

XIAOXIAO LIANG

✉ xliang603@connect.hkust-gz.edu.cn · ☎ (+86) 131-2519-9937 ·

EDUCATION

Hong Kong University of Science and Technology - Guangzhou Campus 2022 – Present

Ph.D. in Microelectronics, supervised by Prof. Yuzhe MA
Core Grade: 3.87/4.3

Hong Kong University of Science and Technology 2020 – 2021

M.S. in Electronic Engineering
Core Grade: 4.0/4.3

Huazhong University of Science and Technology 2016 – 2020

B.Eng. in Automation
Core Grade: 3.4/4.0

WORK EXPERIENCE

Hong Kong University of Science and Technology - Guangzhou Campus Jan. 2022 – Jul. 2022

Research Assistant Advisor: Prof. Yuzhe MA
Mask optimization in VLSI manufacturing

Hong Kong University of Science and Technology Jul. 2021 – Dec. 2021

Research Assistant Advisor: Prof. Xiaomeng LI
Federated framework building for medical image analysis

PUBLICATIONS

Xiaoxiao Liang, Haoyu Yang, Kang Liu, Bei Yu, Yuzhe Ma, “CAMO: Correlation-Aware Mask Optimization with Modulated Reinforcement Learning”. *Design Automation Conference (DAC)*, 2024.

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)*, 2024.

Xiaoxiao Liang, Yiqun Lin, Huazhu Fu, Lei Zhu, Xiaomeng Li, “RSCFed: Random Sampling Consensus Federated Semi-supervised Learning”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022.

Su Zheng, **Xiaoxiao Liang**, Ziyang Yu, Yuzhe Ma, Bei Yu, Martin Wong, “Curvilinear Optical Proximity Correction via Cardinal Spline”. *Accepted by Design Automation Conference (DAC)*, 2025.

Luo Yang, **Xiaoxiao Liang**, Yuzhe Ma, “Enabling Robust Inverse Lithography with Rigorous Multi-Objective Optimization”, *International Conference on Computer-Aided Design (ICCAD)*, 2024.

NOTABLE PROJECTS

Mask Optimization in VLSI Manufacturing

Jan. 2022 – Present

- Developed a reinforcement learning-based OPC technique
- Collected layout data and optimized masks using commercial EDA tools
- Independently implemented the proposed framework and completed the experiments
- Published a first-authored paper in *TCAD'24*
- Published a first-authored paper in *DAC'24*

Privacy-Preserving Federated Framework for Medical Image Analysis

Jul. 2021 – Dec. 2021

- Addressed the data heterogeneity problem in federated semi-supervised learning
- Presented a novel FSSL method to model the uneven reliability of Non-IID clients
- Independently implemented the proposed framework and completed the experiments
- Published a first-authored paper in *CVPR'22*

HONORS AND AWARDS

ICCAD Student Scholar Program Grant	2024
DAC Young Fellow	2024
Full Postgraduate Scholarship, HKUST(GZ)	2022-present
Excellent Student Scholarship, HKUST	2021
Outstanding Graduate	2020
<i>Honorable Mentioned</i> in the Mathematical Contest in Modeling and Interdisciplinary Contest in Modeling	2019
Academic Scholarship, HUST	2016-2017

SKILLS

- Languages
English, Chinese
- Programming Language
Python, C/C++, MATLAB
- Deep Learning Framework
PyTorch, TensorFlow