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Site Fan

EDUCATION

Southern University of Science and Technology (SUSTech)   Shenzhen, China
Bachelor of Engineering in Computer Science and Technology   2021 - 2025
- GPA: 3.90/4.00, Rank: 7/199.
- Honored Degree, Turing Class of 2021, Rank: 1/29.

PUBLICATIONS

1. Yi Chen, **Site Fan**, Rishika Varma Kalidindi, Po-Yu Hou, Maizhe Zhang, Peng Huang. **LiteLib: Containing Failure Impact for Stateful Applications with Compact Replicas.** *23rd USENIX Symposium on Networked Systems Design and Implementation*, May 2026. [Submitted to NSDI'26]

2. Haibin Lai, Sicheng Zhou, **Site Fan**, Zhuozhao Li. **ParaCOSM: Parallel Framework for Accelerating Continuous Subgraph Matching.** *54th International Conference on Parallel Processing (ICPP)*, Sep 2025.
[Paper]   [Presentation]   [GitHub]

RESEARCH

Research Intern at HPC Lab, SUSTech   Shenzhen, China
Advised by **Prof. Zhuozhao Li**   2024/08–2025/04
- Developed ParaCOSM, a parallel framework that accelerates existing CSM algorithms on multi-core CPUs.
- Designed **inner-update parallelism** for fine-grained task decomposition and balanced search on large query graphs.
- Implemented a **safe-update mechanism** enabling concurrent update verification while preserving correctness.
- Achieved $1.2\times$–$30.2\times$ **speedups**, up to $100\times$ **faster** update handling, and higher success rates on large queries.

Research Intern at Order Lab, University of Michigan   Ann Arbor, United States
Advised by **Prof. Ryan Huang**   2024/03–2024/08
- Designed and implemented mechanisms for **compact replicas** that preserve only critical state and core operations to maintain bounded service continuity during failures.
- Built transparent state maintenance and failover support that enables seamless switching to compact replicas while logging updates for post-recovery replay.
- Integrated into 5 production-scale datacenter applications; achieved $50\times$ **faster recovery, 50%+ request serving** during failures, and prevented cascading/metastable failures with only **2% code size**.

Research Intern at Teecert Labs, SUSTech   Shenzhen, China
Advised by **Prof. Yinqian Zhang**, in collaboration with Ant Group   2023/06–2024/01
- **Exception Handling and Stack Unwinding for Asterinas OS Kernel** [GitHub]
- Implemented kernel-level **stack unwinding** enabling structured exception handling and fault recovery.
- Supported debugging and reliability improvements for Asterinas.

Research Intern at EMI Group, SUSTech   Shenzhen, China
Advised by **Prof. Ran Cheng**   2022/06–2022/09
- **EvoX: Distributed GPU-accelerated Framework for Scalable Evolutionary Computation** [GitHub]
- Implemented GPU-accelerated multi-objective evolutionary algorithms.
- Improved scalability for **50+ algorithms** and **100+ benchmark tasks** with optimized GPU kernels.

PROJECTS

Compiler Project — SPL Compiler [GitHub]   2023/09 – 2024/01

Implementation of an instructional compiler targeting the MIPS32 architecture.

- Implemented a complete compilation toolchain—including lexing, parsing, semantic analysis, and IR generation—using Bison/Flex, producing structured MIPS32 assembly.

Operating Systems Project — GAS File System [GitHub]   2023/05 – 2023/06

Design and implementation of a minimal Linux file system as a loadable kernel module.

- Developed core VFS components including inode/dentry operations and file abstractions, providing an instructional platform for exploring Linux filesystem internals.

Computer Architecture Project — Feather CPU [GitHub]   2023/04 – 2023/06

Hardware implementation of a single-cycle RISC-V (RV32I) CPU on FPGA (Minisys).

- Designed datapath, control logic, and ISA execution pipeline following *Computer Organization and Design*, and validated correctness across RV32I workloads.

ACTIVITIES

Teaching Assistant | Advanced Computer Program Design   2024/09 – 2025/01
- Led lab sessions and contributed to assignment and project design.
- Introduced C, C++, and Rust, with emphasis on their use in systems programming and high-performance computing.

Teaching Assistant | C/C++ Program Design   2023/09 – 2024/01
- Led lab sessions and designed quizzes, assignments, and programming projects.
- Provided foundational training in C/C++ and practical systems programming experience.

Teaching Assistant | Advanced Database Summer Workshop   2023/07 – 2023/08
- Assisted instructor Stéphane Faroult and provided technical translation during lab sessions.
- Supported hands-on training in modern industrial database techniques.

President | 2021 Turing Class, Dept. CSE   2022/08 – Present
- Organized academic and research activities; supported student progress; coordinated with faculty on class-wide affairs.

Outstanding Peer Mentor | Shude College, SUSTech   2022/05 – Present
- Advised undergraduates on major selection, academic planning, mental well-being, and foundational computing skills.

AWARDS AND HONORS

- **Top 10 Undergraduate Graduates**, SUSTech   2025
- **National Scholarship**, SUSTech (9 out of 4000)   2023
- **School Motto *Truth* Series Scholarship**, SUSTech (3 out of 4000)   2023
- **Top 10 Outstanding Volunteers**, SUSTech   2023
- **Outstanding Teaching Assistant**, SUSTech   2023
- **First Prize of Outstanding Student Scholarship**, SUSTech   2022,2023,2024

SKILLS

Languages:
- Chinese (Native)
- English (Advanced, TOEFL 110: R30/L30/S23/W27, GRE 327: Q170/V157)

Programming: Advanced: C/C++, Python, Java; Familiar: Rust, CUDA; Basic knowledge: Golang, TypeScript. Language-agnostic and adaptable to research targets.

Development: Experienced in Git, Linux Kernel development, parallel programming interfaces and microservice infrastructures.

DevOps: Experienced in containerization, microservices deployment and maintenance, databases and Hadoop filesystem.