

Dayi Fan

PERSONAL INFO

Email : fan.1090@osu.edu
Homepage : <https://davis-fan.github.io/>
GitHub : <https://github.com/Davis-Fan>
Address: Columbus, Ohio, USA

EDUCATION

- 2022.01-CURRENT Ph.D. student in Computer Science and Engineering,
The Ohio State University, USA
Advised by Prof. Xiaodong Zhang
Topic: Accelerations for complex and irregular data-centric algorithms with high scalability
- 2021.01-2021.05 Undergraduate Exchange in School of Computing,
National University of Singapore, Singapore
Advised by Prof. Trevor E. Carlson
Topic: Spike neural network for LSTM
- 2017.09-2021.07 B.Eng. in Microelectronics Science and Engineering,
Southern University of Science and Technology, China
Advised by Prof. Quan Chen
Topic: RRAM-based neural network optimizations

RESEARCH INTEREST

My research focuses on parallel computing, algorithm engineering, and data management acceleration in computer systems.

By leveraging modern hardware accelerators (e.g., GPUs), my work aims to significantly enhance computational throughput and efficiency in large-scale systems, addressing key challenges in data-driven fields such as big data analytics, machine learning, and scientific computing.

My research interests also extend to the interaction between AI and computer systems. I am open to addressing AI-driven challenges in system design and databases, such as accelerating model training, developing intelligent storage solutions, and enhancing data retrieval efficiency.

PUBLICATIONS

- 2025 **X-Blossom: Massive Parallelization of Graph Maximum Matching**
Dayi Fan, Rubao Lee, Xiaodong Zhang
The 51st International Conference on Very Large Databases (VLDB 2025)
- 2024 **RR-Compound: RDMA-Fused gRPC for Low Latency, High Throughput, and Easy Interface**
Liang Geng, Hao Wang, Jingsong Meng, **Dayi Fan**, Sami Ben-Romdhane, Hari Kadayam Pichumani, Vinay Phegade, Xiaodong Zhang
IEEE Transactions on Parallel and Distributed Systems (TPDS 2024)
- 2024 **X-TED: Massive Parallelization of Tree Edit Distance**
Dayi Fan, Rubao Lee, Xiaodong Zhang
The 50th International Conference on Very Large Databases (VLDB 2024)

ACADEMIC PERFORMANCE

Postgraduate GPA: 3.951/4.000

Undergraduate GPA: 3.90/4.00

June 2021 Excellent Graduate Award
Southern University of Science and Technology

2017-2020 First Class Student Scholarship (Top 5%, three years)
Southern University of Science and Technology

TEACHING EXPERIENCE

Spring 2022 – Spring 2024 Teaching Assistant in CSE 3421: Computer Architecture

ADDITIONALS

Languages: English, Chinese, Cantonese

Music: Cello and Piano Player

Enthusiast: Photography and Cooking