RESUME

Ms. ZHONG Yuyi Ph.D. candidate in National University of Singapore

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Office Address: Programming Language & Software Engineering Research Lab, COM3, Level 2 Computing Drive, Singapore 117417

EDUCATION

● **National University of Singapore, Singapore** Aug 2018 - Now

Degree to be obtained: Doctor of Philosophy

Faculty: School of Computing

Major: Computer Science

Supervisor: Associate Professor Siau-Cheng Khoo

● **Huazhong University of Science and Technology, China** Sep 2014 - Jun 2018

Degree: Bachelor of Engineering in Computer Science

Major: Computer Science and Technology

RESEARCH INTERESTS

Neural network analysis; robustness verification; linear constraints

RESEARCH ACTIVITIES

● **The International Conference on Verification, Model Checking, and Abstract Interpretation 2023 (VMCAI' 23), Boston, USA** Jan 2023

Topic: ARENA: Enhancing Abstract Refinement for Neural Network Verification

● **The ACM SIGPLAN Conference on Systems, Programming, Languages, and Applications: Software for Humanity 2022 (SPLASH' 22), Auckland, New Zealand** Dec 2022

2nd place winner at ACM Student research competition

Topic: Enhancing Abstract Refinement for Neural Network Verification (poster)

● **The Asian Symposium on Programming Languages and Systems 2021 (APLAS' 21), virtual** Oct 2021

Topic: Scalable and Modular Robustness Analysis of Deep Neural Networks

● **The Asian Symposium on Programming Languages and Systems 2019 (APLAS' 19), Bali, Indonesia** Dec 2019

Topic: Image segmentation and transformation by examples (poster)

● **National University of Singapore, Singapore** Jan 2018 – May 2018

Final Year Project Internship

Topic: Multi-Extract Method Refactoring Recommendation

Supervisor: Associate Professor Siau-Cheng Khoo

● **Huazhong University of Science and Technology** Mar 2017 – Jun 2018

Topic: For software security, conducted software error detection and vulnerability exploiting research

Instructor: Professor Zou Deqing

PUBLICATIONS

1. Expediting Neural Network Verification via Network Reduction
(Yuyi Zhong*, Ruiwei Wang*, Siau-Cheng Khoo)
The 38th IEEE/ACM International Conference on Automated Software Engineering (ASE 2023) (* means equal contribution)

2. ARENA: Enhancing Abstract Refinement for Neural Network Verification
(Yuyi Zhong, Quang-Trung Ta, Siau-Cheng Khoo)
The 24th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI 2023)

3. ARENA: Enhancing Abstract Refinement for Neural Network Verification (Poster)
(Yuyi Zhong, Quang-Trung Ta, Siau-Cheng Khoo)
Poster in the ACM Student Research Competition at SPLASH 2022 (ACM SRC 2022)

4. Scalable and Modular Robustness Analysis of Deep Neural Networks
(Yuyi Zhong, Quang-Trung Ta, Tianzuo Luo, Fanlong Zhang, Siau-Cheng Khoo)
The 19th Asian Symposium on Programming Languages and Systems (APLAS 2021)

5. Image Segmentation and Transformation by Examples (Poster)
(Yuyi Zhong, Quang-Trung Ta, Wee-Kheng Leow, Siau-Cheng Khoo)
Poster in the 17th Asian Symposium on Programming Languages and Systems (APLAS 2019)

6. SCVD: A New Semantics-Based Approach for Cloned Vulnerable Code Detection
(Deqing Zou, Hanchao Qi, Zhen Li, Song Wu, Hai Jin, Guozhong Sun, Sujuan Wang, **Yuyi Zhong**)
The 14th International Conference on Detection of Intrusions and Malware, and Vulnerability Assessment (DIMVA 2017)

7. VulDeePecker: A Deep Learning-Based System for Vulnerability Detection
(Zhen Li, Deqing Zou, Shouhuai Xu, Xinyu Ou, Hai Jin, Sujuan Wang, Zhijun Deng, **Yuyi Zhong**)
The 25th Annual Network and Distributed System Security Symposium (NDSS 2018)

ONGOING PROJECTS

Optimization based network verification on GPU
Collaboration with Hanping Xu

TEACHING WORK

1. CS3219, Software Engineering Principles and Patterns, NUS, 2020
Teaching assistant and assignment grader

2. CS1010J, Programming Methodology, Java language, NUS, 2020
Examination grader

3. CS1010E, Programming Methodology, Python language, NUS, 2019-2021
Examination grader

AWARDS & SCHOLARSHIP

Student Research Competition 2nd Place	Graduation Category	ACM SIGPLAN 2022
Outstanding Graduate	University Level	June 2018
Excellent Student Scholarship	University Level	Academic Year 2016-2017
Excellent Student Leader	University Level	Academic Year 2015-2016