Weijiang Hong

Website: wj-hong.github.io
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Research Interests

Formal Methods and Logic with applications to Programming Languages and Software Engineering.

Education

National University of Defense Technology — Changsha, China
Ph.D Candidate in College of Computer — 2020–present

- Thesis: TBD
- Supervisor: Prof. Ji Wang
- Co-Supervisor: Prof. Zhenbang Chen

National University of Defense Technology — Changsha, China
M.E in College of Computer — 2017–2019

- Thesis: "A Robustness-oriented Data Augmentation Method for DNN"
- Supervisor: Prof. Ji Wang
- Co-Supervisor: Prof. Zhenbang Chen

Peking University — Beijing, China
B.S. in School of Mathematical Sciences — 2013–2017

- Thesis: "Using Coq for Formal Modeling and Verification of Timed Connectors"
- Supervisor: Prof. Meng Sun

Scholarships and Awards

- Guanghua Scholarship, National University of Defense Technology — 2019
- Award for Academic Excellents, Peking University — 2016
- May 4^{th} Scholarship, Peking University — 2016

Skills

- **Programming:** Python, Matlab, C/C++
- **Tools/Techs:** LaTeX, Git, SQL

Languages

- **Chinese:** Mother tongue, native speaker
- **English:** Proficient, IELTS score: 6.0

Publications

1. **Weijiang Hong**, Zhenbang Chen, Yide Du, Ji Wang, "Trace Abstraction-based Verification for Uninterpreted Programs", *International Symposium of Formal Methods (FM) 2021*
2. **Weijiang Hong**, Zhenbang Chen, Hengbiao Yu, Ji Wang, "Evaluation of model checkers by verifying message passing programs", *Science China Information Sciences (SCIS) 2019*
3. **Weijiang Hong**, Zhenbang Chen, Yufeng Zhang, Hengbiao Yu, Yide Du, Ji Wang, "Verification of Message-passing Uninterpreted Programs", *Science of Computer Programming (SCP) 2023*
4. **Weijiang Hong**, henbang Chen, Minglong Li, Yuhan Li, Peishan Huang, Ji Wang, "Formal Verification based Synthesis for Behavior Trees", *Symposium on Dependable Software Engineering: Theories, Tools and Applications (SETTA) 2023*

5. **Weijiang Hong**, Yijun Liu, Zhenbang Chen, Wei Dong, Ji Wang, "Modified condition/decision coverage (MC/DC) oriented compiler optimization for symbolic execution", *Frontiers of Information Technology & Electronic Engineering (FITEE) 2020*

6. **Weijiang Hong**, M. Saqib Nawaz, Xiyue Zhang, Yi Li, Meng Sun, "Using Coq for formal modeling and verification of timed connectors", *International Conference on Software Engineering and Formal Methods (SEFM) 2017, Workshop Paper*

7. Yide Du, **Weijiang Hong**, Zhenbang Chen, Ji Wang, "Collaborative Verification of Uninterpreted Programs", *Journal of Softwares (JOS) 2022*

8. Xiyue Zhang, **Weijiang Hong**, Yi Li, Meng Sun, "Reasoning about connectors using Coq and Z3", *Science of Computer Programming (SCP) 2019*

9. Meixi Liu, **Weijiang Hong**, Weiyu Pan, Chendong Feng, Zhenbang Chen, Ji Wang, "Styx: A Data-Oriented Mutation Framework to Improve the Robustness of DNN", *International Conference on Automated Software Engineering (ASE) 2020, LBR paper*

10. Qi Feng, Chendong Feng, **Weijiang Hong**, "Graph Neural Network-based Vulnerability Predication", *International Conference on Software Maintenance and Evolution (ICSME) 2020, LBR paper*

11. Yide Du, **Weijiang Hong**, Zhenbang Chen, Ji Wang, "Collaborative Verification of Uninterpreted Programs", *International Symposium on Theoretical Aspects of Software Engineering (TASE) 2022*

12. Xiyue Zhang, Yi Li, **Weijiang Hong**, Meng Sun, "Using Recurrent Neural Network to Predict Tactics for Proving Component Connector Properties in Coq", *International Symposium on Theoretical Aspects of Software Engineering (TASE) 2019*

13. Peishan Huang, **Weijiang Hong**, Zhenbang Chen, Ji Wang, "CSP based Formal Modeling and Verification of Behavior Trees", *International Conference on Software Quality, Reliability, and Security (QRS) 2023, FA paper*

14. Meixi Liu, **Weijiang Hong**, Weiyu Pan, Chendong Feng, "A Robustness-Oriented Data Augmentation Method for DNN", *International Conference on Software Quality, Reliability, and Security (QRS) 2021*

15. Xiyue Zhang, **Weijiang Hong**, Yi Li, Meng Sun, "Reasoning about connectors in Coq", *International Conference on Formal Aspects of Component Software (FACS) 2016*