

# TIANAO GE

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## EDUCATION

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- **The Hong Kong University of Science and Technology (Guangzhou)** Sep. 2022 – Present  
Ph.D. in Microelectronics  
Advisor: Dr. Xiaowen Chu and Dr. Hongyuan Liu
- **University of Pittsburgh** Jan. 2024 – June 2024  
Visiting Student, Department of Computer Science  
Hosted by: Dr. Xulong Tang
- **Sun Yat-sen University** Sep. 2020 – June 2022  
Master in Computer Science  
Advisor: Dr. Xianwei Zhang
- **Wuhan University of Technology** Sept. 2016 – June 2020  
B.E. in Software Engineering

## PUBLICATIONS

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| <b>MICRO 2025</b><br><i>CCF A</i>                               | <b>Tianao Ge</b> , Xiaowen Chu, Hongyuan Liu, “Interleaved Bitstream Execution for Multi-Pattern Regex Matching on GPUs”, <i>In Proceedings of the 58th Annual IEEE/ACM International Symposium on Microarchitecture</i> , 2025.   |
| <b>ACM TOCS</b><br><i>CCF A</i>                                 | <b>Tianao Ge</b> , Tong Zhang, Hongyuan Liu, “Towards Scalable and Non-blocking Automata Processing on GPUs with ngAP”, <i>ACM Transactions on Computer Systems</i> , 2025.  |
| <b>ASPLOS 2024</b><br>🏆 <i>Best Paper Award</i><br><i>CCF A</i> | <b>Tianao Ge</b> , Tong Zhang, Hongyuan Liu, “ngAP: Non-blocking Large-scale Automata Processing on GPUs”, <i>In Proceedings of the 28th ACM International Conference on Architectural Support for Programming Languages and Operating Systems</i> , 2024.                     |
| <b>LCTES 2022</b><br><i>CCF B</i>                               | <b>Tianao Ge</b> , Zewei Mo, Kan Wu, Xianwei Zhang, Yutong Lu, “RollBin: Reducing Code-Size via Loop Rerolling at Binary Level”, <i>In Proceedings of the 23rd ACM SIGPLAN/SIGBED International Conference on Languages, Compilers, and Tools for Embedded Systems</i> , 2022. |
| <b>CCGrid 2022</b><br><i>CCF C</i>                              | Yue Weng, <b>Tianao Ge</b> , Xi Zhang, Xianwei Zhang, Yutong Lu, “RAISE: Efficient GPU Resource Management via Hybrid Scheduling”, <i>In Proceedings of the 22nd IEEE International Symposium on Cluster, Cloud and Internet Computing</i> , 2022.                             |

## EXPERIENCE

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- **University of Pittsburgh** Jan. 2024 – June 2024  
*Visiting Student, hosted by: Prof. Xulong Tang*  
Pittsburgh, PA, USA  
Characterized and optimized the gather-matmul-scatter workload.
- **Intel** May 2021 - Oct. 2021  
*Software Engineer Intern*  
Shanghai, China  
Developing and optimizing deep learning compilers for Intel CPU.
- **SenseTime** Mar. 2021 - Apr. 2021  
*Researcher Intern*  
Shenzhen, China  
Worked on GPU computing on mobile devices.
- **Tencent** Dec. 2019 - July 2020  
*Software Engineer Intern*  
Shanghai, China  
Developed and optimized a multi-platform real-time 3D graphic engine.

## SELECTED HONORS & AWARDS

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- **ASPLOS'24 Student Travel Grant**, SIGPLAN 2024
- **ASPLOS'24 Best Paper Award**, ACM 2024
- **Third-Prize Scholarship**, Sun Yat-sen University 2021
- **Outstanding Graduate**, Wuhan University of Technology 2020
- **Excellent Student**, Wuhan University of Technology 2019
- **First-Prize Scholarship** (Top 5%), Wuhan University of Technology 2018

## TEACHING

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Teaching Assistant of MICS6000R: Advanced Compilers. Spring 2024, HKUST(GZ).

Teaching Assistant of MICS6000J: GPU Architectures and Programming. Fall 2023, HKUST(GZ).

Teaching Assistant of DCS5637: Advanced Computer Architecture . Fall 2021, SYSU.

## PROFESSIONAL SERVICE

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Artifact Evaluation Committee: ASPLOS 2024 2025, MICRO 2023, EuroSys 2023

Sub-Reviewer: ICCD 2023 2025