Zhuolun (Leon) HE

The Chinese University of Hong Kong

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RESEARCH INTEREST

Machine learning for logic synthesis and physical design

EDUCATION

The Chinese University of Hong Kong — *Hong Kong*
Ph.D. student in Computer Scinece and Engineering — *Aug. 2019 - Present*
Supervisor: Prof. Bei Yu

Peking University — *Beijing*
Ph.D. student in Computer Architecture — *Sept. 2017 - Sept. 2018*
Supervisor: Prof. Guojie Luo

Peking University — *Beijing*
B.S. in Computer Science and Technology — *Sept. 2013 - Jul. 2017*
Thesis: Architecture Support for Monadic Serial Dynamic Programming Algorithm

PUBLICATION

1. **Zhuolun He**, Ziyi Wang, Chen Bail, Haoyu Yang, and Bei Yu. "Graph Learning-Based Arithmetic Block Identification". *2021 IEEE/ACM International Conference On Computer Aided Design (ICCAD)*, Munich, 2021.

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

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

4. **Zhuolun He**, Yuzhe Ma, Lu Zhang, Peiyu Liao, Ngai Wong, Bei Yu, and Martin D.F. Wong. "Learn to Floorplan through Acquisition of Effective Local Search Heuristics". *IEEE International Conference on Computer Design (ICCD)*, Hartford, CT, 2020.

5. Yuzhe Ma, **Zhuolun He**, Wei Li, Tinghuan Chen, Lu Zhang, and Bei Yu. "Understanding Graphs in EDA: From Shallow to Deep Learning". *ACM International Symposium on Physical Design (ISPD)*, Taipei, 2020. (Invited Paper)

6. Ching-Yun Ko, Cong Chen, **Zhuolun He**, Yuke Zhang, Kim Batselier, and Ngai Wong. "Deep Model Compression and Inference Speedup of Sum-Product Networks on Tensor Trains". *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2019.

7. **Zhuolun He**, Hanxian Huang, Ming Jiang, Yuanchao Bai, and Guojie Luo. "FPGA-based Real-time Super-resolution System for Ultra High Definition Videos". *IEEE International Symposium on Field-Programmable Custom Computing Machines (FCCM)*, Boulder, CO, 2018.

8. **Zhuolun He** and Guojie Luo. "FPGA Acceleration for Computational Glass-Free Displays". *ACM/SIGDA International Symposium on Field-Programmable Gate Arrays (FPGA)*, Monterey, CA, 2017.

WORK EXPERIENCE

SmartMore *Hong Kong*
Research Intern *Jun. 2020 - Present*

The University of Hong Kong *Hong Kong*
Research Assistant *Nov. 2018 - Jul. 2019*

AWARDS

- 3rd Place in ISPD Contest *2020*
- Champion of EDAthon 2018 *2018*
- Outstanding Dissertation Award at EECS, Peking University *2017*

SKILL SET

Programming	Proficient in C/C++, Python Experienced with CUDA, HLS-C, Javascript, MATLAB, Rust
Framework/Tool	Bash, Bootstrap, LaTeX, PyTorch, Taskflow