

YUNTAO LU

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RESEARCH INTERESTS

Artificial intelligence for electronic design automation & hardware design verification/performance modeling.

PUBLICATIONS

Journal Papers

- [J2] **Yuntao Lu**, Chen Bai, Yuxuan Zhao, Ziyue Zheng, Yangdi Lyu, Mingyu Liu, and Bei Yu, “[DeepVerifier: Learning to Update Test Sequences for Coverage-Guided Verification](#)”, ACM Transactions on Design Automation of Electronic Systems (**TODAES**), pp. 1–23, 2025.
- [J1] **Yuntao Lu**, Chao Wang, Lei Gong, and Xuehai Zhou, “[SparseNN: A Performance-efficient Accelerator for Large-scale Sparse Neural Networks](#)”, International Journal of Parallel Programming (**IJPP**), vol. 46, no. 4, pp. 648–659, 2018.

Conference Papers

- [C6] Hongduo Liu, **Yuntao Lu**, Mingjun Wang, Xufeng Yao, and Bei Yu, “[LLM-Assisted Circuit Verification: A Comprehensive Survey](#)”, IEEE/ACM Asia and South Pacific Design Automation Conference (**ASPDAC**), pp. 1–6, 2026.
- [C5] **Yuntao Lu**, Mingjun Wang, Yihan Wen, Boyu Han, Jianan Mu, Huawei Li, and Bei Yu, “[VIRTUAL: Vector-based Dynamic Power Estimation via Decoupled Multi-Modality Learning](#)”, IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), pp. 1–9, 2025.
- [C4] Yuhao Ji, **Yuntao Lu**, Zuodong Zhang, Zizheng Guo, Yibo Lin, and Bei Yu, “[DiffCCD: Differentiable Concurrent Clock and Data Optimization](#)”, IEEE/ACM International Conference on Computer-Aided Design (**ICCAD**), pp. 1–9, 2025.
- [C3] **Yuntao Lu**, Dehua Liang, Siting Liu, Yuhao Ji, Yu Zhang, Xuanqi Chen, Xia Lin, Jinlei Lu, Weihua Sheng, and Bei Yu, “[A Hybrid Optimization Framework for Power-Efficient Pulsed Latch Utilization in Clock Networks](#)”, ACM/IEEE Workshop on Machine Learning CAD (**MLCAD**), pp. 1–8, 2025.
- [C2] **Yuntao Lu**, Lei Gong, Chongchong Xu, Fan Sun, Yiwei Zhang, Chao Wang, and Xuehai Zhou, “[A High-performance FPGA Accelerator for Sparse Neural Networks: Work-in-progress](#)”, International Conference on Compilers, Architecture, and Synthesis for Embedded Systems (**CASES**), pp. 1–2, 2017.
- [C1] Chongchong Xu, Jinhong Zhou, **Yuntao Lu**, Fan Sun, Lei Gong, Chao Wang, Xi Li, and Xuehai Zhou, “[Evaluation and Trade-offs of Graph Processing for Cloud Services](#)”, IEEE International Conference on Web Services (**ICWS**), pp. 420–427, 2017.

EXPERIENCE

- Hong Kong Research Center, Huawei Dec. 2024 – Jun. 2025
Research Intern, Electronic Design Automation Lab, Hong Kong, China
- Integrated new features into physical design workflow to reduce power consumption of clock trees by exploring integer linear programming, dynamic programming, clustering, and reinforcement learning approaches.

- Intel Asia-Pacific Research & Development Ltd. Jan. 2022 – Aug. 2023
Machine Learning Engineer, Intel-Optimized TensorFlow Validation Team, Shanghai, China
 - Maintained the daily model performance validation and monthly release routine for the Intel-Optimized TensorFlow.
- Institute of Computing Technology, Chinese Academy of Sciences Aug. 2018 – May 2020
AI Applied Engineer, Intelligent Processor Research Center, Beijing, China
 - Migrated and deployed optimized AI models and customized user applications on Neural Processing Units and development boards.

EDUCATION

- The Chinese University of Hong Kong, Hong Kong, China Aug. 2023 – Present
Ph.D. Student, Department of Computer Science and Engineering
- The University of Texas at Austin, Texas, USA Aug. 2018 – May 2020
M.S., School of Information
- The University of Science and Technology of China, Anhui, China Sep. 2015 – Jun. 2018
M.S., School of Computer Science and Technology
- The University of Electronic Science and Technology of China, Sichuan, China Sep. 2011 – Jun. 2015
B.Eng, School of Information and Software Engineering

HONORS

- Honor Award of Dream Cup Chinese Youth IC Technology Competition 2022
In recognition of the teams reaching the final round of the competition.
- Postgraduate Studentship of Global Digital Tech Ltd. 2017
University of Science and Technology of China
1,500 CNY in recognition of the postgraduates.
- First Grade Postgraduate Studentship 2015
University of Science and Technology of China
11,000 CNY in recognition of the recommended postgraduates.
- Graduation with Honors 2015
University of Electronic Science and Technology of China
In recognition of the outstanding graduates.
- Undergraduate Studentship of Futong Group 2014
University of Science and Technology of China
8,000 CNY in recognition of the top 2% undergraduates.
- Top Grade Undergraduate Studentship 2013
University of Science and Technology of China
3,000 CNY in recognition of the top 3% undergraduates.
- First Grade Undergraduate Studentship 2012
University of Science and Technology of China
1,500 CNY in recognition of the top 4% undergraduates.