

# Yifan Qiao | Curriculum Vitae

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## Education

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### University of California, Los Angeles

*Ph.D. Student, Department of Computer Science, US*

California

*Sep. 2019 – Present*

### Tsinghua University

*B.E., Department of Computer Science and Technology*

GPA: 3.85/4.0 Ranking: 6/140

Beijing, China

*Aug. 2015 – Jul. 2019*

### Carnegie Mellon University

*Research Intern, Computer Science Department*

Pennsylvania, US

*Jul. 2018 – Sept. 2018*

## Publications

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[1] Shuo Yang, Kai Wu, **Yifan Qiao**, Dong Li, Jidong Zhai. Algorithm-Directed Crash Consistence in Non-Volatile Memory for HPC. *CLUSTER 2017*

## Research Experience

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### Storage Research Group

Dept. CS, Tsinghua University

*The group aims at building efficient and reliable storage system softwares with emerging devices (e.g., non-volatile memories, open-channel SSDs, programmable NICs/switches).*

Undergraduate Research Assistant

*Jan. 2019 - Jun. 2019*

Research Advisor: **Prof. Youyou LU**

### Project: An Efficient Allocator for Non-volatile Memory

*This project proposed an efficient and scalable allocator for non-volatile memory (NVM) and leveraged a novel versioned commit mechanism to establish crash consistency.*

### Parallel Computing Group

CS Department, Carnegie Mellon University

*The goal of this group is to enable efficient parallelism on shared memory systems. Current work includes the development of abstractions, algorithms, and language systems based on C++ and Standard ML.*

Summer Internship

*Jun. 2018 - Sep. 2018*

Research Advisor: **Prof. Umut ACAR**

### Project: Efficient Scheduling with Private Deques in Multiprogrammed Environments

*This project focused on the efficiency of work stealing schedulers with private deques. Our methods*

greatly improved the efficiency of the private deque algorithm by reducing synchronization and communication overhead.

## **Institute of High Performance Computing (IHPC)**

Dept. CS, Tsinghua University

*The research interests of our group include High Performance Computing, Compiler, and Heterogeneous Computing. Current work includes optimizations of parallel applications with GPU, MIC, etc.*

Undergraduate Research Assistant

Jan. 2017 - Sept. 2017

Research Advisor: **Prof. Jidong ZHAI**

### **Project: Crash Consistency in NVRAM for HPC**

*This project leveraged algorithm knowledge to establish crash consistency of HPC applications in NVRAM (Non-volatile RAM). We introduced an algorithm-based method with slight extension of application data structures or sparse cache blocks flushes to eliminate the overhead of logging or checkpointing.*

## **Awards**

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**2019** Cum Laude at Tsinghua University (14/140)

**2019** Magna Cum Laude in Beijing (8/140)

**2019** Magna Cum Laude at Department of Computer Science and Technology, Tsinghua University

**2018** CNPC Scholarship for Comprehensive Excellence (8/140)

**2018** Qualcomm Scholarship (Top 6%)

**2017** National Scholarship (6/140)

## **Extra-Curricular**

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**2017** 35th "Challenge Cup" National College Student Curricular Academic Science and Technology Works Competition, third prize.

**2016, 2017** Electrical Trading Challenge, Champion of 50+ teams.

**2016** National University Student Physics Competition, first prize.

## **Skills**

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### ○ **Programming Languages:**

Familiar with C/C++, Standard ML, Assembly, Python, MATLAB, Go  
Capable of Java, Rust, VHDL, HTML/CSS

### ○ **Parallel Computing Skills:** MPI, Linux perf, CUDA, OpenMP

### ○ **Other Skills:** TensorFlow, PyTorch