

Qinghao Hu

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EDUCATION

Nanyang Technological University, Singapore <i>Ph.D. Student in Computer Science</i> Supervisor: Prof. Tianwei Zhang and Prof. Yonggang Wen	2020 ~ Now GPA: 4.67/5.00
National University of Singapore, Singapore <i>Master in Electrical Engineering</i>	2020
Zhejiang University, China <i>Bachelor in Electrical Engineering</i>	2018

RESEARCH INTEREST

- Datacenter Scheduling and Resource Management
- Machine Learning for Systems
- Automated Deep Learning Systems

PUBLICATION

Hydro: Surrogate-Based Hyperparameter Tuning Service in the Datacenter

Qinghao Hu, Zhisheng Ye*, Meng Zhang*, Qiaoling Chen*, Peng Sun, Yonggang Wen, Tianwei Zhang
[OSDI '23] USENIX Symposium on Operating Systems Design and Implementation

Lucid: A Non-Intrusive, Scalable and Interpretable Scheduler for Deep Learning Training Jobs

Qinghao Hu*, Meng Zhang*, Peng Sun, Yonggang Wen, Tianwei Zhang
[ASPLOS '23] Architectural Support for Programming Languages and Operating Systems
Distinguished Paper Award

Primo: Practical Learning-Augmented Systems with Interpretable Models

Qinghao Hu, Harsha Nori, Peng Sun, Yonggang Wen, Tianwei Zhang
[ATC '22] USENIX Annual Technical Conference (Accept Rate: 64/393=16.3%)

Characterization and Prediction of Deep Learning Workloads in Large-Scale GPU Datacenters

Qinghao Hu, Peng Sun, Shengen Yan, Yonggang Wen, Tianwei Zhang
[SC '21] International Conference for High Performance Computing, Networking, Storage, and Analysis

Deep Learning Workload Scheduling in GPU Datacenters: Taxonomy, Challenges and Vision

Wei Gao*, **Qinghao Hu***, Zhisheng Ye*, Peng Sun, et al.
[Preprint] Submitted to ACM Computing Surveys

Boosting Distributed Full-graph GNN Training with Asynchronous One-bit Communication

Meng Zhang, **Qinghao Hu**, Peng Sun, Yonggang Wen, Tianwei Zhang
[Preprint] Submitted to a Conference
(* Equal Contribution)

PROFESSIONAL SERVICE

[EuroSys '23] EuroSys Conference	Shadow Committee Member
[OSDI '22] USENIX Symposium on Operating Systems Design and Implementation	AE Committee Member

[ATC '22] USENIX Annual Technical Conference
[EuroSys '22] EuroSys Conference
[SOSP '21] ACM Symposium on Operating Systems Principles

AE Committee Member
AE Committee Member
AE Committee Member

WORK EXPERIENCE

Shanghai AI Laboratory, China
Research Intern
Mentor: Dr. Peng Sun

Sep. 2022 - Mar. 2023

INVITED TALK

Scheduling in Large-Scale GPU Datacenters
National University of Singapore

Jan. 2022

Cluster Scheduling for Deep Learning
S-Lab for Advanced Intelligence

Apr. 2021

STUDENT MENTORED

I am fortunate to mentor and co-advise the research of the following students:

- **Ph.D. Students:** Meng Zhang, Yutong Wu
- **Master Students:** Qiaoling Chen, Tan Ru Phing (NUS)
- **Undergraduates:** Amrita Ravishanker

HONORS

Distinguished Paper Award of ASPLOS '23 2023
Best Undergraduate Thesis Award 2018
Outstanding Graduates of Zhejiang University 2018