

Guojin Chen

Department of Computer Science and Engineering

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RESEARCH INTERESTS

I am interested in Machine Learning, EDA, VLSI design. My current focuses include:

- Machine Learning in VLSI Design.
- Reinforcement learning, computer vision.

EDUCATION

The Chinese University of Hong Kong

Ph.D. in Computer Science

- Advisor: Prof. Bei Yu

Hong Kong

Aug 2021 – Present

The Chinese University of Hong Kong

M.Sc. in Computer Science

- Advisor: Prof. Bei Yu

Hong Kong

Sep 2019 – Nov 2020

Huazhong University of Science and Technology

Bachelor of Computer Science

Wuhan, China

Sep 2015 – Jun 2019

RELEVANT WORKING EXPERIENCE AWARDS

Tencent Technology Co.Ltd.

Research Intern

SHENZHEN, China

May 2018 – Nov 2018

Scholarship

- Distinguished Academic Performance Scholarship, CUHK. May 2020
- National Encouragement Scholarship, HUST, Ministry of Education, PRC. Nov 2016
- First Class Scholarship, HUST, the highest scholarship in HUST. 2018, 2019

Internship

- First Prize, Tencent SNG Hack Week. Jun 2019
- Excellent Intern, Tencent. Sep 2019

PROJECTS

DAMO : Towards High Accuracy DL-Based OPC With Deep Lithography Simulator. This paper present a novel method for Deep Learning based OPC which results surpass the famous OPC tool Mentor Calibre. The manuscript was accepted by ICCAD2020.

CUDA-OPC : This is a CUDA acceleration project that aims to improve the ILT computation efficiency, it speeds up the lithography process nearly 40 times than before.

SKILLS

Programming C/C++, Python, Ruby, Matlab, L^AT_EX, Bash, Javascript, Rust, Java

Machine Learning Skilled in Pytorch, Tensorflow, and CUDA programming.

Tools Vim, Git, macOS, Linux

TALKS

1. CUDA based Convolution and FFT on OPC. *CUDA Group Presentation.*, CUHK. Mar 2020
2. DLS-DMO: High Accuracy DL-Based OPC With DLS. *CUDA Group Presentation.*, CUHK. May 2020

PUBLICATIONS

- [1] **G. Chen**, W. Chen, Y. Ma, H. Yang, and B. Yu, "DevelSet: Deep neural level set for instant mask optimization," in *Proceedings of the 40th International Conference on Computer-Aided Design, (ICCAD '20)*, Nov. 2021.
- [2] W. Li, **G. Chen**, H. Yang, R. Chen, and B. Yu, "Learning point clouds in eda. (Invited Paper)," in *ACM International Symposium on Physical Design, (ISPD '21)*, Mar. 2021.
- [3] Z. Yu, **G. Chen**, Y. Ma, and B. Yu, "A gpu-enabled level set method for mask optimization," in *IEEE/ACM Proceedings Design, Automation and Test in Europe, (DATE '21)*, Nov. 2020.

- [4] **G. Chen**, W. Chen, Y. Ma, H. Yang, and B. Yu, “DAMO: Deep agile mask optimization for full chip scale,” in *Proceedings of the 39th International Conference on Computer-Aided Design, (ICCAD '20)*, Nov. 2020, pp. 1–9.