

Xiangyun Ding

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Education

University of California, Riverside

2023/09 - Present

Ph.D student, Department of Computer Science

Advisers: [Prof. Yan Gu](#) and [Prof. Yihan Sun](#)

Tsinghua University

2016/08 - 2020/06

Bachelor of Engineering, Department of Computer Science and Technology

Advisers: [Prof. Wenjian Yu](#)

Awards and Honors

- 2025 **5'th Place** in SIGMOD 2025 Programming Contest [🔗](#)
- 2024 **Outstanding Paper Award**, ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)
- 2023 **Best Paper Award**, European Symposium on Algorithms (ESA)
- 2023 **Dean's Distinguished Fellowship**, UC Riverside
- 2015 **Silver Medal**, Chinese 32'th National Olympiad in Informatics (CCF NOI 2015)

Publications

- 2025 *New Algorithms for Incremental Minimum Spanning Trees and Temporal Graph Applications* [🔗](#)
Xiangyun Ding, Yan Gu, Yihan Sun.
In *SIAM Conference on Applied and Computational Discrete Algorithms (ACDA)*, 2025.
- 2024 *Parallel and (Nearly) Work-Efficient Dynamic Programming* [🔗](#)
Xiangyun Ding, Yan Gu, Yihan Sun.
In *36th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, 2024. **Outstanding paper award.**
- 2024 *Fast and Space-Efficient Parallel Algorithms for Influence Maximization* [🔗](#)
Letong Wang, Xiangyun Ding, Yan Gu, Yihan Sun.
In *Proceedings of the VLDB Endowment (VLDB)*, 2024.
- 2023 *Efficient Parallel Output-Sensitive Edit Distance* [🔗](#)
Xiangyun Ding, Xiaojun Dong, Yan Gu, Youzhe Liu, Yihan Sun.
In *31st Annual European Symposium on Algorithms (ESA)*, 2023. **Best paper award.**
- 2022 *DP-Nets: Dynamic programming assisted quantization schemes for DNN compression and acceleration* [🔗](#)
Dingcheng Yang, Wenjian Yu, Xiangyun Ding, Ao Zhou, Xiaoyi Wang.
In *Integration, the VLSI Journal*, 2022.
- 2020 *Efficient model-based collaborative filtering with fast adaptive PCA* [🔗](#)
Xiangyun Ding, Wenjian Yu, Yuyang Xie, Shenghua Liu
In *IEEE 32nd International Conference on Tools with Artificial Intelligence (ICTAI)*, 2020.

Work Experience

Software Engineer

Beijing, China

Airbnb, Inc.

2020/07 - 2023/07

- Host tiering project. Lead the development collaboration. Use airflow and python to process data in hive tables. Build java backend services for data layer and presentation layer. Develop APIs for frontend.
- Airbnb chat bot development. Build new bot rules for specific circumstances of user-bot interaction. Use ML models to direct bot behaviors. Develop new UI components and conduct A/B test.
- Coding Interviewer.

Software Engineer Intern

Beijing, China

Google

2019/05 - 2019/08

- Project: detect possible vandalism in Wikipedia revisions. Use C++ to extract signals from Wikipedia revisions. Use flume and borg to process large-scale Wikipedia data.

Research Experience

Research Assistant

University of California, Riverside

Riverside, CA

2023 - Present

Initiative Scientific Research Program

Tsinghua University

Beijing, China

2019 - 2020

External Reviewer

- Shadow PC member for *Proceedings of the VLDB Endowment (VLDB)*, 2026
- *ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, 2025
- *ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP)*, 2025
- *ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, 2024
- *International European Conference on Parallel and Distributed Computing (Euro-PAR)*, 2024
- *The European Symposium on Algorithms (ESA)*, 2024
- *SIAM Symposium on Algorithm Engineering and Experiments (ALENEX)*, 2024

Other Projects

Parallel-GPT-2 [🔗](#)

- A C++ implemented GPT-2, running on multi-CPU in parallel.
- Tools used: C++, CMake.

Vahadane: Histological Image Normalization [🔗](#)

- Tools used: Python.

Single-user Relational Database [🔗](#)

- Tools used: C++, Bazel, SQL.

Five-level Pipelined CPU [🔗](#)

- Tools used: Verilog, MIPS.

Distributed Sharded Key/Value Storage [🔗](#)

- Tools used: Go, Raft.

LQ-Nets-PyTorch [🔗](#)

- A PyTorch implementation of neural network quantization.
- Tools used: Python, PyTorch.