

# Chenggang Zhao

+86 18810597132  
✉ zhaocg17@mails.tsinghua.edu.cn  
🎧 LyricZhao

## Education

Aug 2017 **Tsinghua University**, Beijing, China.  
– Present B.Eng. in Computer Science and Technology.  
**GPA:** 3.73/4.0, **Rank:** 49/222 (~22%).

## Publication

Oct 2019 **Student Cluster Competition 2018, Team Tsinghua University: Reproducing Performance of Multi-Physics Simulations of the Tsunamigenic 2004 Sumatra Megathrust Earthquake on the Intel Skylake Architecture**, *Parallel Computing* 36 (2019)  
Jiaao He, **Chenggang Zhao**, Jiping Yu, Xinjian Yu, Liyan Zheng, Chenyao Lou, Shizhi Tang, Wentao Han, Jidong Zhai.

## Experience

Jan 2020 **Innovative Data-centric Efficient Architecture Lab (IDEAL)**, Institute for Interdisciplinary Information Sciences (IIIS), Tsinghua University  
– Present Advisor: Professor [Mingyu Gao](#).  
Working on distributed deep learning framework memory optimization.  
Jan 2018 **Student Supercomputing Team**, Department of Computer Science and Technology, Tsinghua University  
– May 2020 Advisor: Professor [Jidong Zhai](#).  
Participated in multiple worldwide student cluster competitions as a core team member, winning many championship titles. Conducted parallel performance analysis and optimization on various software applications. Involved in cluster building and maintenance.

## Selected Scholarships

Nov 2019 **Cai Xiong Scholarship for Science and Technology Innovation Excellence Award**, Tsinghua University.  
Nov 2019 **SenseTime Scholarship**, SenseTime Technology.  
Oct 2019 **Science and Technology Innovation Excellence Award**, Tsinghua University.  
Oct 2018 **Science and Technology Innovation Excellence Award**, Tsinghua University.  
Oct 2018 **Volunteer Excellence Award**, Tsinghua University.

## Selected Awards

Nov 2019 **SC19 Student Cluster Competition Overall Winner**, ACM/IEEE, Denver, USA.  
Reproduced and analyzed the performance of computing normal modes with a polynomial filtering eigensolver.

- May 2019 **ASC19 Student Cluster Competition Silver Prize**, *ASC Committee*, Dalian, China.  
Implemented and optimized the ECCV paper *Super-Identity Convolutional Neural Network for Face Hallucination*.
- Nov 2018 **SC18 Student Cluster Competition Overall Winner**, *ACM/IEEE*, Dallas, USA.  
Reproduced and analyzed performance of Multi-Physics Simulations of the tsunamigenic 2004 Sumatra megathrust earthquake. Our work is published on *Parallel Computing*.
- Oct 2018 **First Prize in North China Area of China Parallel Application Challenge on Domestic CPU**, *CCF*, Wuxi National Supercomputing Center, China.  
Ported and optimized GROMACS (GRONingen Machine for Chemical Simulations) on Sunway TaihuLight.
- Sept 2018 **First Prize in Beijing Area of China Undergraduate Mathematical Contest in Modeling**, *CSIAM*, Beijing, China.  
Analyzed and modeled the RGV (Rail Guided Vehicle) control system using reinforcement learning method.
- Dec 2017 **CCF Certified Software Professional Highest Score (Ranking 1/5947)**, *CCF*, Beijing, China.
- Jul 2016 **Silver Medal of National Olympiad in Informatics**, *CCF*, Sichuan, China.

## Selected Course Projects

For more projects and related code, please refer to this [GitHub link](#).

- Jan 2020 **rCore Tutorial**, Operating Systems.  
– Present A tutorial for writing an OS in Rust, it's going to be used for materials of labs in next year's course.
- Sept 2019 **ThinRouter**, Computer Organizations & Computer Networks.  
– Dec 2019 A SystemVerilog implementation of MIPS32 CPU, bus and RIP router.
- Sept 2018 **FEATURES**, Software Engineering.  
– Dec 2018 A massive-multiplayer online web game with distributed deployment and load balance.

## Skills

**Programming Languages:** C/C++, Python, Java, JavaScript,  $\LaTeX$ , Rust, Verilog, MATLAB

**Environments and Frameworks:** CUDA, MPI, PyTorch, Vivado, Intel® Parallel Studio

**Ballroom Dancing:** Waltz, Quick Step, Fox Step, Tango, Rumba, Jive

## Extracurricular Activities

- Oct 2019 **Volunteer for the 70th anniversary gala of the People's Republic of China**.  
Volunteered for reception of domestic and foreign guests in the gala.
- Sept 2017 **Member of Ballroom Dancing Team**, Art Troupe of Tsinghua University.  
– Present Participated in several university-level performances, winning titles in ballroom dancing competitions.
- Aug 2018 **Vice Minister in Student Union**, Department of Computer Science and Technology, Tsinghua University.  
– Dec 2019 Participated in the organization of students' festivals (2018 and 2019). Director of the music video [InterNine](#).