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Sitian Chen

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RESEARCH INTERESTS

My research interests focus on **system for Machine Learning, processing-in-memory, and high-performance computing**. My work aims to improve the cost-efficiency of cutting-edge applications in machine learning systems, including retrieval-augmented generation (RAG), vector search, and recommender systems. By exploring new hardware solutions and optimizing system-level integration, my goal is to bridge the gap between rapidly evolving machine learning models and the underlying computational infrastructure. In the end, I aim to enable more efficient, accessible, and robust AI systems for real-world deployment.

EDUCATION

Ph.D student of Department of Computer science

Hong Kong Baptist University

Advisors: Prof. Amelie Chi Zhou

September 2024 - 2028 (expected)

HongKong, China

Bachelor of Computer science and Technology

Shenzhen University

Average GPA: 4.05/4.50 (top 5%)

September 2019 - June 2023

Shenzhen, China

EXPERIENCE

Summer School of Data Science, Learning and Optimization (DataSLO)

the University for Foreigners of Perugia

June 2025

Perugia, Italy

Research Assistant

Hong Kong Baptist University

September 2023 - September 2024

HongKong, China

HONORS AND AWARDS

• Best Poster Award, HKBU-BNU Joint Postgraduate Research Symposium, 2025

• Outstanding Graduates, CSSE, SZU, 2023 (Top 5%)

• Second prize of Learning Star(three times in 2020, 2021, 2022), SZU (Top 4%)

• PAC Winner of the national preliminary competition, 2021 (Top 16 teams)

PUBLICATIONS

First-Author

[1] **Sitian Chen**, Amelie Chi Zhou, Yusen Li, Min Si and Pavan Balaji. GPAQuant: Accelerating Personalized Recommendation with Group-Wise and PIM-Aware Quantization. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, 2026

[2] **Sitian Chen**, Amelie Chi Zhou, Yucheng Shi, Xin Yao. UpANNS: Enhancing Billion-Scale ANNS Efficiency with Practical PIM Hardware. **In SC' 2025**

[3] **Sitian Chen**, Haobin Tan, Amelie Chi Zhou, Yusen Li, Pavan Balaji. UpDLRM: Accelerating Personalized Recommendation using Real-World PIM Architecture. **In DAC' 2024**

Co-Author

- [1] Guofan Yu, ***Sitian Chen***, Zhenheng Tang, Xiaowen Chu, Amelie Chi Zhou. SNI-GNN: SmartNIC-Assisted Full-Graph GNN Training with In-Network Embedding Prediction. **In ICDE' 2026**
- [2] Wenjun Yu, ***Sitian Chen***, Amelie Chi Zhou, Cheng Chen. Near-Zero-Overhead Freshness for Recommendation Systems via Inference-Side Model Updates. **In HPCA' 2026**
- [5] Xiao Y, ***Sitian Chen***, Amelie Chi Zhou, Shuhao Zhang, Yi Wang, Rui Mao, Xuan Yang. Low-Latency Video Conferencing System for Geo-Distributed Data Centers. **In IWQoS' 2024**

TEACHING

Teaching Assistant

Cloud Computing
Research Methodology
Operating System

Spring 2026
Fall 2025
TA Performance Award | Spring 2025