

JING LAN

✉ jlan22@cse.cuhk.edu.hk · ☎ (+852) 6401-8176 · 🌐 Jing Lan

🎓 EDUCATION

The Chinese University of Hong Kong (CUHK), Hong Kong, China 2022 – Present

MPhil in Computer Science

Supervisor: Prof. James Cheng

Sun Yat-sen University (SYSU), Canton, China 2018 – 2022

BEng in Computer Science

Supervisors: Prof. Nong Xiao & Prof. Dan Huang

GPA: 3.9

👥 EXPERIENCE

Flavius: Disaggregated Graph OLAP Engine @ Husky Data Lab, CUHK 2022 – Present

core member Advisor: Prof. James Cheng

We build an in-memory graph OLAP engine with a disaggregated architecture. The system optimizes for highly skewed graph workloads. It processes dominant small queries with high throughput while ensuring QoS for the heavy. Major Contributions are:

- A query planner mapping graph semantics (e.g., optional match, pattern filter, repeated join, etc.) to a set of novel *Subquery* operators.
- A *disaggregated* architecture with a cache cluster caching graph data, executing pushdown operators (e.g., filter, aggregation) and distributed joins.
- A push-pull hybrid query engine: The system executes heavy queries in batches, preventing small ones from starvation. A scheduler optimizes the batch size for our performance objectives.

Student Cluster Competition (SCC) @ SYSU 2020 – 2022

leader(2021-22), member(2020-21) Advisor: Prof. Dan Huang

- We win system competitions in world-famous HPC venues (e.g., ACM SC & European ISC)
- We explore HPC systems:
 - Cluster management from supercomputers to configurable cloud (e.g., TACC Chameleon)
 - Application optimizations via exploiting: platform features (e.g., SmartNICs), parallel opportunities (e.g., OpenMP, CUDA), and code optimizations (e.g., better spatial & temporal localities)

🎓 PUBLICATION

TBD

⚙️ SKILLS

- Programming Languages: C, C++, Python
- Platform experience: clusters, cloud, supercomputers
- Software: Slurm, Spack, tmux, CMake, L^AT_EX, etc.
- Languages: English (TOEFL 103), Putonghua

♡ HONORS

2nd Prize (top 10%), Undergraduate Scholarship
Champion

Honorable Mention

2nd Prize (3rd out of 65, and a \$9000 bonus!)

2019, 2021

IndySCC@SC, 2021

SCC@ISC, 2021

Sugon Priority Research Application, 2021

i MISCELLANEOUS

- The SYSU SCC Team: <https://scc.sysu.tech>
- Homepage: <https://lan-jing.github.io/>