DONGSHENG ZUO

Ph.D. Student ⋄ Microelectronics Thrust

The Hong Kong University of Science and Technology (Guangzhou)

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RESEARCH INTERESTS

- Datapath circuits design
- Artificial intelligence for chip design

EDUCATION

The Hong Kong University of Science and Technology (Guangzhou), Guangzhou, China   Sep. 2022 – Present
Ph.D.   Microelectronics

The Hong Kong University of Science and Technology, Hong Kong SAR   Sep. 2021 – Jul. 2022
M.S.   Electronic Engineering

Harbin Institute of Technology, Harbin, China   Sep. 2017 – Jul. 2021
B.Eng.   Microelectronics
B.Eng.   Big Data Technology

EXPERIENCE

Research Intern   Jul. 2023 – Dec. 2023
Huawei Noah's Ark Lab
Shenzhen, China

Engineering Intern   Mar. 2022 – Jun. 2022
NVIDIA Corporation
Beijing, China

Engineering Intern   Jun. 2021 – Aug. 2021
Cambricon Technologies Co., Ltd.
Beijing, China

Engineering Intern   Jan. 2021 – Apr. 2021
Tensorchip (Beijing) Technologies Co., Ltd.
Beijing, China

Research Assistant   Jun. 2020 – Aug. 2020
University of Florida
Remote

AWARDS AND HONORS

[A1] **Best Paper Award**, ACM/IEEE International Workshop on Machine Learning for CAD (MLCAD), 2023.

PUBLICATIONS

Conference Papers

[C5] **Dongsheng Zuo**, Jiadong Zhu, Chenglin Li, Yuzhe Ma, "UFO-MAC: A Unified Framework for Optimization of High-Performance Multipliers and Multiply-Accumulators", ACM/IEEE International Conference on Computer-Aided Design (**ICCAD**), New Jersey, Oct. 27-31, 2024.

[C4] Zhihai Wang, Jie Wang, **Dongsheng Zuo**, Ji Yunjie, Xilin Xia, Yuzhe Ma, Jianye Hao, Mingxuan Yuan, Yongdong Zhang, Feng Wu, "A Hierarchical Adaptive Multi-Task Reinforcement Learning Framework for Multiplier Circuit Design", The 40th International Conference on Machine Learning (**ICML**), Vienna, Austria, Jul. 2024.

[C3] 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, Jun. 2024.

[C2] 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)**

[C1] **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.