Benyu Wang

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Email: wang-by19@mails.tsinghua.edu.cn
Website: wbyyui.github.io (in progress)
Github: wbyyui
Location: Beijing, China

Research interests

Discrete Algorithms, Theory of Computation

Education

Tsinghua University — Beijing, China
Undergraduate student in Yao Class, IIIS — August 2019 – Present
GPA: 3.87 / 4.00.

Harbin No.3 High School — Harbin, China
August 2016 – June 2019
Studied and won prizes in both mathematics and algorithm contests.

Awards and scholarships

The Third Prize Scholarship in IIIS	2020
Xuetang Scholarship	2019,2020
Gold Prize in Chinese Mathematical Olympiad (CMO)	2018
Silver Prize in National Olympiad in Informatics (NOI)	2018

Courses taken

Course grades
I do well in professional courses and got A or A+ in 14 professional courses. In both courses instructed by Mr. Yao, "Mathematics for Computer Science" and "Mathematics for Artificial Intelligence", I got the only A+ in class. Moreover, I got an A+ in "Theory of Computation", instructed by Prof. Ran Duan.

Course Project: Research into Singular Elliptic Curve Groups
This is my course project in the class "Fundamentals of Cryptography", instructed by Prof. Wenfei Wu (My grade: A).
The course project considered removing the prerequisite $4a^3 + 27b^2 \neq 0$ in the elliptic curve system to let it be a "singular curve group". In the project I gave a proof of the group structure and gave reasons that why the group is not as secure as the elliptic curve group based on references.

Term Paper: A Literature Review of Fair Sharing and Envy-freeness
This is my term paper in the class "Game Theory", instructed by Prof. Zhixuan Fang (My grade: A).
In the course project I reviewed into the fair sharing and envy-free notions in game theory. This term paper covered important notions, papers and results related to this topic from the basic continuous cake-cutting protocol between two people to discrete item sharing with envy-freeness up to any item (EFX), and reviewed important proofs in this research area.

Skills

Basic skills

Proficient in: Discrete Mathematics / Elementary Number Theory / Algorithms

Familiar with: Probability Theory / Abstract Algebra / Physics

Programming

Proficient in: C, Python, RISC-V

Familiar with: SQL, Verilog, Mathematica, MATLAB

Languages

Fluent in Chinese and English.