

CHENYUAN CHU

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EDUCATION

Peking University

B.S. degree from the School of Electrical Engineering and Computer Science

GPA: 3.80/4.0 (WES-calculated 3.84/4.00) **Rank:** 3/39 (Top 10%)

Beijing, China

Sep 2022 - Present

EXPERIENCE

PRIME Lab

Undergraduate Researcher, advised by Prof. Xiyuan Tang

Peking University

Sep 2024 - Present

- Conducted research and literature review on cutting-edge Analog EDA technologies, covering fields such as circuit topology generation/evaluation, automated layout design, LLM-assisted design, and AI/ML-based circuit design. Collaborated with the team to propose an end-to-end automated design approach from circuit topology selection to layout implementation. Developed code for LLM-assisted circuit design based on a knowledge base independently, but withdrew from the project in February 2025 due to a deviation in its development direction. The codes can be found at <https://github.com/FileTransferr/AICAS>
Sep 2024 - Feb 2025
- Participated in the tape-out testing of analog circuit EDA design tools (PVTsizing, DAC'2024), deeply involved in the entire tape-out process. Responsible for the layout design of test modules such as Bandgap and StrongArm Comparator, as well as the final floorplan solution planning. The finalized chip design is scheduled to enter the testing phase between July and August, marking the completion of the entire funded project.
Feb 2025 - Apr 2025
- Currently participate in a research project on the design of a high-speed readout circuit, which is expected to progress to the tape-out stage in early May.
Apr 2025 - Present

China Graduate Innovation Practice Competitions

Undergraduate contestant, advised by Prof. Yibo Lin

Peking University

Oct 2024 - Dec 2024

- Designed a detection tool for identifying unstable combinational logic loops in digital circuits, innovatively proposing a "Reversed Detection" algorithmic approach. This solution enables high-speed and high-accuracy verification for ultra-large-scale combinational logic circuits. Notably, as an undergraduate contestant, the work received awards in National Graduate-Level Competitions. The codes can be found at <https://github.com/FileTransferr/EDA-Project>

SKILLS

| | |
|-----------------------|-------------------------------------------------------------------------|
| Language: | Mandarin(Native), English |
| Programming Language: | C/C++, Python, MATLAB, Verilog, Chisel, L ^A T _E X |
| Circuit Design: | Vivado, Modelsim, Cadence Virtuoso, NgSpice |

PROJECTS

BCM Solver C++

<https://github.com/FileTransferr/BCM>

Develop a set of tools that expects to find a set of legal input-output port mappings for two equivalent circuits with some graph algorithms and random computing methods, so that given a set of input vectors, exactly the same output vectors are obtained.

Vehicle-Routing-Problem-with-ILP-and-SA Matlab

<https://github.com/alhenu/Vehicle-Routing-Problem-with-ILP-and-SA>

Develop a program to solve the vehicle routing problem, integrating integer linear programming algorithm and simulated annealing algorithm. I was responsible for writing the algorithm code for the integer linear programming part.

RISC-V CPU(In Progress) Chisel, Vivado

<https://github.com/star-power-riscv>

Develop a fundamental CPU which supports some arithmetic operations, branch predictions, etc.

Congestion Prediction Optimization Python, Machine Learning

<https://github.com/FileTransferr/Congestion-Prediction>

Optimize the neural network architecture in the congestion prediction module of an open-source ML-assisted EDA tool(CircuitNet), such as replacing U-Net with Double U-Net, to improve the accuracy of congestion prediction during the placement phase.

EXTRA-CURRICULUM OUTREACH

Member of department's football team at Peking University

Sep 2022 - Present

- Silver medal in the 2022 Freshman Cup Football Match.
- Bronze medal in the 2024 Peking University Cup Football Match.

HONORS & AWARDS

Huawei's Scholarship

School of Electrical Engineering and Computer Science, Peking University

Oct 2024

Commendation for Outstanding Academic Performance in the 2023-24 Academic Year.

Outstanding Research Award

Peking University

Oct 2024

Commendation for exceptional performance in comprehensive evaluation during the 2023-24 Academic Year.

National Third Prize in EDA Elite Challenge

China Graduate Innovation Practice Competitions

Dec 2024

Awarded in the 2024 China Graduate Innovation Contest for outstanding achievement in EDA design. (Undergraduate Awardee in National Graduate-Level Competition)

Team members: Chenyuan Chu, Yitian Sun, Boxin Zheng. Advisor: Yibo Lin.