

# Peilin (Leo) Chen

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## Research Interests

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- AI Chips Based on Computing-in-Memory
- Algorithm-Hardware Co-Design
- Neuromorphic Computing
- Computer Architecture

## Education

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### University of Virginia

*Ph.D. in Electrical Engineering*

**Aug. 2024 – Present**

*Advisor: Dr. Xiaoxuan Yang*

### University of Virginia

*M.E. in Electrical Engineering*

**Aug. 2024 – Dec. 2026**

*Advisor: Dr. Xiaoxuan Yang*

### Xidian University

*B.E. in Integrated Circuit Design and Integration System*

**Sept. 2020 – Jun. 2024**

*Advisor: Dr. Kang Li*

## Experience

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### University of Virginia

*Research Assistant*

**Aug. 2024 – Present**

*Advisor: Dr. Xiaoxuan Yang*

### Nanyang Technological University

*Visiting Student*

**Jul. 2023 – Aug. 2023**

*Mentor: Dr. Goh Wang Ling, Dr. Tony Tae-Hyoung Kim*

### Hong Kong University of Science and Technology (Guangzhou)

*Research Assistant*

**Jun. 2023 – Jul. 2023**

*Mentor: Dr. Hongwu Jiang*

### Shenzhen Xiyun Digital Technology Co., Ltd

*Technology Intern*

**Nov. 2021 – Jan. 2022**

*Mentor: Mr. Ziye Lv*

## Publications

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### Conference Proceedings

- **Peilin Chen** and Xiaoxuan Yang, “SpikON: A Dual-Parallel and Efficient Accelerator for Online Spiking Neural Networks Learning,” *In ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED), Northwestern University, Evanston, Illinois, USA, 2026.*
- **Peilin Chen** and Xiaoxuan Yang, “SpiKint: Native Full-Integer Spiking Neural Networks Training with an Efficient CIM-based Accelerator,” *In ACM Great Lakes Symposium on VLSI (GLSVLSI), Finger Lakes, NY, USA, 2026.*
- Xiaoxuan Yang, **Peilin Chen**, Tergel Molom-Ochir, and Yiran Chen, “End-to-End Transformer Acceleration Through Processing-in-Memory Architectures,” *In IEEE International Conference on Microelectronics (ICM), Cairo, EGYPT, 2025.*
- **Peilin Chen** and Xiaoxuan Yang, “Titanus: Enabling KV Cache Pruning and Quantization On-the-Fly for LLM Acceleration,” *In ACM Great Lakes Symposium on VLSI (GLSVLSI), New Orleans, USA, 2025. (Best Paper Award)*
- **Peilin Chen** and Xiaoxuan Yang, “Optimizing and Exploring System Performance in Compact Processing-in-Memory-Based Chips,” *In IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS), Bordeaux, FRANCE, 2025.*

## Journal Articles

- Jiacheng Cao, Wei Xiong, Jie Lu, **Peilin Chen**, Jian Wang, Jinmei Lai, and Miaoqing Huang, “An optimized EEGNet processor for low-power and real-time EEG classification in wearable brain-computer interfaces,” *In Microelectronics Journal*, 2024.

## Selected Awards and Honors

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- **Best Paper Award**, ACM Great Lakes Symposium on VLSI (GLSVLSI), 2025
- **DAC Young Fellow**, ACM/IEEE Design Automation Conference (DAC), 2025
- **Provost’s Fellowship**, University of Virginia, 2024
- **Excellent Graduation Thesis**, Xidian University, 2024
- **National Third Prize**, the 25th China Robot and Artificial Intelligence Competition, 2023
- **National Second Prize**, the 6th China College Integrated Circuit Competition, 2022
- **Meritorious Winner**, COMAP Mathematical Contest in Modeling, 2022
- **Excellent**, National Undergraduate Innovation and Entrepreneurship Training Program, 2022
- **National Third Prize**, Embedded System Design Invitational Contest (Intel Cup), 2022
- **National Second Prize**, China Undergraduate Mathematical Contest in Modeling, 2021
- **National Third Prize**, National Undergraduate FPGA Innovation Design Competition, 2021
- **Provincial Second Prize**, Mathematics Competition of Chinese College Student, 2021
- **Provincial Second Prize**, Chinese Collegiate Computing Competition, 2021

## Services

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**Technology Department of School of Microelectronics**  
*President*

**Sept. 2021 – Sept. 2023**  
*Xidian University*

## Skills and Others

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**Programming Languages:** Verilog, SystemVerilog, Python, C++, C, TCL, Matlab, LaTeX, Markdown

**EDA Tools:** Cadence Innovus, Cadence Virtuoso, Synopsys Design Compiler, Synopsys IC Compiler, Synopsys Library Compiler, Synopsys VCS, Synopsys Verdi, Siemens Modelsim, Xilinx Vivado

**ML Frameworks:** PyTorch, TensorFlow

**Channel:** Share what I have learned and post demonstration videos about my projects on the Bilibili: [Link]