

YUCHEN ZHU

Northwestern University, Evanston, IL, USA

(+1) (574)315-1684 | yzhu7@u.northwestern.edu | yuchen-zhu.online

Education

Northwestern University

PhD Student advised by Prof. Nikos Hardavellas, Major in Computer Science

Evanston, IL

Sep 2025 - Present

Southeast University (SEU)

Bachelor of Engineering, Major in Electronic Science and Technology

Nanjing, China

Sep 2021 - Jun 2025

University of Notre Dame

Visiting Student

Notre Dame, IN

Jul 2024 - Aug 2024

University of California, San Diego (UCSD)

Visiting Student

San Diego, CA

Sep 2024 - Dec 2024

Publications

[1] **Yuchen Zhu**, Jinglei Cheng, Boxi Li, Kecheng Liu, Yidong Zhou, Hanrui Wang, Yufei Ding, and Zhiding Liang. “Hardware-aware Calibration Protocol for Quantum Computers” *In Proceedings of the 52nd Annual International Symposium on Computer Architecture (ISCA)*, 2025

[2] Fang Xiang, Keyi Yin, **Yuchen Zhu**, Jixuan Ruan, Dean Tullsen, Zhiding Liang, Andrew Sornborger, Ang Li, Travis Humble, Yufei Ding, and Yunong Shi. “CaliQEC: In-situ Qubit Calibration for Surface Code Quantum Error Correction.” *In Proceedings of the 52nd Annual International Symposium on Computer Architecture (ISCA)*, 2025

[3] Jinglei Cheng*, **Yuchen Zhu**¹, Yidong Zhou, Hang Ren, Zhixin Song, and Zhiding Liang. “EPOC: An Efficient Pulse Generation Framework with Advanced Synthesis for Quantum Circuits.” *In Proceedings of the 62nd ACM/IEEE Design Automation Conference (DAC)*, 2025

[4] **Yuchen Zhu***, Yidong Zhou*, Jinglei Cheng*, Yuwei Jin*, Boxi Li, Siyuan Niu, and Zhiding Liang. “Compiler Optimizations for QAOA” *In Proceedings of the 43rd IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*, 2024

[5] Yidong Zhou, Kecheng Liu, Haochen Luo, Lingjun Xiong, **Yuchen Zhu**, Eilis Casey, Jinglei Cheng, Samuel Yen-Chi Chen, and Zhiding Liang. “EDDQC: Enhanced Dynamical Distributing Quantum Compilation.” *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, 2025.

[6] Du, Yipu, Jinyu Yang, Kaidong Song, Qiang Jiang, Md Omarsany Bappy, **Yuchen Zhu**, David B. Go, and Yanliang Zhang. “Autonomous Aerosol and Plasma Co-Jet Printing of Metallic Devices at Ambient Temperature.” *Small*, 2025.

[7] **Yuchen Zhu**, Ruixuan Yang, Yuhang Gu, Fangtian Gu, Lingyi Kong, and He Li. “Towards Fault-tolerant Design of Quaternary Quantum Arithmetic.” *In Proceedings of the 2024 IEEE International Test Conference in Asia (ITC-Asia)*, 2024

[8] Hua Hong, Junjie Zhang, **Yuchen Zhu**, Stephen D. Tse, Hongxuan Guo, Yilin Lai, Yubo Xi, Longbin He, Zhen Zhu, Kuibo Yin, and Litao Sun. “In Situ Polymer-Solution-Processed Graphene-PDMS Nanocomposites for Application in Intracranial Pressure Sensors.” *Nanomaterials*, 2024.

Patent

[1] Hua Hong, **Yuchen Zhu**, Jun Teng, et al. “A Wireless, Passive, and Implantable Intracranial Pressure Monitoring System” *CN 2024104924977*, 2024.

Honors & Awards

- ISCA 2025 Student Travel Grant
- 2023 Dean’s List (the highest honor sponsored by university, **Top 1%**)
- 2022 Dean’s List (the highest honor sponsored by university, **Top 1%**)

¹* indicates equal contribution