

Shuang Chen

ADDRESS

471C Rhodes Hall,
Cornell University
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<https://sc2682cornell.github.io>

EDUCATION

Cornell University, NY, USA.

Aug 2015 ~ Present

Ph.D. Candidate, Computer Systems Laboratory, Department of ECE

- GPA: **3.9**/4.0
- Advisor: José F. Martínez

Shanghai Jiao Tong University, China

B.S., Computer Science (SJTU ACM Elite Class), Zhiyuan College

Sept 2011 ~ July 2015

- Overall GPA: **90.6**/100 Major GPA: **91.5**/100

RESEARCH INTERESTS

I am generally interested in computer architecture and systems. Specifically, my current research focuses on improving the resource management and efficiency in datacenters leveraging emerging memory technologies. I also have research experiences in cache and memory subsystems, database systems, and GPU architectures.

PUBLICATIONS

- **Shuang Chen**, Christina Delimitrou, and José F. Martínez, “PARTIES: QoS-Aware Resource Partitioning for Multiple Interactive Services,” in *the 24th ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, Apr 2019.
- **Shuang Chen**, Shay Galon, Christina Delimitrou, Srilatha Manne, and José F. Martínez, “Workload Characterization of Interactive Cloud Services on Big and Small Platforms,” in *the 2017 IEEE International Symposium on Workload Characterization (IISWC)*, Oct 2017.
- Xiaodong Wang, **Shuang Chen**, Jeff Setter and José F. Martínez, “SWAP: Effective Fine-grain Management of Shared Last-level Caches with Minimum Hardware Support,” in *the 23rd IEEE HPCA International Conference on High Performance Computer Architecture (HPCA)*, Feb 2017.
- **Shuang Chen**, Shunning Jiang, Bingsheng He and Xueyan Tang, “A Study of Sorting Algorithms Using Approximate Storage,” in *the 2016 ACM SIGMOD International Conference on Management of Data (SIGMOD)*, June 2016.
- Naifeng Jing, Shunning Jiang, **Shuang Chen**, Jinjie Zhang, Li Jiang, Chao Li and Xiaoyao Liang, “Bank Stealing for a Compact and Efficient Register File Architecture in GPGPU,” in *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, 2016.
- Naifeng Jing, **Shuang Chen**, Shunning Jiang, Li Jiang and Xiaoyao Liang, “Bank Stealing for Conflict Mitigation in GPGPU Register File,” in *the 2015 ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED)*, July 2015.

HONORS AND AWARDS

- Selected for **Rising Stars in EECS Workshop**, UIUC, 2019
- **ECE Woman of the Month**, Cornell University, Mar 2018
- **Cornell Graduate Fellowship**, Cornell University, 2015
- **Outstanding Graduate**, Shanghai Jiao Tong University, 2015 (top 1%)

- **Outstanding Graduate in Zhiyuan College**, Shanghai Jiao Tong University, 2015 (top 12)
- **Kai Yuan Scholarship**, Shanghai Jiao Tong University, 2013 (top 20 in Zhiyuan College)
- ACM-ICPC (International Collegiate Programming Contest) Asia Regional
 - **4th place** in Hsinchu Site, 2011 (Team TrustMe)
 - **Gold medal** in Beijing Site, 2011 (Team TrustMe)
- **Silver medal** (ranked the 64th) in National Olympiad in Informatics, China, 2010

WORK AND RESEARCH EXPERIENCES

Graduate Research Assistant at M³ Architecture Research Group

Computer Systems Laboratory, Cornell University, NY, USA.

August 2015 ~ Present

- *Advisor: José F. Martínez*
 - Optimization of cache and memory systems
 - Colocation of multiple interactive services in datacenters
 - Improving energy efficiency of interactive services using emerging memory technologies

Research Intern at Facebook Inc.

Menlo Park, CA, USA.

Summer 2018

- *Manager: Banit Agrawal*
 - Tupperware monitoring framework
 - GPU tracing, profiling, and analysis

Software Engineering Intern at Cavium Inc.

San José, CA, USA.

Summer 2016

- *Manager: Bobbie Manne*
 - Cache and memory system in Cavium ThunderX2
 - Performance analysis of cloud applications

Undergraduate Research Assistant at Xtra Computing Group

Parallel and Distributed Computing Centre

Nanyang Technological University, Singapore

August 2014 ~ Feb 2015

- *Advisors: Bingsheng He and Xueyan Tang*
 - Approximate database systems

Undergraduate Research Assistant at Advanced Computer Architecture Laboratory

Shanghai Jiao Tong University, China

July 2013 ~ June 2014

- *Advisor: Xiaoyao Liang*
 - Optimization of GPGPU Register File

TEACHING EXPERIENCE

Guest Lecturer of Competition Programming and Problem Solving Seminar (CS5199)

Cornell University, USA

Fall 2019

Head Teaching Assistant of Computer Systems Programming (ECE2400)

Cornell University, USA

Spring 2017

Teaching Assistant of Computer Architecture (ECE4750/CS4420)

Cornell University, USA

Fall 2016

Teaching Assistant of C++ Programming (CS110)

Shanghai Jiao Tong University, China

Fall 2012