

# Wuqi ZHANG

Also known as William Aaron Cheung

Ph.D. Candidate in Computer Science and Engineering

☎ + (852) 5168 4758    ✉ (Personal) [me@troublor.xyz](mailto:me@troublor.xyz)    ✉ (Work) [academic@troublor.xyz](mailto:academic@troublor.xyz)

🔗 [troublor.xyz](https://troublor.xyz)    🌐 [github.com/Troublor](https://github.com/Troublor)

📍 Room 3663, Academic Building, The Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong

I am currently a Ph.D. candidate supervised by professor Shing-Chi Cheung at The Hong Kong University of Science and Technology (HKUST) with a research focus : software engineering, especially in software testing and analysis. As a member of the CASTLE Research Group at HKUST, it is very nice to work with a professional and very kind professor, as well as a group of innovative researchers.

## 🎓 EDUCATION

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|----------------|--|
| 2019 - Present | <b>Ph.D. in Computer Science and Engineering</b><br>CGA : 3.933/4.3<br>The Hong Kong University of Science and Technology, Hong Kong.      |
| 2015 - 2019    | <b>B.Eng. in Computer Science and Technology</b><br>GPA : 4.2149/5 (Rank : 1/250), Outstanding Graduates<br>Northeastern University, China |

## 💡 RESEARCH INTERESTS

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|-----------------|--|
| RESEARCH FOCUS  | Software Engineering, Software Testing, Program Analysis |
| APPLICATION TO  | Blockchain, Smart Contracts, Decentralized Applications  |
| OTHER INTERESTS | Web Fingerprinting, Deep Learning System Testing         |

## 📖 PUBLICATIONS

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|--------------------|--|
| 2022<br>Conference | <b>Surakav : Generating Realistic Traces for a Strong Website Fingerprinting Defense</b><br>Jiajun Gong, Wuqi Zhang, Charles Zhang, Tao Wang<br>In Proceedings of the 43rd IEEE Symposium on Security and Privacy (IEEE S&P 2022), May 23-26, 2022, San Francisco, United States.  |
| 2021<br>Preprint   | <b>Fast Test Input Generation for Finding Deviated Behaviors in Compressed Deep Neural Network</b><br>Yongqiang Tian, Wuqi Zhang, Ming Wen, Shing-Chi Cheung, Chengnian Sun, Shiqing Ma, Yu Jiang<br>arXiv:2112.02819  |
| 2021<br>Preprint   | <b>WDefProxy : Modularly Implementing and Empirically Evaluating Website Fingerprinting Defenses</b><br>Jiajun Gong, Wuqi Zhang, Charles Zhang, Tao Wang<br>arXiv:2111.12629   |
| 2021<br>Conference | <b>DArcher : Detecting On-Chain-Off-Chain Synchronization Bugs In Decentralized Applications</b><br>Wuqi Zhang, Lili Wei, Shuqing Li, Yepang Liu, Shing-Chi Cheung<br>In Proceedings of the 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE '21), August 23-28, 2021, Athens, Greece. |
| 2021<br>Conference | <b>Characterizing Transaction-Reverting Statements in Ethereum Smart Contracts</b><br>Lu Liu, Lili Wei, Wuqi Zhang, Ming Wen, Yepang Liu, Shing-Chi Cheung<br>In Proceedings of the 34th IEEE/ACM International Conference on Automated Software Engineering (ASE '21), November 14-20, 2021, Melbourne, Australia.  |
| 2018<br>Journal    | <b>Exploration on the Reform of Laboratory Integrated Management System in Colleges and Universities</b><br>Wuqi Zhang, Xingyu Wang, Yi Sha, Lili Zhang<br>Research and Exploration in Laboratory, 2018, 37(11) : 149-152.   |

## 🏆 AWARDS

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|------|--|
| 2022 | <b>HKUST RedBird Academic Excellence Award</b><br>The Hong Kong University of Science and Technology |
| 2019 | <b>Postgraduate Studentship</b><br>The Hong Kong University of Science and Technology                |

- 2019 **Outstanding Graduates of Liaoning Province**  
Department of Education of Liaoning, China
- 2018 **Second-class University Scholarship**  
Northeastern University, China
- 2018 **Excellent Student Award**  
Northeastern University, China
- 2017 **National Scholarship**  
Ministry of Education of the People's Republic of China
- 2017 **First-class University Scholarship**  
Northeastern University, China
- 2017 **Pacemaker to Excellent Student Award**  
Northeastern University, China
- 2016 **National Scholarship**  
Ministry of Education of the People's Republic of China
- 2016 **First-class University Scholarship**  
Northeastern University, China
- 2016 **Pacemaker to Excellent Student Award**  
Northeastern University, China

## TEACHING

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- 2021-2022 Fall Teaching Assistant for COMP3021 Java Programming, HKUST
- 2020-2021 Spring Teaching Assistant for COMP5111 Fundamentals of Software Analysis, HKUST
- 2020-2021 Fall Teaching Assistant for COMP3021 Java Programming, HKUST

## VISITING EXPERIENCE

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- Research**  
2019

**The Hong Kong University of Science and Technology, HONG KONG, China**
  - > Topic : Vulnerability Detection in Ethereum Smart Contracts
  - > Adviser : Professor Shing-Chi Cheung
  - > March, 2019 - May, 2019

Research Internship
- Research**  
2018

**North Carolina State University, NORTH CAROLINA, U.S.A.**
  - > Topic : Multiple Peaks Phenomenon in Non-Markovian Epidemics on Multilayer Networks
  - > Adviser : Professor Huaiyu Dai
  - > July, 2018 - August, 2018

Summer Research Program

## WORK EXPERIENCE

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- Engineering**  
2020-2021

**Hong Kong Applied Science and Technology Research Institute (ASTRI), HONG KONG, China**

This is a joint project between ASTRI and Crypto-FinTech Lab of HKUST to develop the next-generation distributed file system based on blockchain and distributed computing technologies.

  - > October 2020 - June 2021

Blockchain

FinTech

Smart Contracts
- Engineering**  
2018-2019

**Shenyang Wuzhi Technology Co., Ltd., LIAONING, China**

The company was funded by alumni of Northeastern University. The work in this company was to develop the back-end server of the mobile application that automatically translates sign language to Chinese.

  - > October 2018 - January 2019

RESTful Service

Sever-side Development
- Engineering**  
2015-2019

**Publicity Department of Northeastern University, LIAONING, China**

The work is to continuously maintain various University websites as one of the technical leaders in the student association.

  - > October 2015 - June 2019

Web Development

RESTful Service