

MENGFEI REN

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EDUCATION

University of Texas, Arlington Ph.D. in Computer Science Dissertation: <i>Fuzz Testing of Zigbee Protocol Implementation</i> Advisors: Dr. Yu Lei and Dr. Jiang Ming	Aug. 2017 – Aug. 2023
University of Texas, Arlington M.S in Computer Science	Aug. 2011 – Dec. 2013
China University of Petroleum B.S in Computer Science and Technology	Sept. 2007 – Jul. 2011

PEER-REVIEWED PUBLICATIONS

P6 Low-entropy Packed Binary Detection via Accurate Hardware Events Profiling Erika Leal, Mengfei Ren , Sijia Shi, Jiang Ming In <i>Proceedings of the 2025 IEEE International Symposium on Hardware Oriented Security and Trust</i> . San Jose, CA, USA. May, 2025. (Just Accepted)	HOST '25
P5 An AI-based Security Analysis Solution for DevSecOps Abdullah Al Noman, Samson Olugbenga Idowu, Rolly Davany Mougoue Kakanou, Paolo Ciancarini, Mengfei Ren In <i>Proceedings of the 2025 International Symposium on Intelligent Computing and Networking</i> . San Juan, Puerto Rico. 2025. (Just Accepted)	ISICN '25
P4 Intelligent Zigbee Protocol Fuzzing via Constraint-Field Dependency Inference Mengfei Ren , Haotian Zhang, Xiaolei Ren, Jiang Ming, Yu Lei In <i>Proceedings of the 28th European Symposium of Research in Computer Security</i> . The Hague, The Netherland. 2023.	ESORICS '23 Acceptance Rate: 19.5%
P3 Security Analysis of Zigbee Protocol Implementation via Device-agnostic Fuzzing Mengfei Ren , Xiaolei Ren, Huadong Feng, Jiang Ming, Yu Lei In <i>ACM Digital Threats: Research and Practice</i> . 2022.	DTRAP Journal '22
P2 One Size Does Not Fit All: Security Hardening of MIPS Embedded Systems via Static Binary Debloating for Shared Libraries Haotian Zhang, Mengfei Ren , Yu Lei, Jiang Ming In <i>Proceedings of the 27th International Conference on Architectural Support for Programming Languages and Operating Systems</i> , Lausanne, Switzerland. 2022. ACM Artifacts Evaluation Badges: <i>Functional, Available, Reproduced</i>	ASPLOS '22 Acceptance Rate: 20.1%
P1 Z-Fuzzer: Device-agnostic Fuzzing of Zigbee Protocol Implementation Mengfei Ren , Xiaolei Ren, Huadong Feng, Jiang Ming, Yu Lei In <i>Proceedings of the 14th ACM Conference on Security and Privacy in Wireless and Mobile Networks</i> . Abu Dhabi, UAE (Virtual). 2021. ACM Artifacts Evaluation Badges: <i>Functional, Available, Reproduced</i> 0-day Vulnerabilities Detected: CVE-2020-27890 , CVE-2020-27891 , CVE-2020-27892	WiSec '21 Acceptance Rate: 28.1%

SUBMITTED & UNDER REVIEW

- S3 Fuzzing Zigbee Protocol Implementation with Combinatorial Testing**
- S2 Revisiting Optimization-Resilience Claims in Binary Diffing: Insights from Peephole Optimization Analysis**
- S1 Principal Component Analysis with Ordered Weighted Average Operator for Feature Extraction**

TEACHING EXPERIENCE

University of Alabama in Huntsville

CPE 212 Fundamental of Software Engineering

CPE 645/CS 685 Applied Cryptography

University of Texas at Arlington

CSE 4380/5380 Information Security I Laboratory

WORKING EXPERIENCE

University of Alabama in Huntsville (Huntsville, AL)*Aug. 2023 – Present**Assistant Professor in ECE Department***Toyota North America (Plano, TX)***May. 2021 – Aug. 2021**Intern – Vehicle Security Testing***Secureworks (Atlanta, GA)***Jan. 2015 – Jul. 2016**Software Dev Engineer*HONORS AND REWARDS

UA Huntsville New Faculty Research Program Award*2024***UT Arlington 2023 Summer Dissertation Fellowship***2023***USENIX Security Symposium Diversity Grant***2022*PROPOSALS UNDER REVIEW

NSF SHF Collaborative: Incorrectness Identification in Java Decompilation*2024***NSF Mid-scale RI-1 Collaborative: National Aerospace Cyber Range***2024*PROFESSIONAL SERVICES

Technical Program Committees:

IEEE SoutheastCon

*2024/2025***Peer Reviewers**

The Journal of Systems & Software (JSS)

2024/2025