

Yimin Wang

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Education

National University of Singapore (NUS) , Singapore Ph.D. student, Electrical and Computer Engineering	2022—Present GPA: 4.83/5.0
Fudan University (FDU) , Shanghai, China Ph.D. student, Microelectronics and Solid-state Electronics	2019—2021 GPA: 3.72/4.0
Jilin University (JLU) , Changchun, China B.Sc., Electronic Information Science and Technology	2015—2019 GPA: 3.92/4.0

Research Interest

Circuits and systems; processing-in-memory architecture; hardware-software co-design for AI accelerator

Publications

In preparation

- [J4] Y. Wang, Z. Wu, YJ. Chong, and X. Fong, “JADE: Joint Architecture-Dataflow Exploration for LLM Inference on Heterogeneous In- and Near-memory Computing Systems,” *IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS)*.
- [J3] Y. Wang and X. Fong, “ImAll: Ising Machine with Asynchronous Latches and Boolean Logics for Versatile COP Solving,” *IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS)*. (Extended from ISCAS24)
- [J2] Y. Wang, YJ. Chong, and X. Fong, “LEAP: LLM Inference on Scalable PIM-NoC Architecture with Balanced Dataflow and Fine-Grained Parallelism,” *IEEE Transactions on Circuits and Systems I: Regular Papers (TCAS-I)*. (Extended from ICCAD25)

Accepted

- [BC1] Y. Wang and X. Fong, “Machine Learning Acceleration in Embedded Non-volatile Memory Subsystems for Edge Computing,” *Non-Volatile Memory and Selector Devices: Technology and Applications*, Wiley, 2026.
- [C4] Y. Wang, YJ. Chong, and X. Fong, “LEAP: LLM Inference on Scalable PIM-NoC Architecture with Balanced Dataflow and Fine-Grained Parallelism,” *IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*, 2025.

Published

- [C3] Y. Wang and X. Fong, “Energy-Efficient Ising Machines Using Capacitance-Coupled Latches for MaxCut Solving,” *IEEE International Symposium on Circuits and Systems (ISCAS)*, 2024.
- [C2] Y. Wang, Y. Cen, and X. Fong, “Design Framework for Ising Machines with Bistable Latch-Based Spins and All-to-All Resistive Coupling,” *IEEE International Symposium on Circuits and Systems (ISCAS)*, 2024.
- [J1] Y. Wang and X. Fong, “Benchmarking DNN Mapping Methods for the In-Memory Computing Accelerators,” *IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS)*, 2023.
- [C1] Y. Wang, Z. Zou, and L. Zheng, “Design Framework for SRAM-Based Computing-In-Memory Edge CNN Accelerators,” *IEEE International Symposium on Circuits and Systems (ISCAS)*, 2021.

Work Experience

Research intern, Advanced Micro Devices (AMD) , Singapore	May 2024—November 2024
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Awards

Third prize, 1 st IEEE SEACAS Chipathon organized by IEEE CAS Society	Academic Year 2023-2024
Micron Foundation Prize , National University of Singapore	Academic Year 2021-2022
First-Class Scholarship, Fudan University	Academic Year 2019-2020
Outstanding Graduate, Jilin University	Academic Year 2018-2019
Samsung Scholarship , Jilin University	Academic Year 2017-2018
First-Class Scholarship, Jilin University	Academic Year 2015-2016, 2016-2017, 2017-2018

Teaching

Teaching assistant, CEG5202 Embedded Software Systems and Security, NUS	Spring 2023 and Spring 2024
Teaching assistant, CEG5201 Hardware Technologies, Principles, & Platforms, NUS	Fall 2023
Teaching assistant, TIE2030 Programming Methodology with Python, NUS	Fall 2022 and Fall 2023
Teaching assistant, TEE2101 Programming Methodology, NUS	Spring 2023
Teaching assistant, Internet of Things, FDU	Fall 2020

Academic Service

Committee member, IEEE Circuits and Systems Society (CASS), NUS Student Chapter
Reviewer, IEEE Transactions on Circuits and Systems I: Regular Papers (TCAS-I)
Reviewer, IEEE Transactions on Very Large Scale Integration (VLSI) Systems
Reviewer, 2025 IEEE International Symposium on Circuits and Systems (ISCAS)
Reviewer, 2024 ACM/IEEE International Conference on Computer-Aided Design (ICCAD)

November 2023–Present
January 2024–Present
January 2024–Present
January 2025
June 2024