

Yuhui Wang

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Education

Sept. 2015 – June. 2020	Bachelor in Computer Science, Honours program, Xi'an Jiaotong University
Jan. 2019 – Dec. 2019	Berkeley International Study Program, University of California, Berkeley
July. 2017 – Aug. 2017	Summer Program, National University of Singapore
Sept. 2012 – June 2015	General Senior High School, Zhucheng No. 1 Middle School.

Research Interests

High Performance Computing, Theory and Algorithm, Parallel Computing, Machine Learning

Honors & Awards

Dec. 2017	Second Place in Microsoft Hackathon, Xi'an Site
Dec. 2017	Second Prize of Shidi Lu Scholarship (1%)
Oct. 2017	The China Computer Federation (CCF) Elite Collegiate Award (0.2%)
Aug. 2017	Best Game in 2D Game Engine Class, National University of Singapore
June. 2017	First Prize in The Mathematical Contest in Modeling, Xi'an Jiaotong University
Mar. 2017	First Prize in Chinese Colleges Computer Competition (CCCC) - Group Programming Ladder Tournament - Northwest Division
Dec. 2016	Outstanding Student, Xi'an Jiaotong University (20%)
Dec. 2016	First Prize of Shidi Lu Scholarship (0.5%)
Dec. 2016	Silver Medal in the ACM-ICPC Asia Regional Contest China-Final 2016
Oct. 2016	Bronze Medal in the ACM-ICPC Asia Regional Contest Dailan Site 2016
July. 2016	First Prize in Chinese Colleges Computer Competition (CCCC) - Group Programming Ladder Tournament
May. 2016	Golden Medal in The 2016 ACM-ICPC China Shaanxi Provincial Programming Contest
Oct. 2015	Champion of Freshman Football Match, Xi'an Jiaotong University
Oct. 2015-	Scholarship for Excellent Students (10%)
Nov. 2014	First Prize in National Olympiad in Informatics in Provinces (NOIP 2014)
Dec. 2013	Bronze Medal in Winter Camp of the National Olympiad in Informatics
July. 2013	Bronze Medal in the National Olympiad in Informatics (NOI 2013)

Research & Work Experience

May. 2019– Dec. 2019 Research Assist in **Berkeley Benchmarking and Optimization Group, University of California, Berkeley**

Mentored by Grace Dinh and [James Demmel](#).

Researching in CACNNs (communication avoiding convolutional neural networks), contributions included:

- Implementing the state of art [CACNN algorithm](#) and testing the practical performance based on simulated caches. Our paper was accepted by [SIAM Conference on Mathematics of Data Science](#)
- Improving existing communication lower bounds for convolutional neural networks by a constant factor.
- Analyzing the impact of cache line size on practical communication costs.

Jan. 2018– May. 2018 Research Intern in **Visual Computing Group, Microsoft Research Asia**.

Mentored by [Houwen Peng](#) and [Jifeng Dai](#).

Researching in computer vision and deep learning, main duties included:

- Updating [Faster R-CNN](#) to fit the latest version of mxnet framework and utilize dynamic graphs to effectively debug
- Converting [NASNet](#) model from tensorflow to mxnet

Nov. 2015 – Sept. 2016 Software Development Intern in **Ministry of Education Key Lab For Intelligent Networks and Network Security**

Mentored by [Chenxu Wang](#).

As a main developer of a music game, duties included:

- Extracting main track from music
- Designing and implementing several game modes
- Implementing animation

This game is exhibited in China Science and Technology Museum and attracts lots of teenagers.

Publications

- James Demmel, Grace N. Dinh, Ed Younis, and **Yuhui Wang**. "Communication-Optimal Convolutional Neural Nets." SIAM Conference on Mathematics of Data Science, 2020.

- You Yang, **Yuhui Wang**, Huan Zhang, Zhao Zhang, James Demmel, and Cho-Jui Hsieh. "The Limit of the Batch Size." arXiv preprint arXiv:2006.08517 (2020).