

YUXUAN ZHAO

Assistant Professor ◇ School of Science and Engineering
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RESEARCH INTERESTS

- 3D Integrated Circuits
- GPU Acceleration
- VLSI CAD

EXPERIENCES

The Chinese University of Hong Kong, Shenzhen
School of Science and Engineering
Assistant Professor

Shenzhen, China
Jun. 2026 - Present

The Chinese University of Hong Kong
Post-doctoral Fellow
Advisor: [Prof. Bei Yu](#)

Hong Kong SAR
Nov. 2025 - May. 2026

Huawei Hong Kong Research Center
Research Intern
EDA Lab

Hong Kong SAR
Jun. 2022 - Dec. 2022

EDUCATION

The Chinese University of Hong Kong
Department of Computer Science and Engineering
Ph.D. in Computer Science & Engineering
Advisor: [Prof. Bei Yu](#)

Hong Kong SAR
Aug. 2021 - Oct. 2025

Zhejiang University
College of Information Science and Electronic Engineering
B.Eng. in Information Engineering

Hangzhou, China
Sep. 2016 - Jun. 2021

PUBLICATIONS

(*Indicates equal contribution)

- [1] **Yuxuan Zhao***, Peiyu Liao*, Siting Liu, Jiaxi Jiang, Yibo Lin, and Bei Yu. "Analytical Heterogeneous Die-to-Die 3D Placement with Macros". In: *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)* (2024).
- [2] **Yuxuan Zhao**, Qi Sun, Zhuolun He, Yang Bai, and Bei Yu. "AutoGraph: Optimizing DNN Computation Graph for Parallel GPU Kernel Execution". In: *AAAI Conference on Artificial Intelligence (AAAI)*. 2023.
- [3] **Yuxuan Zhao**, Peiyu Liao, and Bei Yu. "3D-Flow: Flow-based Standard Cell Legalization for 3D ICs". In: *ACM/IEEE Design Automation Conference (DAC)*. 2025.
- [4] **Yuxuan Zhao**, Feng Gu, Siting Liu, Peiyu Liao, and Bei Yu. "H3D: Heterogeneous Resources Aware Global Router for Face-to-Face Bonded 3D ICs". In: *IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*. 2025.

- [5] **Yuxuan Zhao**, Lancheng Zou, and Bei Yu. “Physical Design for Advanced 3D ICs: Challenges and Solutions”. In: *ACM International Symposium on Physical Design (ISPD)*. 2025.
- [6] Peiyu Liao*, **Yuxuan Zhao***, Dawei Guo, Yibo Lin, and Bei Yu. “Analytical Die-to-Die 3D Placement with Bistratal Wirelength Model and GPU Acceleration”. In: *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)* (2023).
- [7] Peiyu Liao*, **Yuxuan Zhao***, Siting Liu, and Bei Yu. “Ultrafast Density Gradient Accumulation in 3D Analytical Placement with Divergence Theorem”. In: *IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*. 2025.
- [8] Yuhao Ji, Yunqi Shi, Tianshu Hou, **Yuxuan Zhao**, Chunyuan Zhao, Peiyu Liao, Zizheng Guo, Chao Qian, Yibo Lin, and Bei Yu. “Integrated Timing-driven Placement for Hybrid-Bonding-based Face-to-Face 3D ICs”. In: *ACM/IEEE Design Automation Conference (DAC)*. 2026.
- [9] Xufeng Yao, Jiayi Jiang, **Yuxuan Zhao**, Peiyu Liao, Yibo Lin, and Bei Yu. “EvoPlace: Evolution of Optimization Algorithms for Global Placement via Large Language Models”. In: *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)* (2026).
- [10] Lancheng Zou, Sing Sen YE, Shuo Yin, Yuan Pu, Jiayi Jiang, Siting Liu, **Yuxuan Zhao**, and Bei Yu. “IncreMacro-3D: Incremental Macro Placement for Face-to-Face Stacked Memory-on-Logic 3D ICs”. In: *IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE)*. IEEE. 2026.
- [11] Qinggong Shen, Chaoli Zhang, Haoyang Xu, Zhiwen Yu, Bin Guo, **Yuxuan Zhao**, Bei Yu, Tsung-Yi Ho, and Xing Huang. “HPPlacer: A High-Precision Slack-Aware Global Placement Engine”. In: *IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE)*. IEEE. 2026.
- [12] Zhen Zhuang, Zheng Yang, **Yuxuan Zhao**, Jiawei Hu, Bei Yu, Sung Kyu Lim, and Tsung-Yi Ho. “DPO-3D: Differentiable Power Delivery Network Optimization via Flexible Modeling for Routability and IR-Drop Tradeoff in Face-to-Face 3D ICs”. In: *IEEE/ACM Asian and South Pacific Design Automation Conference (ASPDAC)*. 2026.
- [13] Wendong Xu, Yuhao Ji, Yang Bai, Yueting Li, **Yuxuan Zhao**, Zhengwu Liu, Bei Yu, and Ngai Wong. “PPD: A Portable and Highly Parallel Dispatching System for Deep Learning”. In: *ACM Transactions on Design Automation of Electronic Systems (TODAES)* (2025).
- [14] Yuntao Lu, Chen Bai, **Yuxuan Zhao**, Ziyue Zheng, Yangdi Lyu, Mingyu Liu, and Bei Yu. “Deep-Verifier: Learning to Update Test Sequences for Coverage-Guided Verification”. In: *ACM Transactions on Design Automation of Electronic Systems (TODAES)* (2025).
- [15] Jiayi Jiang, Yuan Pu, Mingjun Li, **Yuxuan Zhao**, Peiyu Liao, Zuodong Zhang, Yibo Lin, and Bei Yu. “RegPlace: Regularity-Aware Placement for Full-System DNN Accelerator Designs”. In: *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)* (2025).
- [16] Xun Jiang, Haoran Lu, **Yuxuan Zhao**, Jiarui Wang, Zizheng Guo, Heng Wu, Bei Yu, Sung Kyu Lim, Runsheng Wang, Ru Huang, and Yibo Lin. “A Systematic Approach for Multi-Objective Double-Side Clock Tree Synthesis”. In: *ACM/IEEE Design Automation Conference (DAC)*. 2025.
- [17] Qi Sun, Xinyun Zhang, Hao Geng, **Yuxuan Zhao**, Yang Bai, Haisheng Zheng, and Bei Yu. “GTuner: Tuning DNN Computations on GPU via Graph Attention Network”. In: *ACM/IEEE Design Automation Conference (DAC)*. 2022.
- [18] Haoyu Yang, Kit Fung, **Yuxuan Zhao**, Yibo Lin, and Bei Yu. “Mixed-Cell-Height Legalization on CPU-GPU Heterogeneous Systems”. In: *IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE)*. IEEE. 2022.

SELECTED AWARDS

DAC Young Fellow Award	2025
3rd Place Award in CAD Contest ICCAD	2022
Hong Kong PhD Fellowship	2021-2025
National Scholarship	2017

PROFESSIONAL SERVICE

Program Committee Member

- ACM/IEEE International Conference on Computer-Aided Design (ICCAD), 2026
- IEEE International Conference on Computer Design (ICCD), 2026

Conference Reviewer

- ACM/IEEE Design Automation Conference (DAC)
- ACM/IEEE International Conference on Computer-Aided Design (ICCAD)
- IEEE International Conference on Computer Design (ICCD)
- ACM International Symposium on Physical Design (ISPD)
- IEEE/ACM Asian and South Pacific Design Automation Conference (ASPDAC)

Journal Reviewer

- IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)
- ACM Transactions on Design Automation of Electronic Systems (TODAES)
- IEEE Transactions on Very Large Scale Integration Systems (TVLSI)

TEACHING

CENG3420	Computer Organization & Design	Spring 2022
CSCI3310	Mobile Computing and Applications Development	Spring 2021
ENGG1110F	Problem Solving By Programming	Fall 2021