



Jiacheng Chen

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South China University of Technology

EDUCATION

• South China University of Technology

2021-2025

B.S. in Computer Science and Technology

3.94 GPA/0.6% (Rank: 1/165)

RESEARCH INTEREST

Formal Theorem Proving; Neurosymbolic AI; NLP; Meta black-box optimization; Reinforcement learning;

PUBLICATIONS

1. Reasoning in Reasoning: A Hierarchical Framework for Neural Theorem Proving

Ziyu Ye, **Jiacheng Chen**, Jonathan Light, Yifei Wang, Jiankai Sun, Mac Schwager, Philip Torr, Guohao Li, Yuxin Chen, Kaiyu Yang, Yisong Yue, Ziniu Hu.

NeurIPS 2024 Workshop MATH-AI

2. SYMBOL: Generating Flexible Black-Box Optimizers through Symbolic Equation Learning

Jiacheng Chen*, Zeyuan Ma*, Hongshu Guo, Yining Ma, Jie Zhang, Yue-Jiao Gong.

The Twelfth International Conference on Learning Representations (ICLR), 2024.

3. LLaMoCo: Instruction Tuning of Large Language Models for Optimization Code Generation

Zeyuan Ma, Hongshu Guo, **Jiacheng Chen**, Guojun Peng, Zhiguang Cao, Yining Ma, Yue-Jiao Gong.

pre-print

4. MetaBox: A Benchmark Platform for Meta-Black-Box Optimization with Reinforcement Learning

Zeyuan Ma, Hongshu Guo, **Jiacheng Chen**, Zhenrui Li, Guojun Peng, Yue-Jiao Gong, Yining Ma, and Zhiguang Cao.

Advances in Neural Information Processing Systems (NeurIPS), 2023. (Oral)

5. Neural Exploratory Landscape Analysis

Zeyuan Ma, **Jiacheng Chen**, Hongshu Guo, Yue-Jiao Gong.

pre-print

6. Auto-configuring Exploration-Exploitation Tradeoff in Evolutionary Computation via Deep Reinforcement Learning

Zeyuan Ma*, **Jiacheng Chen***, Hongshu Guo, Yining Ma, Yue-Jiao Gong.

The Genetic and Evolutionary Computation Conference (GECCO), 2024.

7. Deep Reinforcement Learning for Dynamic Algorithm Selection: A Proof-of-Principle Study on Differential Evolution

Hongshu Guo, Yining Ma, Zeyuan Ma, **Jiacheng Chen**, Xinglin Zhang, Zhiguang Cao, Jun Zhang, Yue-Jiao Gong.

IEEE Transactions on Systems, Man, and Cybernetics: Systems (TSMC).

RESEARCH EXPERIENCE

• Summer Undergraduate Research Fellow at Caltech

2024

- Theme: Formal Theorem Proving based on Machine Learning.
- Projects: "Reasoning in Reasoning" and one under working project on AI4Math.
- Advised by: Prof. Yisong Yue and Dr. Kaiyu Yang

• Student research project at South China University of Technology

2022-2023

- Theme: Meta Black Box Optimization.
- Projects: SYMBOL, MetaBox and etc.
- Advised by: Prof. Yue-Jiao Gong

TECHNICAL SKILLS

Coding: Python, Rust, Lean, C++, L^AT_EX, ...

Frameworks: Pytorch, Ray, ...

AWARDS

- Caltech Summer Undergraduate Research Fellowship (SURF) *2024*
- China National Scholarship *2023-2024*
- China National Scholarship *2021-2022*