



KOU ZILI

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🎓 EDUCATION

Hong Kong University of Science and Technology , Hong Kong SAR, China	2019.08 – Now
<i>PhD Candidate</i> , Electronic & Computer Eng., Supervised by Prof. ZHANG Wei	
Alibaba DAMO Academy, Computing Technology Lab , <i>Research Intern</i>	2022.06 – 2022.11
Southeast University , Nanjing, China	2015.08 – 2019.06
<i>Bachelor</i> , Electronics Sci. & Eng., GPA 3.94/4.0	

⚙️ FIRST-AUTHORED RESEARCH

GPU Framework for Hybrid and Efficient Fully Homomorphic Encryption	2022.06 – 2023.01
<ul style="list-style-type: none">• CUDA-Accelerate the hybrid FHE scheme that supports both linear and nonlinear operations• Achieve hundreds times of speed-up, making FHE practical• Under double-blind reviewing	
Cache Attacks and Defenses of the Sliding Window Algorithm in TEEs	2021.12 – 2022.05
<ul style="list-style-type: none">• Scrutinize implementations of the sliding window algorithm in RSA• Reveal a new vulnerability in the latest Mbed TLS design• Assigned CVE-2022-46392 as the public identifier• Accepted by DATE 2023	
Attack Directories on ARM big.LITTLE Processors	2021.02 – 2021.11
<ul style="list-style-type: none">• Reverse engineer the Snoop Filter (SF) built in Arm CCI-5XX.• Comprehensive methodology to exploit the SF as a new side channel• Best Paper Award• Accepted by ICCAD 2022	
Precise Framework for Side-channel Attacks on Arm TrustZone	2020.03 – 2021.01
<ul style="list-style-type: none">• Single profiling trace attack on RSA, breaching the exponent blinding defense.• Target on reference implementation TF-A + OPTee + Mbed TLS• Assigned CVE-2021-36647 as the public identifier• Accepted by DAC 2021	

⚙️ SKILLS

- Programming Languages: C/C++, CUDA, Python, Verilog
- Engineering Scope: Linux Kernel, ARMv8 ISA, Gem5, FHE
- Research Focus: System Security, Side-Channel Attack, Post-quantum Cryptography

🏆 HONORS AND AWARDS

William J. McCalla ICCAD Best Paper Award	2022
HKUST RedBird Academic Excellence Award	2022
Baowu Steel Excellent Student Award (4 undergraduate students per year)	2019
National Scholarship, President Scholarship (Top 1%)	2018

👥 ACTIVITIES

- Sub-Reviewer: TCAD, TRETs, TVLSI, TECS, FCCM, FPL, CASES, ASPDAC, etc.
- Student Helper: FPT 2022, EDathon 2020