

Zhi Hong

automathhz@gmail.com Google Scholar GitHub

Education

- **South China University of Technology (SCUT)** Guangzhou, China
Dual-Degree: B.Eng. in Automation & B.Sc. in Mathematics *Sep 2022 – Jul 2026*
 - **GPA:** 3.84/4.0 **Rank:** 3/24
 - **Majors:** Control Science & Engineering + Mathematics and Applied Mathematics
 - **Relevant Coursework:** Mathematical Analysis, Advanced Algebra, Probability Theory, Statistics, Automatic Control, Machine Learning, Deep Learning, Reinforcement Learning

Research Interests

- **Large Language Models:** Embodied Agents, Multi-Agent Systems, Prompt Optimization
- **Machine Learning:** Bandits, Reinforcement Learning, Federated Learning

Publications

- **MASPOB: Bandit-Based Prompt Optimization for Multi-Agent Systems with Graph Neural Networks**
Zhi Hong*, Qian Zhang*, Jiahang Sun, Zhiwei Shang, Mingze Kong, Xiangyi Wang, Yao Shu[†], Zhongxiang Dai[†]
ICML 2026 (Spotlight, Top 2.2% of 23,918 submissions)

Preprints & Under Review

- **AgentSpec: Understanding Embodied Agent Scaffolds Through Controlled Composition**
Jixuan Chen, Jianzhi Shen, Haoqiang Kang, **Zhi Hong**, Qingyi Jiang, Soham Bose, Yiming Zhang, Leon Leng, Amit Vyas, Lingjun Mao, Siru Ouyang, Kun Zhou, Lianhui Qin · Submitted to *EMNLP 2026* · arXiv:2606.14674
- **FedPOB: Sample-Efficient Federated Prompt Optimization via Bandits**
Pingchen Lu*, **Zhi Hong***, Zhiwei Shang, Zhiyong Wang, Yikun Ban, Yao Shu, Min Zhang, Shuang Qiu, Zhongxiang Dai[†]
arXiv:2509.24701
- **Workflow-R1: Group Sub-sequence Policy Optimization for Multi-turn Workflow Construction**
Mingze Kong, Zikun Qu, Zhongquan Zhou, Pengyu Liang, Xiang Li, Zhiwei Shang, **Zhi Hong**, Kaiyu Huang, Zhiyong Wang, Zhongxiang Dai[†] · arXiv:2602.01202
- **Linear and Neural Dueling Bandits with Delayed Feedback**
Xiangyi Wang, Pingchen Lu, Jie Mao, Mingze Kong, **Zhi Hong**, Zhiyong Wang, Zhongxiang Dai · arXiv:2605.26554

Research Experience

- **Research Intern – LLM Agents** Jul 2026 – Present
Advisor: Bei Liu, Microsoft Research Asia (MSRA), Visual Computing Group
 - Conducted research on llm agents, including social simulation and automated research
- **Research Intern – Embodied Agents** Jan 2026 – Jul 2026
Advisor: Prof. Lianhui Qin, Computer Science and Engineering, UC San Diego
 - Conducted research on modular architectures to enhance capabilities of embodied LLM-based agents
 - Developed a specification framework for composing reusable policy components in embodied agents
- **Research Assistant – Large Language Models** Sep 2024 – Jul 2026
Advisor: Prof. Zhongxiang Dai, School of Data Science, CUHK-Shenzhen
 - Conducted research on multi-agent systems to enhance intelligence in large language models
 - Developed collaborative frameworks for multi-user multi-agent coordination

Honors & Awards

- **First Prize** – China Mathematics Competition (CMC, Category A, Province Level) 2024
- **National Encouragement Scholarship** – Ministry of Education, China 2023 – 2025
- **Merit Student** – South China University of Technology 2023 – 2025

Skills & Interests

- **Languages:** English (TOEFL MyBest 101), Chinese (Native) **Programming:** Python, LaTeX, C++, MATLAB
- **Research Skills:** Reinforcement Learning, Deep Learning, Federated Learning, Bandit Algorithms
- **Interests:** Traveling, Basketball, Swimming