Yao Lai

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Education

- **The University of Hong Kong** — Hong Kong S.A.R.
  Doctor of Philosophy in Computer Sciences; HKU-MMLab; Supervisor: Prof. Ping Luo — *Sept. 2021 – July 2025*
- **Tsinghua University** — Beijing, China
  Master of Engineering in Software Engineering — *Sept. 2017 – Jun. 2020*
- **Fudan University** — Shanghai, China
  Bachelor of Engineering in Electronics Engineering — *Sept. 2013 – Jun. 2017*

Research Experience

- **The University of Texas at Austin** — Austin, Texas, United States
  Research Student; UTDA Lab; Supervisor: Prof. David Z. Pan — *Feb. 2024 – July 2024*

Publication

- **Yao Lai**, Sungyoung Lee, Guojin Chen, Souradip Poddar, Mengkang Hu, David Z. Pan, Ping Luo. "AnalogCoder: Analog Circuit Design via Training-Free Code Generation." AAAI Conference on Artificial Intelligence (AAAI), 2024.
- **Yao Lai**, Jinxin Liu, David Z. Pan, Ping Luo. "Scalable and Effective Arithmetic Tree Generation for Adder and Multiplier Designs." Advances in Neural Information Processing Systems (NeurIPS), 2024.
- **Yao Lai**, Jinxin Liu, Zhentao Tang, Wang Bin, Jianye Hao, Ping Luo. "Chipformer: Transferable chip placement via offline decision transformer." International Conference on Machine Learning (ICML), 2023.
- **Yao Lai**, Yao Mu, Ping Luo. "Maskplace: Fast chip placement via reinforced visual representation learning." Advances in Neural Information Processing Systems (NeurIPS), 2022.
- **Yao Lai**, Guolou Ping, Xiaojun Ye. Lai, Yao, et al."Opensmax: Unknown domain generation algorithm detection." European Conference on Artificial Intelligence (ECAI), 2020.
- Souradip Poddar, Youngmin Oh, **Yao Lai**, Hanqing Zhu, Bosun Hwang, David Z Pan. "INSIGHT: Universal neural simulator for analog circuits harnessing autoregressive transformers." Design Automation Conference (DAC), 2025.
- **Yao Lai**, Ming'e Jing. "On-chip network source routing algorithm based on A* algorithm optimization." Journal of Fudan University, 2018. (in Chinese)
- Lan Zhang, **Yao Lai**, Xiaojun Ye. "Attention Mechanism Based Detection of Malware Call Sequences." Computer Science, 2019. (in Chinese)

Programming Skills

- **Languages**: C/C++, Python, SQL, Java, Perl, MATLAB, Verilog HDL
- **Tools**: Pytorch, Tensorflow, Scikit-learn

Language Skills

- **English**: **Advanced** TOEFL-iBT: 102
- **Japanese**: **Intermediate** JLPT-N2 (Japanese Language Proficiency Test)
- **Cantonese**: **Intermediate**

Work Experience

- **Huawei** — Beijing, China
  Software Engineering Intern — *July 2022 – Feb. 2023*
  - **Responsibility**: Assisted with software engineering and research tasks for circuit design.
- **ByteDance** — Beijing, China
  Software Engineer — *July 2020 – July 2021*
  - **Responsibility**: Support page parsing function in search engine.
- **Google** — Beijing, China
  Software Engineering Intern — *June 2019 – Sept. 2019*
  - **Responsibility**: Migrated one query language of knowledge graph to a new language.
- **NVIDIA** — Shanghai, China
  VLSI Physical Design Intern — *Jan. 2016 - May 2016*
  - **Responsibility**: Written VLSI flow automation scripts for VLSI Test Analysis.