Mark Huasong MENG

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EDUCATION

2019 – 2024 *(Expected)*	Doctor of Philosophy in COMPUTER SCIENCE **National University of Singapore**, Singapore

Research Area: Cybersecurity & Trustworthy Artificial Intelligence
Thesis: "Post-GDPR Privacy Preservation in the Android Ecosystem"
Supervisors: Prof. Jin Song DONG, Dr. Sin Gee TEO

A*STAR Computing and Information Science Scholarship (2019 – 2023)
Dean's Graduate Research Achievement Award (2021 – 2022)
School of Computing's Teaching Fellowship (2023)
Honours List of Student Tutors (2021-2022)

2015 – 2016	Master of Computing in INFOCOMM SECURITY **National University of Singapore**, Singapore Graduate with DISTINCTION

Thesis: "Analysing Use of High Privileges in Android Applications"
Keywords: Android Security, Reverse Engineering, Program Analysis
Supervisor: Prof. Jin Song DONG

2010 – 2014	Bachelor of Engineering (Hon.) in COMPUTER SCIENCE *with* BUSINESS Minor **Nanyang Technological University**, Singapore Graduate with SECOND UPPER CLASS HONOURS

Thesis: "Chinese Segmentation in User Generated Content"
Keywords: Natural Language Processing
Supervisor: A/Prof. Aixin SUN

SM2 MOE-Industry Joint Scholarship (2008 – 2014)

2022 – 2023	Visiting Research Student **The University of Queensland**, QLD, Australia Supervisors: A/Prof. Guangdong BAI
2013	Summer Exchange Programme **University of California, Berkeley**, CA, United States

COMPLETE LIST OF PUBLICATIONS

c1   Duc Phong Le, **Huasong Meng**, Le Su, Sze Ling Yeo and Vrizlynn L. L. Thing, "BIFF: A Blockchain-based IoT Forensics Framework with Identity Privacy", *IEEE Region 10 Conference (TENCON)*, 2018

c2   Li Zhang, **Huasong Meng** and Vrizlynn L. L. Thing, "Progressive Control Flow Obfuscation for Android Applications", *IEEE Region 10 Conference (TENCON)*, 2018

c3   **Mark Huasong Meng** and Yaou Qian, "A Blockchain Aided Metric for Predictive Delivery Performance in Supply Chain Management," *IEEE International Conference on Service Operations and Logistics, and Informatics (SOLI)*, 2018

c4   **Mark Huasong Meng**, Guangdong Bai, Joseph K. Liu, Xiapu Luo and Yu Wang, "Analyzing Use of High Privileges on Android: An Empirical Case Study of Screenshot and Screen Recording Applications", *The 14th International Conference on Information Security and Cryptology (Inscrypt)*, 2018

c5   Le Su, Yao Cheng, **Huasong Meng**, Vrizlynn Thing, Zhe Wang, Linghe Kong, and Long Cheng, "Securing Intelligent Transportation System: a Blockchain-based Approach with Attack Mitigation," *The 2nd International conference on Smart Block (SmartBlock)*, 2019

c6   Xinguo Feng, Yanjun Zhang, **Mark Huasong Meng**, and Sin G. Teo. "Detecting Contradictions from CoAP RFC Based on Knowledge Graph", *International Conference on Network and System Security (NSS)*, 2022

c7   **Mark Huasong Meng**, Qing Zhang, Guangshuai Xia, Yuwei Zheng, Yanjun Zhang, Guangdong Bai, Zhi Liu, Sin G. Teo, and Jin Song Dong, "Post-GDPR Threat Hunting on Android Phones: Dissecting OS-level Safeguards of User-unresettable Identifiers," *Network and Distributed System Security Symposium (NDSS)*, 2023

c8   **Mark Huasong Meng**, Sin G. Teo, Guangdong Bai, Kailong Wang, and Jin Song Dong. "Enhancing Federated Learning Robustness using Data-Agnostic Model Pruning", *The 26th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, 2023

c9   **Mark Huasong Meng**, Guangdong Bai, Sin G. Teo, and Jin Song Dong. "Supervised Robustness-preserving Data-free Neural Network Pruning", *The 27th International Conference on Engineering of Complex Computer Systems (ICECCS)*, 2023

c10 Zhongkui Ma, Xinguo Feng, Zihan Wang, Shuofeng Liu, Mengyao Ma, Hao Guan, and **Mark Huasong Meng**. "Formalizing Robustness against Character-level Perturbations for Neural Network Language Models", *The 24th International Conference on Formal Engineering Methods (ICFEM)*, 2023.

c11 Fuman Xie, Chuan Yan, **Mark Huasong Meng**, Shaoming Teng, Yanjun Zhang, and Guangdong Bai,"Are Your Requests Your True Needs? Checking Excessive Data Collection in VPA Apps." *The 46th International Conference on Software Engineering (ICSE)*, 2024..

c12 Chuan Yan, Fuman Xie, **Mark Huasong Meng**, Yanjun Zhang, and Guangdong Bai,"On the Quality of Privacy Policy Documents of Virtual Personal Assistant Applications." *The 24th Privacy Enhancing Technologies Symposium (PETS)*, 2024.

j1   **Huasong Meng**, Vrizlynn L. L. Thing, Yao Cheng, Zhongmin Dai, and Li Zhang, "A Survey of Android Exploits in the Wild," *Computers & Security*, vol. 76, pp. 71–91, 2018

j2   **Mark Huasong Meng**, Guangdong Bai, Sin G. Teo, Zhe Hou, Yan Xiao, Yun Lin, and Jin Song Dong, "Adversarial Robustness of Deep Neural Networks: A Survey from a Formal Verification Perspective," *IEEE Transactions on Dependable and Secure Computing*, 2022 *(Early Access)*

j3   Xinguo Feng, Yanjun Zhang, **Mark Huasong Meng**, Yansong Li, Chegne Eu Joe, Zhe Wang and Guangdong Bai, "Detecting contradictions from IoT protocol specification documents based on neural generated knowledge graph," vol. 141, pp. 10-19, 2023

TEACHING ASSISTANCE

2023 FALL	**CS4211 Formal Methods for Software Engineering (NUS)** Duties include course preparation, logistics, project consultation and grading (92 students enrolled).
2022 SPRING	**CS4221/CS5421 Database Applications Design and Tuning (NUS)** Duties include tutorial teaching (152 students in 10 groups, 65 hrs), project consultation, and assignments grading. **Teaching feedback score: 4.5/5.0 (CS4221), 4.6/5.0 (CS5221)** (CS department average 4.2, school average 4.2).
2022 SPRING	**IT5006 Fundamentals of Data Analytics (NUS)** Duties include assignments design and grading.
2021 FALL	**BT5110 Data Management and Warehousing (NUS)** Duties include tutorial teaching (119 students in 8 groups, 45 hrs) and assignments grading. **Teaching feedback score: 4.6/5.0** (CS department average 4.3, school average 4.2).
2021 SPRING	**CS5232 Formal Specification and Design Techniques (NUS)** Duties include project consultation (19 students enrolled) and grading.

SERVICES

Committee	AAAI 2024 (SRRAI Track, PC), AsiaCCS 2023 (Poster Session, PC), NSS 2022 (Subreviewer)
Reviewer	Transactions on Dependable and Secure Computing (TDSC), Journal of Logical and Algebraic Methods in Programming (JLAMP), Technology in Society (TechSoc)
Others	ADMA 2022 (Local Arrangement Team), ATVA/PRDC 203 (Session Chair)

WORK EXPERIENCE

Oct 2016 to PRESENT *(On leave)*	AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH (A*STAR), Singapore *Research Engineer II* Cyber-Security (CS) Department, Institute for Infocomm Research (I²R) • Be involved in researching and developing advanced technologies and algorithms for a wide range of research projects. • Co-supervise 5 Singapore Polytechnic students' final year projects. • Represent the cluster in the software quality control committee of I²R. • Organize and lead 4 software development training sessions within the institute. • Serve as the treasurer of I²R Recreational Club Management Committee.
Jul 2016 to *Sep 2016*	NCS PTE LTD, Singapore *Software Analyst* PaC@Gov Team, Ministry of Finance Project Group • Take charge of post penetration testing remediation for the PaC@Gov platform. • Coordinate the development of mobile applications (iOS and Android) with the contractor. • Participate in the pre-release testing of mobile applications for the PaC@Gov platform.
Jun 2014 to *Jul 2015*	GEMALTO PTE LTD, Singapore[1] *Software Engineer* Ezio Mobile SDK Team, R&D Department • Serve as a development team member of Gemalto's eBanking product – Ezio Mobile SDK *(n.k.a. Mobile Protector)*. • Focus on stability and security of mobile application development (iOS, Android and Windows Phone). • Work as a Scrum team by applying Agile development methodology. • Test the project by following professional software development process. • Write technical documentation for both internal and external users.
Jul 2012 to *Dec 2012*	AUTODESK ASIA PTE LTD, Singapore *Intern Software Engineer* DesignScript Team, R&D Department • Contribute in design and development of the new programming language: "DesignScript" *(n.k.a. Dynamo BIM)*. • Study and implement the new parser of DesignScript language. • Be involved in pre-release defects fixing work for the new compiler and IDE.

SKILLS

Programming	Proficient in JAVA, C/C++ and PYTHON Full Stack Web Development (NODEJS and DJANGO) Mobile Development on Android *(since 2014)*, iOS *(since 2014)* and Windows Phone *(since 2012)* Working experience in C, R, JSP and SQL
Software	Adobe Software (Photoshop, Lightroom, etc), Microsoft Office
Management	SCRUM development methodology

LANGUAGES

Proficient in ENGLISH and CHINESE MANDARIN
Conversational in CANTONESE
Elementary in MALAY

INTERESTS

Photography, Travel, Cooking, Religion and History

[1]Now known as Thales Technologies Pte Ltd