Chaojian Li

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EDUCATION

Georgia Institute of Technology — Atlanta, GA, USA
Ph.D. in Computer Science, Advisor: Dr. Yingyan Lin — 2023–Current

Rice University — Houston, TX, USA
Ph.D. Program in Electrical and Computer Engineering, Advisor: Dr. Yingyan Lin — 2019–2023

Tsinghua University — Beijing, China
B.S. in Engineering of Measurement, Control Technology and Instruments, Ranking: 7/45 — 2015–2019

WORKING EXPERIENCE

Meta Reality Labs — Menlo Park, CA, USA
Research Engineer Intern at Mobile Vision — 2021-2022

– Corresponding publications: [1], [2]

RESEARCH INTEREST

- Neural Rendering [2]–[4]

- Neural Architecture Search (NAS) [1], [5]–[7]

- Efficient Deep Neural Networks (DNNs) Training [8]–[10]

- DNNs Accelerators [11], [12]

PUBLICATIONS

[1] B. Wu, **C. Li**, H. Zhang, X. Dai, P. Zhang, M. Yu, J. Wang, Y. Lin, and P. Vajda, "FBNetV5: Neural Architecture Search for Multiple Tasks in One Run", *arXiv preprint arXiv:2111.10007*, 2021, [Paper].

[2] **C. Li**, B. Wu, A. Pumarola, P. Zhang, Y. Lin, and P. Vajda, "INGeo: Accelerating i nstant n eural scene reconstruction with noisy geo metry priors", in *European Conference on Computer Vision Workshop*, Springer, 2022, pp. 686–694, [Paper].

[3] S. Li, **C. Li**, W. Zhu, B. Yu, Y. Zhao, C. Wan, H. You, H. Shi, and Y. Lin, "Instant-3D: Instant neural radiance field training towards on-device ar/vr 3d reconstruction", in *Proceedings of the 50th Annual International Symposium on Computer Architecture*, 2023, pp. 1–13, [Paper].

[4] **C. Li**, S. Li, Y. Zhao, W. Zhu, and Y. Lin, "RT-NeRF: Real-time on-device neural radiance fields towards immersive ar/vr rendering", in *Proceedings of the 41st IEEE/ACM International Conference on Computer-Aided Design*, 2022, pp. 1–9, [Paper].

[5] **C. Li**, Z. Yu, Y. Fu, Y. Zhang, Y. Zhao, H. You, Q. Yu, Y. Wang, and Y. Lin, "HW-NAS-Bench: Hardware-Aware Neural Architecture Search Benchmark", in *International Conference on Learning Representations (ICLR)*, 2021, [Paper], [Code].

[6] Y. Fu, Y. Zhang, **C. Li**, Z. Yu, and Y. Lin, "A3C-S: Automated Agent Accelerator Co-Search towards Efficient Deep Reinforcement Learning", in *Design Automation Conference (DAC 2021)*, 2021, [Paper].

[7] **C. Li**, W. Chen, J. Yuan, Y. C. Lin, and A. Sabharwal, "ERSAM: Neural architecture search for energy-efficient and real-time social ambiance measurement", in *ICASSP 2023-2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, 2023, pp. 1–5, [Paper].

[8] **C. Li**, T. Chen, H. You, Z. Wang, and Y. Lin, "HALO: Hardware-Aware Learning to Optimize", in *European Conference on Computer Vision (ECCV)*, 2020, [Paper].

[9] H. You, **C. Li**, P. Xu, Y. Fu, Y. Wang, X. Chen, Y. Lin, Z. Wang, and R. G. Baraniuk, "Drawing Early-Bird Tickets: Toward More Efficient Training of Deep Networks", in *International Conference on Learning Representations (ICLR)*, 2020, [Paper], [Code].

[10] **C. Li**, W. Chen, Y. Gu, T. Chen, Y. Fu, Z. Wang, and Y. Lin, "DANCE: DAta-Network Co-optimization for Efficient Segmentation Model Training and Inference", *ACM Transactions on Design Automation of Electronic Systems*, Jan. 7, 2022, [Paper].

[11] Y. Zhao, **C. Li**, P. X. Yue Wang, Y. Zhang, and Y. Lin, "DNN-Chip Predictor: An Analytical Performance Predictor for DNN Accelerators with Various Dataflows and Hardware Architectures", in *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2020, [Paper].

[12] H. Wang, Y. Zhao, **C. Li**, Y. Wang, and Y. Lin, "A New MRAM-based Process In-Memory Accelerator for Efficient Neural Network Training with Floating Point Precision", in *IEEE International Symposium on Circuits and Systems (ISCAS)*, 2020, [Paper].

TEACHING

- **Teaching Assistant** at Georgia Institute of Technology — Fall 2023
  Processor Design (CS 3220)
- **Teaching Assistant** at Rice University — Spring 2022
  Analog Integrated Circuits (ELEC 442)
- **Teaching Assistant** at Rice University — Fall 2020, Fall 2021
  Embedded Machine Learning (ELEC 515)
- **Teaching Assistant** at Rice University — Fall 2020
  Fundamentals of Computer Engineering (ELEC 220)

SCHOLARSHIPS AND AWARDS

- 1st/150 Participating Teams in TinyML Design Contest at ICCAD (as Leader) — ACM/IEEE, 2022
- Comprehensive Excellence Scholarship Sponsored by XCMG Corp. — Tsinghua University, 2018
- The "Star of Department of Precision Instrument" (6/ 250 students) — Tsinghua University, 2018
- Member of "Spark 11th" Scientific Innovation Program (50/3000 students) — Tsinghua University, 2017
- Comprehensive Excellence Scholarship Sponsored by Hannon Corp. — Tsinghua University, 2017
- Comprehensive Excellence Scholarship Sponsored by Takada Corp. — Tsinghua University, 2016

EXTRACURRICULAR ACTIVITIES

- **Club Leader** at Skyworks Club, Tsinghua University — 2018–2019
  Highlight: Received $10,000 sponsorship from Boeing Co. yearly
- **Club Leader** at DPI Student Science and Technology Club, Tsinghua University — 2017–2019
  Highlight 1: Established and managed a student laboratory for all the students in the department
  Highlight 2: Collaborated with two faculty instructors to manage a $100,000 funding for the club