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Site Fan

Education

Northeastern University — Boston, MA, USA
Ph.D. in Computer Science — 2026 - Present

Southern University of Science and Technology (SUSTech) — Shenzhen, China
B.Eng. in Computer Science and Technology — 2021 - 2025

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. [One-shot Revision in 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] [Code]

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×–30.2× speedups, up to 100× 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× faster recovery**, **50%+ request serving** during failures, and prevented cascading/metastable failures with only **2% code size**.

Teaching

Teaching Assistant | Advanced Computer Program Design — 2024/09 – 2025/01

- Led lab sessions and designed assignments on C, C++, and Rust for systems and high-performance programming.

Teaching Assistant | C/C++ Program Design — 2023/09 – 2024/01

- Led lab sessions and designed quizzes, assignments, and programming projects in C/C++.

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