Shuang Chen

ADDRESS
471C Rhodes Hall,
Cornell University
Ithaca, NY 14853

Email
sc2682@cornell.edu
Website
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
  – Committee: José F. Martínez (chair), Christina Delimitrou, Robbert van Renesse

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 hardware 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

- **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 M^3 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

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

SKILLS

- Programming and Software: – Proficient: Pascal, C, C++, Java, Python, MySQL, LaTeX, Matlab.
  – Basic: Verilog DHL, OpenCL, CUDA.
- Language: Chinese (native), English
- Electronic organ, Certificate of Musical Level Ten in China (highest level for amateurs).