Guojin Chen

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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 — Hong Kong
Ph.D. in Computer Science — *Aug 2021 – Present*
- Advisor: Prof. Bei Yu

The Chinese University of Hong Kong — Hong Kong
M.Sc. in Computer Science — *Sep 2019 – Nov 2020*
- Advisor: Prof. Bei Yu

Huazhong University of Science and Technology — Wuhan, China
Bachelor of Computer Science — *Sep 2015 – Jun 2019*

Relevent Working Experience

Tencent Technology Co.Ltd. — SHENZHEN, China
Research Intern — *May 2018 – Nov 2018*

Awards

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, LaTeX, 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] 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.

[2] 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.

[3] **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.