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Room 3654, Lift 31/32, Academic Building

Department of Engineering

The Hong Kong University of Science and Technology  
(HKUST)

## RESEARCH INTERESTS

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- Computer Architecture, Memory Systems, Workload Synthesis
- Using Machine Learning for System Evaluation and Simulation Acceleration
- Multivariate Time-Series Modeling, Trace-Based Simulation, System Optimization

## Education

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2021–on **PhD in Electronic & Computer Engineering**, HKUST.

2017–2021 **BSc in Computer Science (Honors Science Program)**, Xi'an Jiaotong University.

2019–2020 **Berkeley International Study Program (BISP)**, UC Berkeley.

2019–2019 **International Summer Enrichment Program**, University of Alberta.

## Publication Highlights

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2023 **Memory Workload Synthesis Using Generative AI.**

Proceedings of the International Symposium on Memory Systems (MEMSYS), 2023.

Chengao, SHI; F. Jiang, Z. Liu, C. Ding, and J. Xu. doi:[10.1145/3631882.363188](https://doi.org/10.1145/3631882.363188).

**Best Paper Award** winner.

## Research & Engineering Experience

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2022–2023 **TA for course ELEC5300 (Stochastic Processes)**

Role: Teaching Assistant, HKUST

2022–2023 **TA for course ELEC2350 (Introduction to Computer Organization and Design)**

Role: Teaching Assistant, HKUST

2020–2020 **Developed prototypes in General Development Department to optimize pipeline concurrency on in-house accelerator hardware.**

*Assisted in analyzing memory traffic bottlenecks for server-grade SoCs, using C++ for trace analysis.*

Role: Intern Engineer, Huawei R&D, Xi'an

2019–2021 **Worked with Prof. SUN Heli on network processes and link recommendations.**

*Co-led small projects involving machine learning for NLP system used in English literature.*

Role: Undergraduate Researcher, Xi'an Jiaotong University

## Technical Skills

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- **Programming:** C/C++, Python, Rust, Shell scripting
- **Tools/Tech:** gem5, ChampSim, PyTorch, Docker, Git,  $\LaTeX$
- **Research:** Multivariate time-series modeling, memory system simulation, statistical data analysis
- **Languages:** English (fluent), Chinese (native)