research questions as well. The paper is now in process.

G.o.S.S.I.P, SJTU, Shanghai, China Jul 2023 – May 2025

Undergraduate Research Intern, hybrid

Advised by Dr. Juanru Li & Dr. Siqi Ma
G.o.S.S.I.P is the short version of Group of Software Security In Progress led by Dr.Juanru Li at Shanghai Jiao Tong University. My internship at GoSSIP covered a wide range of security academic learning, including paper reading, conducting academic research, participating in competition as well as doing experiments. All the experiences enhanced my professional knowledge and made me become more interested in academic research.

Shanghai Qizhi Institute, Shanghai, China Jul 2023 – Sep 2023

Security Research Intern, on-site

Conduct systematic security analysis on open source and operating systems currently used in common network equipment (routers, optical modems, etc.), summarize typical security issues and design and implement relevant security analysis tools. Specifically, I **discovered some issues with authentication flaws exists in OpenWRT system add-ons**. And we proposed a tool named **ChkAPIC** to automatically detect 8 kinds of authentication misuse in networking related add-ons.

PUBLICATIONS

PAPERS

- Zihan Ni, Jialiang Dong, Runtao He, Nan Sun, Willy Susilo, Surya Nepal, Siqi Ma. **Shape Before You Build: Secure Cryptographic Code Generation via Prompt Optimization.** *The 41st IFIP TC11 Information Security & Privacy Conference (IFIP SEC 2026).* Published in the proceedings of IFIP SEC 2026, Springer Nature.

INVITED TALKS

- **Research on authentication security based on OpenWRT system add-ons code**

  Alibaba Cloud Xian Zhi Security Salon, Hangzhou, Zhejiang

  [Slides]

AWARDS & HONORS & CTF

First Prize, Information Security Contest of Zhejiang Province 2025
First-Class Prize, School Scholarship 2024 & 2025
First Prize, CISCN Southeast China Regional Tournament 2024
Host, D^3CTF2024 2024
4th, The Second Aliyun(Alibaba Cloud) CTF 2024
3rd & Outstanding Prize, RealWorld CTF 2024 2024
Excellent Team Award, Datacon 2023 2023
Third-Class Prize, School Scholarship 2023
6th, RealWorld CTF 2023 2023
6th, Aliyun(Alibaba Cloud) CTF 2023
6th, PWNHUB 2022 2022
Second-Class Prize, School Scholarship 2022
1st, Zhijiang Cup Industrial Safety International Elite Challenge 2022

VULNERABILITY CREDITS

- CVE-2023-34924

  I found this vulnerability in my freshman year. Here is the bug description:

  H3C Magic B1STW B1STV100R012 router was discovered to contain a stack overflow via the function SetAPInfoById. This vulnerability allows attackers to cause a Denial of Service (DoS) via a crafted POST request.

  Repository

PUBLIC EXPERIENCES

Blackhat Asia 2024 Student Pass 2024
Alibaba Cloud White Hat Conference 2024
Huawei Tech x Security Invited Talks 2024 2024
Huawei Tech x Security Invited Talks 2023 2023
Huawei Kunpeng Developer Innovation Day 2022

MISC

- GitHub: https://github.com/ChrisL0tus
- Language: English - Full professional proficiency / Chinese - native / Spanish - green hand
- Art & Philosophy: Violin & Poem; Fond of Friedrich Nietzsche
- Sports: Body building & Tennis