

# Qinghao Hu

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## EDUCATION

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

## RESEARCH INTEREST

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

## PUBLICATION

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**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

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<a href="#">[EuroSys '23]</a> EuroSys Conference	Shadow Committee Member
<a href="#">[OSDI '22]</a> USENIX Symposium on Operating Systems Design and Implementation	AE Committee Member

[ATC '22] USENIX Annual Technical Conference

AE Committee Member

[EuroSys '22] EuroSys Conference

AE Committee Member

[SOSP '21] ACM Symposium on Operating Systems Principles

AE Committee Member

## WORK EXPERIENCE

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**Shanghai AI Laboratory**, China

*Sep. 2022 - Mar. 2023*

*Research Intern*

Mentor: Dr. Peng Sun

## INVITED TALK

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Scheduling in Large-Scale GPU Datacenters

*Jan. 2022*

*National University of Singapore*

Cluster Scheduling for Deep Learning

*Apr. 2021*

*S-Lab for Advanced Intelligence*

## STUDENT MENTORED

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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

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Distinguished Paper Award of ASPLOS '23

*2023*

Best Undergraduate Thesis Award

*2018*

Outstanding Graduates of Zhejiang University

*2018*