

# Zerui Cheng

## PERSONAL DETAILS

**Date of Birth:** July 12, 2001

**Place of Birth:** Wuhu, Anhui, China

**Institution:** Tsinghua University

**Department:** Institute for Interdisciplinary Information Sciences (IIIS)

**Class:** Yao Class (an undergraduate honor program founded by Andrew Chi-Chih Yao)

**E-mail:** [marco.cheng712@gmail.com](mailto:marco.cheng712@gmail.com)

**Phone Number:** +86-17855329418

## CURRENT STUDY

**Current Study Level:** Year 3 Undergrad

**Major:** Computer Science

**Cumulative Grade Point Average:** 3.89/4.0

**Cumulative Grade Point Average (on major courses) :** 4.0/4.0

## CURRENT RESEARCH INTERESTS

**Main Interests:** Blockchain, Cryptocurrencies

**Others:** Algorithms, Game Theory, Privacy and Security etc.

## RESEARCH PROJECTS

**Optimization and Mechanism Design in Blockchain Systems**

Oct 2020 - Mar 2021

*Students' Research Training Project, advised by Prof. Zhixuan Fang*

**Game Theory and Optimization under the context of Blockchain**

Mar 2021 -May 2021

*Students' Research Training Project, advised by Prof. Zhixuan Fang*

**A Survey on Blockchain System and Related Cryptographic Methods** Apr 2021 - June 2021  
*Project of course <Fundamentals of Cryptography> , instructed by Prof. Yilei Chen*

**An Algorithm for Graph Matching with Restrictions on Edge Weights, Based on Number Theory, Linear Algebra and Randomization** May 2021 - June 2021  
*Project of course <Numerical Analysis> , instructed by Prof. Wenjian Yu*

**Crowdsourcing Work as Mining: A Decentralized Computing Paradigm** June 2021 - Feb 2022  
*Students' Research Training Project, advised by Prof. Zhixuan Fang, paper in submission*

## **RESEARCH INTERNSHIP**

**Undergraduate Research Assistant in Shanghai Qizhi Institute** (founded by Andrew C.C. Yao)  
*Themed "PoUW on Public Chain" , Advised by Prof. Zhixuan Fang* Jul 2021 - Aug 2021

**Student Intern in Duke University and University of California, Berkeley**  
*Advised by Prof. Fan Zhang and Prof. Dawn Song* Since Feb 2022

## **HONORS / AWARDS**

### **Programming Contests**

Silver Medal in National Olympiad in Informatics	Jul 2018
Second Place in "Leetcode Cup" National Programming Contest	Oct 2019
Gold Award in CCPC (Changchun Site, 8 <sup>th</sup> place)	Nov 2020
Silver Award in ICPC (East Continental Final)	Apr 2021
Gold Award in ICPC (Yinchuan Site, 5 <sup>th</sup> place)	May 2021

### **Mathematics Competitions**

First Prize in 12 <sup>th</sup> National Maths Competition	Dec 2020
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### **Scholarships**

Scholarship for Excellence in Voluntary Work and Social Activities	Oct 2020
Scholarship for Excellence in Academic Achievements	Oct 2021
Scholarship for Excellence in Scientific and Technological Innovation	Oct 2021
Scholarship for Exemption of Tuition Fee (Xuetang Program)	Annuual, From 2019

### **SOCIAL WORK**

Vice President, IIIS Students' Union	From Oct 2021
Deputy Secretary, IIIS Youth League Committee	From Oct 2021
League Branch Secretary of Yao Class 92	From Sep 2021
Member, Contest Stuff Department of THU Algorithm Association	From Jul 2020
Member, Organization Department of IIIS Students' Union	Aug 2020 - Sep 2021

### **REMARKABLE ACTIVITIES**

Volunteer of the 110 <sup>th</sup> anniversary of Tsinghua University	Apr 2021
Problem Setter of NOI 2021 (National Olympiad in Informatics)	Jul 2021

### **SKILLS**

**Programming Skills:** C/C++ (proficient), Python, Golang, R, Verilog

**Language Skills:** Chinese(native), English