YUZHE MA

Assistant Professor ⋄ Microelectronics Thrust
The Hong Kong University of Science and Technology (Guangzhou)
yuzhema@hkust-gz.edu.cn

RESEARCH INTERESTS

- VLSI physical design / design for manufacturing / advanced lithography
- Artificial intelligence for chip design

EDUCATION

The Chinese University of Hong Kong, Hong Kong SAR Aug. 2016 – Jul. 2020
Ph.D. Computer Science and Engineering

Sun Yat-Sen University, Guangzhou, China Sep. 2011 – Jul. 2016
B.Eng. Microelectronics

APPOINTMENTS

2021 – Present	Assistant Professor	Microelectronics Thrust, HKUST(GZ)
2023 – 2024	Guangzhou Chapter Vice Chair	IEEE Council on Electronic Design Automation
2020 – 2021	Senior Research Scientist	Hong Kong Research Center, Huawei Tech. Investment Co.

AWARDS AND HONORS

[A7] **Best Paper Award**, ACM/IEEE International Workshop on Machine Learning for CAD (MLCAD), 2023.

[A6] **Best Paper Award**, IEEE/ACM International Conference on Computer-aided Design (ICCAD), 2021.

[A5] **Best Paper Award**, IEEE/ACM Asian and South Pacific Design Automation Conference (ASP-DAC), 2021.

[A4] **Best Poster (Research) Award**, ACM SIGDA Student Research Forum, 2020.

[A3] **Third Place Award**, ACM International Symposium on Physical Design (ISPD) Contest, 2020.

[A2] **Best Student Paper Award**, IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2019.

[A1] **Best Paper Award Nomination**, IEEE/ACM Asian and South Pacific Design Automation Conference (ASP-DAC), 2019.

PUBLICATIONS

Superscript †: Advised PhD, master, or undergraduate students

Book Chapter

[B01] **Yuzhe Ma**, "Machine Learning for Testability Prediction", *Machine Learning Applications in Electronic Design Automation*, Springer 2022.

Journal Papers

[J24] Xiaoxiao Liang†, Yikang Ouyang†, Haoyu Yang, Bei Yu, **Yuzhe Ma**, "RL-OPC: Mask Optimization with Deep Reinforcement Learning", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 43, no. 01, pp. 340–351, 2024.

[J23] Binwu Zhu, Su Zheng, Ziyang Yu, Guojin Chen, **Yuzhe Ma**, Fan Yang, Bei Yu, Martin Wong, "L2O-ILT: Learning to Optimize Inverse Lithography Techniques", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 43, no. 03, pp. 944–955, 2024.

[J22] Guojin Chen, Ziyang Yu, Hongduo Liu, **Yuzhe Ma**, Bei Yu, "DevelSet: Deep Neural Level Set for Instant Mask Optimization", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 42, no. 12, pp. 5020–5033, 2023.

[J21] Ziyang Yu, Peiyu Liao, **Yuzhe Ma**, Bei Yu, Martin D.F. Wong, "CTM-SRAF: Continuous Transmission Mask-based Constraint-aware Sub Resolution Assist Feature Generation", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 42, no. 10, pp. 3402–3411, 2023.

[J20] **Yuzhe Ma**, Xufeng Yao, Ran Chen, Ruiyu Li, Xiaoyong Shen, Bei Yu, "Small is Beautiful: Compressing Deep Neural Networks for Partial Domain Adaptation", accepted by IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**).

[J19] Ziyang Yu, Guojin Chen, **Yuzhe Ma**, Bei Yu, "A GPU-enabled Level Set Method for Mask Optimization", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 42, no. 02, pp. 594–605, 2023

[J18] Hao Geng, Tinghuan Chen, **Yuzhe Ma**, Binwu Zhu, Bei Yu, "PTPT: Physical Design Tool Parameter Tuning via Multi-Objective Bayesian Optimization", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 42, no. 01, pp. 178–189, 2023.

[J17] Xiaodong Wang, Changhao Yan, **Yuzhe Ma**, Bei Yu, Fan Yang, Dian Zhou, Xuan Zeng, "Analog Circuit Yield Optimization via Freeze-Thaw Bayesian Optimization Technique", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 41, no. 11, pp. 4887–4900, 2022.

[J16] Wei Li, **Yuzhe Ma**, Yibo Lin, Bei Yu, "Adaptive Layout Decomposition with Graph Embedding Neural Networks", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 41, no. 11, pp. 5030–5042, 2022.

[J15] Guojin Chen, Wanli Chen, Qi Sun, **Yuzhe Ma**, Haoyu Yang, Bei Yu, "DAMO: Deep Agile Mask Optimization for Full Chip Scale", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 41, no. 9, pp. 3118–3131, 2022.

[J14] Hao Geng, **Yuzhe Ma**, Qi Xu, Jin Miao, Subhendu Roy, Bei Yu, "High-Speed Adder Design Space Exploration via Graph Neural Processes", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 41, no. 8, pp. 2657–2670, 2022.

[J13] Bentian Jiang, Lixin Liu, **Yuzhe Ma**, Bei Yu, Evangeline F.Y. Young, "Neural-ILT 2.0: Migrating ILT to Domain-specific and Multi-task-enabled Neural Network", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 41, no. 8, pp. 2671–2684, 2022.

[J12] Wei Zhong, Shuxiang Hu, **Yuzhe Ma**, Haoyu Yang, Xiuyuan Ma, Bei Yu, "Deep Learning-Driven Simultaneous Layout Decomposition and Mask Optimization", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 41, no. 3, pp. 709—722, 2022.

[J11] Wei Li, **Yuzhe Ma**, Qi Sun, Lu Zhang, Yibo Lin, Iris Hui-Ru Jiang, Bei Yu, David Z. Pan, "OpenMPL: An Open Source Layout Decomposer", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 40, no. 11, pp. 2331—2344, 2021.

[J10] Guyue Huang, Jingbo Hu, Yifan He, Jialong Liu, Mingyuan Ma, Zhaoyang Shen, Juejian Wu, Yuanfan Xu, Hengrui Zhang, Kai Zhong, Xuefei Ning, **Yuzhe Ma**, Haoyu Yang, Bei Yu, Huazhong Yang, Yu Wang, "Machine Learning for Electronic Design Automation: A Survey", ACM Transactions on Design Automation of Electronic Systems (**TODAES**), vol. 25, no. 5, 2021.

[J9] Haoyu Yang, Wei Zhong, **Yuzhe Ma**, Hao Geng, Ran Chen, Wanli Chen, Bei Yu, "VLSI Mask Optimization: From Shallow To Deep Learning", Integration, the VLSI Journal, vol. 77, Mar., pp. 96–103, 2021.

[J8] Kang Liu, Haoyu Yang, **Yuzhe Ma**, Benjamin Tan, Bei Yu, Evangeline F. Y. Young, Ramesh Karri, Siddharth Garg, "Are Adversarial Perturbations a Showstopper for ML-Based CAD? A Case Study on CNN-Based Lithographic Hotspot Detection", ACM Transactions on Design Automation of Electronic Systems (**TODAES**), vol. 25, no. 5, 2020.

[J7] **Yuzhe Ma**, Wei Zhong, Shuxiang Hu, Jhih-Rong Gao, Jian Kuang, Jin Miao, Bei Yu, "A Unified Framework for Simultaneous Layout Decomposition and Mask Optimization", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 39, no. 12, pp. 5069–5082, 2020.

[J6] Hao Geng, Wei Zhong, Haoyu Yang, **Yuzhe Ma**, Joydeep Mitra, Bei Yu, "SRAF Insertion via Supervised Dictionary Learning", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 39, no. 10, pp. 2849–2859, 2020.

[J5] Haoyu Yang, Shuhe Li, Zihao Deng, **Yuzhe Ma**, Bei Yu, and Evangeline F. Y. Young, "GAN-OPC: Mask Optimization with Lithography-guided Generative Adversarial Nets", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 39, no. 10, pp. 2822–2834, 2020.

[J4] **Yuzhe Ma**, Subhendu Roy, Jin Miao, Jiamin Chen, and Bei Yu, "Cross-layer Optimization for High Speed Adders: A Pareto Driven Machine Learning Approach", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 38, no. 12, pp. 2298–2311, 2019

[J3] Qianru Zhang, Meng Zhang, Tinghuan Chen, Zhifei Sun, **Yuzhe Ma**, and Bei Yu, "Recent Advances in Convolutional Neural Network Acceleration", Neurocomputing, vol. 323, pp. 37-51, Jan., 2019.

[J2] Haoyu Yang, Jing Su, Yi Zou, **Yuzhe Ma**, Bei Yu, and Evangeline F.Y. Young, "Layout Hotspot Detection with Feature Tensor Generation and Deep Biased Learning", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 38, no. 6, pp. 1175–1187, 2019.

[J1] Jin Miao, Meng Li, Subhendu Roy, **Yuzhe Ma**, and Bei Yu, "SD-PUF: Spliced Digital Physical Unclonable Function", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), vol. 37, no. 5, pp. 927–940, 2018.

Conference Papers

[C39] Dongsheng Zuo†, Jiadong Zhu†, Chenglin Li†, **Yuzhe Ma**, "UFO-MAC: A Unified Framework for Optimization of High-Performance Multipliers and Multiply-Accumulators", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), New Jersey, Oct. 27–31, 2024.

[C38] Yang Luo†, Xiaoxiao Liang†, **Yuzhe Ma**, "Enabling Robust Inverse Lithography with Rigorous Multi-Objective Optimization", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), New Jersey, Oct. 27–31, 2024.

[C37] Zhihai Wang, Jie Wang, Dongsheng Zuo†, Yunjie Ji, Xilin Xia, **Yuzhe Ma**, Jianye Hao, Mingxuan Yuan, Yongdong Zhang, Feng Wu, "A Hierarchical Adaptive Multi-Task Reinforcement Learning Framework for Multiplier Circuit Design", International Conference on Machine Learning (**ICML**), Vienna, Jul. 21–27, 2024.

[C36] Su Zheng, **Yuzhe Ma**, Bei Yu, Martin Wong, "EMOGen: Enhancing Mask Optimization via Pattern Generation", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, June 23-27, 2024.

[C35] Chen Chen, Guangyu Hu, Dongsheng Zuo†, Cunxi Yu, **Yuzhe Ma**, Hongce Zhang, "E-Syn: E-Graph Rewriting with Technology-Aware Cost Functions for Logic Synthesis", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, June 23-27, 2024.

[C34] Xiaoxiao Liang†, Haoyu Yang, Kang Liu, Bei Yu, **Yuzhe Ma**, "CAMO: Correlation-Aware Mask Optimization with Modulated Reinforcement Learning", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, June 23-27, 2024.

[C33] Chen Bai, Jianwang Zhai, **Yuzhe Ma**, Bei Yu, Martin D.F. Wong, "Towards Automated RISC-V Microarchitecture Design with Reinforcement Learning", AAAI Conference on Artificial Intelligence (**AAAI**), Vancouver, Feb. 20–27, 2024.

[C32] Yikang Ouyang†, Sicheng Li, Dongsheng Zuo†, Hanwei Fan, **Yuzhe Ma**, "ASAP: Accurate Synthesis Analysis and Prediction with Multi-task Learning", ACM/IEEE Workshop on Machine Learning for CAD (**MLCAD**), Utah, Sep. 2023. **(Best Paper Award)**

[C31] Chen Bai, Jiayi Huang, Xuechao Wei, **Yuzhe Ma**, Sicheng Li, Hongzhong Zheng, Bei Yu, Yuan Xie, "ArchExplorer: Microarchitecture Exploration via Bottleneck Analysis", IEEE/ACM International Symposium on Microarchitecture (**MICRO**), Toronto, Oct. 2023.

[C30] Dongsheng Zuo†, Yikang Ouyang†, **Yuzhe Ma**, "RL-MUL: Multiplier Design Optimization with Deep Reinforcement Learning", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, Jul. 09-13, 2023.

[C29] Zhuolun He, Yihang Zuo, Jiaxi Jiang, Haisheng Zheng, **Yuzhe Ma**, Bei Yu, "OpenDRC: An Efficient Open-Source Design Rule Checking Engine with Hierarchical GPU Acceleration", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, Jul. 09-13, 2023.

[C28] Guojin Chen, Zehua Pei, Haoyu Yang, **Yuzhe Ma**, Bei Yu, Martin Wong, "Physics-Informed Optical Kernel Regression Using Complex-valued Neural Fields", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, Jul. 09-13, 2023.

[C27] Zhuolun He, **Yuzhe Ma**, Bei Yu, "X-Check: GPU-Accelerated Design Rule Checking via Parallel Sweepline Algorithms", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), San Diego, Oct. 30-Nov. 3, 2022.

[C26] Wenqian Zhao, Xufeng Yao, Ziyang Yu, Guojin Chen, **Yuzhe Ma**, Bei Yu, Martin Wong, "AdaOPC: A Self-Adaptive Mask Optimization Framework For Real Design Patterns", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), San Diego, Oct. 30-Nov. 3, 2022.

[C25] Chen Bai, Qi Sun, Jianwang Zhai, **Yuzhe Ma**, Bei Yu, Martin D.F. Wong, "BOOM-Explorer: RISC-V BOOM Microarchitecture Design Space Exploration Framework", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), Nov. 01-04, 2021. **(William J. McCalla Best Paper Award)**

[C24] Guojin Chen, Ziyang Yu, Hongduo Liu, **Yuzhe Ma**, Bei Yu, "DevelSet: Deep Neural Level Set for Instant Mask optimization", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), Nov. 01-04, 2021.

[C23] Junzhe Cai, Changhao Yan, **Yuzhe Ma**, Bei Yu, Dian Zhou, Xuan Zeng "DevelSet: Deep Neural Level Set for Instant Mask optimization", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, Dec. 5-9, 2021.

[C22] Ziyang Yu, Guojin Chen, **Yuzhe Ma**, Bei Yu, "A GPU-enabled Level-Set Method for Mask Optimization", IEEE/ACM Proceedings Design, Automation and Test in Europe (**DATE**), Feb. 01-05, 2021.

[C21] Zhuolun He, Peiyu Liao, Siting Liu, **Yuzhe Ma**, Bei Yu, "Physical Synthesis for Advanced Neural Network Processors", IEEE/ACM Asian and South Pacific Design Automation Conference (**ASPDAC**), Jan. 18-21, 2021. (Invited Paper)

[C20] Wei Li, Yuxiao Qu, Gengjie Chen, **Yuzhe Ma**, Bei Yu, "TreeNet: Deep Point Cloud Embedding for Routing Tree Construction", IEEE/ACM Asian and South Pacific Design Automation Conference (**ASPDAC**), Jan. 18-21, 2021. **(Best Paper Award)**

[C19] Zhuolun He, Lu Zhang, Peiyu Liao, **Yuzhe Ma**, Bei Yu, "Reinforcement Learning Driven Physical Synthesis", IEEE International Conference on Solid -State and Integrated Circuit Technology (**ICSICT**), Nov. 3-6, 2020. (Invited Paper)

[C18] Guojin Chen, Wanli Chen, **Yuzhe Ma**, Haoyu Yang, Bei Yu, "DAMO: Deep Agile Mask Optimization for Full Chip Scale", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), Nov. 2-5, 2020.

[C17] Bentian Jiang, Lixin Liu, **Yuzhe Ma**, Hang Zhang, Evangeline F. Y. Young, Bei Yu, "Neural-ILT: Migrating ILT to Nerual Networks for Mask Printability and Complexity Co-optimizaton", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), Nov. 2-5, 2020.

[C16] Zhuolun He, **Yuzhe Ma**, Lu Zhang, Peiyu Liao, Ngai Wong, Bei Yu, Martin D. F. Wong, "Learn to Floorplan through Acquisition of Effective Local Search Heuristics", IEEE International Conference on Computer Design (**ICCD**), Oct. 18–21, 2020.

[C15] Wei Li, Jialu Xia, **Yuzhe Ma**, Jialu Li, Yibo Lin, Bei Yu, "Adaptive Layout Decomposition with Graph Embedding Neural Networks", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, CA, July 19–23, 2020.

[C14] Wei Zhong, Shuxiang Hu, **Yuzhe Ma**, Haoyu Yang, Xiuyuan Ma, Bei Yu, "Deep Learning-Driven Simultaneous Layout Decomposition and Mask Optimization", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, CA, July 19–23, 2020.

[C13] **Yuzhe Ma**, Zhuolun He, Wei Li, Tinghuan Chen, Lu Zhang, Bei Yu, "Understanding Graphs in EDA: From Shallow to Deep Learning", ACM International Symposium on Physical Design (**ISPD**), Taipei, Mar. 25–Apr. 01, 2020. (Invited Paper)

[C12] Haoyu Yang, Wei Zhong, **Yuzhe Ma**, Hao Geng, Ran Chen, Wanli Chen, Bei Yu, "VLSI Mask Optimization: From Shallow To Deep Learning", IEEE/ACM Asian and South Pacific Design Automation Conference (**ASPDAC**), Beijing, Jan. 13–16, 2020. (Invited Paper)

[C11] Zhonghua Zhou, Ziran Zhu, Jianli Chen, **Yuzhe Ma**, Bei Yu, Tsung-Yi Ho, Guy Lemieux, Andre Ivano, "Congestion-aware Global Routing using Deep Convolutional Generative Adversarial Networks", ACM/IEEE Workshop on Machine Learning for CAD (**MLCAD**), Alberta, Canada, Sep. 3–4, 2019.

[C10] **Yuzhe Ma**, Ziyang Yu, Bei Yu, "CAD Tool Design Space Exploration via Bayesian Optimization", ACM/IEEE Workshop on Machine Learning for CAD (**MLCAD**), Alberta, Canada, Sep. 3–4, 2019.

[C9] **Yuzhe Ma**, Ran Chen, Wei Li, Fanhua Shang, Wenjian Yu, Minsik Cho, Bei Yu, "A Unified Approximation Framework for Compressing and Accelerating Deep Neural Networks", IEEE International Conference on Tools with Artificial Intelligence (**ICTAI**), Portland, OR, Nov. 4–6, 2019. **(Best Student Paper Award)**

[C8] Wei Li, **Yuzhe Ma**, Qi Sun, Yibo Lin, Iris Hui-Ru Jiang, Bei Yu, David Z. Pan, "OpenMPL: An Open Source Layout Decomposer", IEEE International Conference on ASIC (**ASICON**), Chongqing, China, Oct. 29–Nov. 1, 2019.

[C7] **Yuzhe Ma**, Haoxing Ren, Brucek Khailany, Harbinder Sikka, Karthikeyan Natarajan, and Bei Yu, "High Performance Graph Convolutional Networks with Applications in Testability Analysis", ACM/IEEE Design Automation Conference (**DAC**), Las Vegas, NV, June 2–6, 2019.

[C6] Hao Geng, Haoyu Yang, **Yuzhe Ma**, Joydeep Mitra, and Bei Yu, "SRAF Insertion via Supervised Dictionary Learning", IEEE/ACM Asian and South Pacific Design Automation Conference (**ASPDAC**), Tokyo, Jan. 21–24, 2019. **(Best Paper Award Nomination)**

[C5] Haoyu Yang, Shuhe Li, **Yuzhe Ma**, Bei Yu, and Evangeline F. Y. Young, "GAN-OPC: Mask Optimization with Lithography-guided Generative Adversarial Nets", ACM/IEEE Design Automation Conference (**DAC**), San Francisco, CA, June 24–28, 2018.

[C4] **Yuzhe Ma**, Jhih-Rong Gao, Jian Kuang, Jin Miao, and Bei Yu, "A Unified Framework for Simultaneous Layout Decomposition and Mask Optimization", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), Irvine, CA, Nov. 13–16, 2017.

[C3] Chak-Wa Pui, Gengjie Chen, **Yuzhe Ma**, Evangeline F. Y. Young, and Bei Yu, "Clock-Aware UltraScale FPGA Placement with Machine Learning Routability Prediction", IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), Irvine, CA, Nov. 13–16, 2017.

[C2] **Yuzhe Ma**, Xuan Zeng, and Bei Yu, "Methodologies for Layout Decomposition and Mask Optimization: A Systematic Review", IFIP/IEEE International Conference on Very Large Scale Integration (**VLSI-SoC**), Abu Dhabi, UAE, Oct. 23–25, 2017. (**Invited Paper**)

[C1] Subhendu Roy, **Yuzhe Ma**, Jin Miao, and Bei Yu, "A Learning Bridge from Architectural Synthesis to Physical Design for Exploring Power Efficient High-Performance Adders", IEEE/ACM International Symposium on Low Power Electronics and Design (**ISLPED**), Taipei, Taiwan, July 24–26, 2017.

TEACHING

MICS5520 Physical Design Automation of Digital Systems, HKUST(GZ) 2022 – Present

MICS6000Q VLSI Design Optimization and Closure, HKUST(GZ) 2023 – Present

STUDENT SUPERVISION

Ph.D. Students

1. Xiaoxiao Liang (2022 – now), Microelectronics Thrust, HKUST(GZ)
2. Yikang Ouyang (2022 – now), Microelectronics Thrust, HKUST(GZ)
3. Dongsheng Zuo (2022 – now), Microelectronics Thrust, HKUST(GZ)
4. Hao Chen (2022 – now, Co-supervised with Prof. Yeyu Tong), Microelectronics Thrust, HKUST(GZ)
5. Xiaonan Huang (2023 – now), Microelectronics Thrust, HKUST(GZ)
6. Yuxuan Lin (2023 – now), Microelectronics Thrust, HKUST(GZ)
7. Yang Luo (2023 – now), Microelectronics Thrust, HKUST(GZ)

MPhil. Students

1. Jiadong Zhu (2022 – now), Microelectronics Thrust, HKUST(GZ)
2. Weilong Guan (2023 – now), Microelectronics Thrust, HKUST(GZ)
3. Yuchao Wu (2023 – now), Microelectronics Thrust, HKUST(GZ)
4. Yihang Zuo (2023 – now), Microelectronics Thrust, HKUST(GZ)

SERVICES OUTSIDE OF UNIVERSITIES

Organizing Committee

- EDA Forum, Co-Organizer, 2023.

Program Committees

- ACM/IEEE Design Automation Conference (DAC), 2022, 2023, 2024.
- IEEE/ACM International Conference on Computer-Aided Design (ICCAD), 2022, 2023, 2024.
- ACM/IEEE Asia and South Pacific Design Automation Conference (ASP-DAC), 2024, 2025.
- IEEE Asia Pacific Conference on Circuits and Systems (APCCAS), 2022.
- IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS), 2022.
- Workshop on Synthesis And System Integration of Mixed Information Technologies (SASIMI), 2021, 2022.

Session (Co-)Chair

- Session: "Design for Manufacturability: from Rule Checking to Yield Optimization", ASP-DAC 2024.
- Session: "Making Patterning Work", ICCAD 2022.

Journal Reviewer

- Nature Machine Intelligence
- IEEE Transaction on Computer-Aided Design of Integrated Circuits and Systems (TCAD)
- ACM Transaction on Design Automation of Electronic Systems (TODAES)
- IEEE Transactions on Very Large Scale Integration (VLSI) Systems
- ACM Transaction on Cyber-Physical Systems (TCPS)
- VLSI Design
- IET Cyber-Physical Systems: Theory & Applications

Conference Reviewer

- ACM/IEEE Design Automation Conference (DAC), 2018–2024.
- IEEE/ACM International Conference on Computer-Aided Design (ICCAD), 2021–2023.
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020, 2021.
- Neural Information Processing Systems (NeurIPS), 2023, 2024, 2025.
- AAAI Conference on Artificial Intelligence (AAAI), 2021, 2022, 2023.
- ACM International Symposium on Physical Design (ISPD), 2018, 2019.
- IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC), 2018.

SERVICES IN UNIVERSITIES

Senate Committee on Postgraduate Studies, HKUST(GZ) 2023 Feb. – 2025 Feb.

Joint Senate Committee Session on Postgraduate Studies, HKUST 2023 Feb. – 2025 Feb.

Red Bird MPhil Selection and Interview Committee, HKUST(GZ) 2022 Aug. – 2023 Aug.