

# Liuhuo Wan

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in Liuhuo Wan

🌐 <https://cosunshine.github.io/>

## Education

**Ph.D., The University of Queensland (UQ), Australia**

Apr 2022 – Dec 2025

Major: **Software Engineering and Cybersecurity**, School of Electrical Engineering and Computer Science

Supervisor: Associate Professor **Guangdong Bai**

**M.Sc., National University of Singapore (NUS), Singapore**

Sep 2018 – Jun 2019

Major: Computer Science, School of Computing

GPA: 4.0/5.0

**B.Sc., Dalian University of Technology (DUT), China**

Sep 2014 – Jun 2018

Major: Software Engineering, School of Software

GPA: 88/100

## Research Interests

- **Software Engineering:** Utilising large language models (LLMs) and other machine learning (ML) techniques, along with static and dynamic analysis methods, for software testing and analysis. Performing large-scale empirical evaluations of real-world software.
- **Cybersecurity:** My research interests span software and information security, including secure DevOps workflows and the analysis and testing of security in web, mobile, IoT, and large language model-based systems such as ChatGPT.

## Research Publications

1. [ICSE'26] **L. Wan**, C. Yan, Z. Liu, H. Wang and G. Bai, "Understanding DevOps Security of Google Workspace Apps", In the 48th International Conference on Software Engineering, 2026. **CORE A\***.
2. [MobiCom'25] Z. Li, C. Yan, **L. Wan**, H. Zhuang, P. Hu, G. Bai, Y. Shen, "WinSpy: Cross-window Side-channel Attacks on Android's Multi-window Mode", In Proceedings of the 31st Annual International Conference On Mobile Computing And Networking, 2025. **CORE A\***.
3. [FSE Workshop'25] C. Yan, **L. Wan**, B. Guan, F. Yu, G. Bai, "Tracking GPTs Third Party Service: Automation, Analysis, and Insights", In Proceedings of 33rd ACM International Conference on the Foundations of Software Engineering (FSE Workshop LLMapp), 2025.
4. [WWW'25] C. Yan, B. Guan, Y. Li, M. H. Meng, **L. Wan**, G. Bai, "Understanding and Detecting File Knowledge Leakage in GPT App Ecosystem", In Proceedings of the ACM on Web Conference 2025. **CORE A\***.
5. [ASE'24] C. Yan, R. Ren, M. H. Meng, **L. Wan**, T. Y. Ooi, and G. Bai, "Exploring ChatGPT App Ecosystem: Distribution, Deployment and Security", In Proceedings of the 39th IEEE/ACM International Conference on Automated Software Engineering, 2024. **CORE A\***. **ACM SIGSOFT Distinguished Paper Award**.

6. [WWW'24]: **L. Wan**, K. Wang, K. Mahadewa, H. Wang, and G. Bai, "Don't Bite Off More than You Can Chew: Investigating Excessive Permission Requests in Trigger-Action Integrations", In Proceedings of the ACM on Web Conference 2024. **CORE A\***.
7. [WWW'24]: **L. Wan**, K. Wang, H. Wang, and G. Bai, "Is It Safe to Share Your Files? An Empirical Security Analysis of Google Workspace", In Proceedings of the ACM on Web Conference 2024. **CORE A\***.
8. [ICECCS'24] **L. Wan**, C. Yan, M. H. Meng, K. Wang, and H. Wang, "Analyzing Excessive Permission Requests in Google Workspace Add-Ons", in International Conference on Engineering of Complex Computer Systems, 2024.
9. [ADMA'22] **L. Wan**, Y. Zhang, R. Li, R. Ko, L. Hoffman, and G. Bai, "SATB: A Testbed of IoT-Based Smart Agriculture Network for Dataset Generation", in International Conference on Advanced Data Mining and Applications, Springer, 2022. **Best Paper Runner Up Award**.

## Teaching Experience

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|------|---|--|
| 2022 | ■ | <b>Casual Academic</b> , CSSE7610 - Concurrency: Theory and Practice   |
| 2023 | ■ | <b>Casual Academic</b> , COMP3320 - Vulnerability Assessment and Penetration Testing<br>Responsibilities included designing assignments and problem sets, delivering tutorials and lab sessions, and evaluating student submissions and final exams. |

## Funded Projects

- |         |   |  |
|---------|---|--|
| UQCyber | ■ | Cyber Seed Project: Security Investigation in Queensland Smart Agriculture. <b>My role:</b> I contributed to the research and delivered the audit presentation.  |
| DP      | ■ | Australian Research Council Discovery Projects: Security and Privacy Compliance in the Emerging Web App Ecosystem. <b>My role:</b> my PhD research is embedded within my supervisor's ARC Discovery Project (DP), where I am responsible for project design and academic deliverables. |




## Recognized Security Contributions

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|--------|---|--|
| Google | ■ | Our discovery of critical security vulnerabilities in Google Workspace was acknowledged by Google, and we were awarded a bug bounty. |
| IFTTT  | ■ | Our findings on suspicious permissions were acknowledged by IFTTT, one of the most widely used IoT integration platforms.            |

## Honors and Awards

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|------|---|---|
| 2025 | ■ | <b>Richard Jago Memorial Prize</b> , School of Electrical Engineering and Computer Science, Australia, \$6883 |
|      | ■ | <b>Scholarship</b> , UQU Postgraduate Bursary Program, Australia, \$500                                       |
| 2024 | ■ | <b>Travel Grant</b> , UQ ITEE, Australia, \$2000  |
|      | ■ | <b>Scholarship</b> , UQU Postgraduate Bursary Program, Australia, \$500                                       |
| 2023 | ■ | <b>Bug Bounty Program</b> , Google <b>Bug Hunter Reward</b> , America, \$800                                  |

## Honors and Awards (continued)

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|------|---|
| 2019 |  <b>Scholarship</b> , Tuition Fee Scholarship, Singapore |
| 2018 |  <b>Merit Award</b> , Outstanding Graduate, China        |
| 2016 |  <b>Scholarship</b> , National Scholarship, China        |

## Talks

1. **LLMapp**, An Oral Presentation of Tracking GPTs Third Party Service, June, 2025
2. **UQ Cybersecurity Seed Funding Talk**, Cyber Security in Smart Agriculture, July, 2024
3. **Research Talk at NUS**, Security and Privacy of Web-based Collaborative Platforms, May, 2024
4. **WWW Conference**, Two Oral Presentations, May, 2024
5. **ADMA Conference**, A Testbed of IoT-based Smart Agriculture Networks, November, 2022

## Mentoring Experience

### Master Students

Guokai Tang, University of Queensland -> Now: Ph.D. Student at Huazhong University of Science and Technology.

Zicong Liu, University of Queensland, Topic: A Study of Privacy in Team Collaboration Platforms.

Zeng Li, Shandong University, Topic: Side-channel Attacks on Android's Multi-window Mode.

Jieping Liu, University of Queensland, Topic: Investigating Security Vulnerabilities in the GitHub Ecosystem.

## Professional Services

### **Sub-Reviewer:**

The International Conference on Software Engineering (ICSE), 2025, 2026

The Network and Distributed System Security Symposium (NDSS), 2024

The ACM International Conference on the Foundations of Software Engineering (FSE), 2024

The ACM SIGSAC Conference on Computer and Communications Security (CCS), 2024, 2025

The International Conference on Engineering of Complex Computer Systems (ICECCS), 2023

IEEE/ACM International Conference on Automated Software Engineering (ASE), 2023

### **External Reviewer:**

The ACM Conference on Data and Application Security and Privacy (CODASPY), 2024

### **Reviewer:**

Moratuwa Engineering Research Conference (MERCon), 2025

IEEE Transactions on Dependable and Secure Computing (TDSC)

IEEE Transactions on Services Computing (TSC)

### **Organization Volunteer:**

The International Symposium on Quality of Service (IWQoS), 2025

The International Conference on Formal Engineering Methods (ICFEM), 2023

The International Conference Advanced Data Mining and Applications (ADMA), 2022

## Collaborators

**Guangdong Bai**, Associate Professor at the University of Queensland

**Haoyu Wang**, Professor at Huazhong University of Science and Technology

**Kailong Wang**, Associate Professor at Huazhong University of Science and Technology

**Yiran Shen**, Professor at Shandong University

**Kulani Mahadewa**, Senior Lecturer at University of Moratuwa

## Industry Experience

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2019 – 2022



### **Software Developer at Shopee**

Designed algorithms for recommendation systems; proficient in deep learning and machine learning

2019 – 2019



### **Research Intern at NUS Suzhou**

Developed machine learning frameworks widely adopted across the institute