GUO YANPEI

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🎓 EDUCATION

Beihang University (BUAA), Beijing, China   2019 – 2023
B.S. in School of Computer Science and Engineering, GPA: 3.78 / 4.00

National University of Singapore (NUS), Singapore   2024
Research Assistance in School of Computing

National University of Singapore (NUS), Singapore   2025 – 2029
Ph.D. in School of Computing

📖 PUBLICATION

UltraProofs: Scalable Reed-Solomon Code Commitment
Yanpei Guo, Alex Luoyuan Xiong, Wenjie Qu, Jiaheng Zhang
Oakland (S&P), 2026, First Author

VerfCNN, Optimal Complexity zkSNARK for Convolutional Neural Networks
Wenjie Qu*, **Yanpei Guo***, Yue Ying, Jiaheng Zhang
Oakland (S&P), 2026, Co-first Author

ZK-GPT: An Efficient Non-interactive Zero-knowledge Proof Framework for LLM Inference
Wenjie Qu, Yijun Sun, Xuanming Liu, Tao Lu, **Yanpei Guo**, Kai Chen, Jiaheng Zhang
USENIX Security Symposium (Security), 2025

DeepFold: Efficient Multilinear Polynomial Commitment from Reed-Solomon Code and Its Application to Zero-knowledge Proofs
Yanpei Guo, Xuanming Liu, Kexi Huang, Wenjie Qu, Tianyang Tao, Jiaheng Zhang
USENIX Security Symposium (Security), 2025, First Author

Fast RS-IOP Multivariate Polynomial Commitments and Verifiable Secret Sharing
Zongyang Zhang*, Weihan Li*, **Yanpei Guo***, Kexin Shi, Sherman S. M. Chow, Ximeng Liu, Jin Dong
USENIX Security Symposium (Security), 2024, Co-first Author.

⚙ SKILLS

- Programming Languages: Rust, C++, Golang, Python

🏆 Honors and Awards

Computer System Development Capability Competition, Operating System Kernel Design   2022, *First Prize, First Place*

Achievements:

- Developed a microkernel operating system in C, compatible with QEMU and SiFive FU740 platforms.
- Integrated support for Busybox, Lua, Redis, GCC, and Vim.
- Significantly enhanced the FAT32 file system with optimizations that improve performance by up to two times compared to Linux in certain benchmarks.

International Collegiate Programming Contest (ICPC) Asia Regional Contest Jinan Site   2020, *Silver Medal, the 54th Place*

The Chinese Mathematics Competitions for College Students (CMC)   2020, *First Prize*

♡ TA experience

Computer Organization, Beijing, China   2022.07 – 2023.01

Superviaor: Xiaopeng Gao, School of Computer Science and Engineering, Beihang University

Operating System, Beijing, China   2021.01 – 2022.06

Superviaor: Lei Wang, School of Computer Science and Engineering, Beihang University

Computer Organization, Beijing, China   2021.07 – 2022.01

Superviaor: Xiaopeng Gao, School of Computer Science and Engineering, Beihang University

Computer Security, CS3235, Singapore   2025.01 – 2025.05

Superviaor: Jiaheng Zhang, School of Computing, National University of Singapore

✺ Language

TOEFL: Reading 28, Listening 23, Speaking 22, Writing 27   2024.04