

IndySCC TEAM GeekPie_HPC



MEET THE TEAM

GeekPie_HPC is united and strengthened by our diverse backgrounds and different STEM minds aiming to discover and solve challenging HPC problems.

Our members have not participated in IndySCC before, but we have gained relevant experience from past participation in ISC and ASC. With each member of our team committed to pushing the boundaries of excellence, we are ready to rise to the challenge and make our mark in IndySCC 2024.

WHY WE WILL WIN

- Our team advisor Prof **Rui Fan** brings valuable expertise in parallel computing, and provides us strategic guidance and insights.
- Our strength also comes from the diversity of our backgrounds. This mix of different backgrounds brings multiple perspectives to the team. We believe the well-rounded set of skills and knowledge we possess will help propel us to victory.

STRATEGIES



MPI Tuning

Try different MPI implementations and tune the configurations by analyzing their communication patterns.

Profiling and Code Improvement

Use profilers to find hotspots and rewrite the code using different techniques such as vectorization and pipelining.

Dynamic Task Distribution

Leverage Slurm for efficient dynamic task allocation, balancing workloads across nodes based on performance profiling insights.

Resource Utilization

Optimize the usage of Service Units (SU) on JetStream2 by scheduling high-priority tasks during peak resource availability.

Collaboration

Set fixed times for team collaboration, fostering collective problem-solving and strengthening team cohesion through joint effort.



Hanrui ZHANG

- @2022 he/his
- DevOps
- Compiler



Jiale LIN

- @2022 he/his
- Computer vision
- DevOps



Xiang LI

- @2022 he/his
- HPC
- Operating systems



Yucheng WU

- @2023 she/her
- Computer vision
- HPC



Zebang HE

- @2023 he/his
- DevOps
- Operating systems



Ziyang JIANG

- @2022 he/his
- Machine Learning
- HPC