YIFAN GUO

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EDUCATION

University of Chicago, Computer Science Department & Booth School of Business

Mar 2023-Aug 2023

Exchange undergradute hosted by Professor Haifeng Xu and Professor Ozan Candogan.

3 leading projects at Algorithmic Game Theory and Operations Research.

University of Science and Technology of China, School of the Gifted Young

Sep 2020-Present

Interdisciplinary Talent Class (Math & Computer Science)

Overall GPA: 4.02/4.3   Major GPA (Math): 4.15/4.3   Minor GPA (Computer Science): 4.16/4.3

Rank Top 3% in the School of the Gifted Young (All Major)   Rank 1/50 (Math Major)

Selected cources: (Math) Honars of Combinatorics 100, Combinatorics 99, Graph theory (Graduate) 98, Probability Theory 98, Real Analysis 95, Moderen Algebra 95, Differential Equations 95 (Computer Science) Computaional Economics (Graduate) 92, Foundations of Algorithms 100

HONORS AND AWARDS

China National Scholarship (Top 1%)	*December 2022*
Excellent Student Scholarship Gold (Top 3%)	*December 2021*
SGY Class of 87 Innovation Scholarship (10/1000)	*December 2021*
S.-T.Yau College Student Mathmatics Contest (Final, Rank 8th in China)	*August 2022*
The ICPC Asia Nanjing Regional Contest (Gold Medal)	*December 2022*
The ICPC Asia Shanghai Regional Contest (Silver Medal)	*November 2021*
2021 China Collegiate Programming Contest (Bronze Medal)	*November 2021*
Anhui Collegiate Programming Contest (First Prize)	*November 2021*
National Competition of Informatics in Anhui, China, First Prize	*2019, 2018, 2017*

PUBLICATIONS AND TALKS

An Isotonic Mechanism for Overlapping Ownership

· https://arxiv.org/pdf/2306.11154.pdf
· in submission to NeurIPS 2023 and full version in submissoin to to Management Science
· Joint work with Prof.Haifeng Xu, Prof.Weijie Su and Jibang Wu
· Poster at IDEAL Annual Conference, June 2023

On Information Design with Spillovers

· major revision at Operations Research
· Joint work with Prof.Haifeng Xu and Prof.Ozan Candogan

OTHER RESEARCH EXPERIENCE

Undergrduate Research   June 2022 - Present
Advisored by Prof.Shuai Shao   *University of Science and Technology of China*

Edge-Constraint Satisfaction Problem (edge-CSP) is the restriction of Constraint Satisfaction Problem to those instances in which every variable is present in exactly two constraints. It can represent graph factors. During the research, we study the complexity classification of decision and optimization problems of edge-CSP. We extend the odd Δ-matriod relations to a larger class of Δ-matriod. This research is two-fold. We are trying to find algorithms and decide the hardness.

Graph Seminar   June 2022 - Present
Organized by Prof.Jie Ma   *University of Science and Technology of China*

· Topic: Extremal Combinatorics, Graph Theory, Probabilistic Methods in Combinatorics
· Book: *Probability Methods in Combinatorics* by Yufei Zhao, MIT

Algorithm Seminar   December 2021 - Present
Organized by Prof.Xue Chen and Prof.Pan Peng   *University of Science and Technology of China*

· Topic: Expander graph, Random algorithm, Algorithms
· Book: *Probability and Computing* by Michael Mitzenmacher and Eli Upfal
· Book: *Pseudorandomness* by Salil P. Vadhan

Academic Seminar   September 2020 - July 2021
Advisor: Prof.Lan Zhang   *University of Science and Technology of China*

· In this class, we learned some basic methods of doing research and finished an academic paper about designing an efficient algorithm to distribute AED equipment in campus.
· Academic writing: *Optimal Design and Management of AED for college campus: a case in USTC*

TEACHING ASSISTANT

Functional Analysis   2023 Fall
Congwen Liu   *University of Science and Technology of China*

· 164 stduents enrolled
· Compulsory course for junior students in the School of Mathematical and School of Statistics

Foundations of Algorithms   2022 Fall
Haisheng Tan, Xiangyang Li   *University of Science and Technology of China*

· 170 stduents enrolled
· Compulsory course for junior students in the School of Computer Science

OTHER EXPERIENCE & LEADERSHIP

President of USTC Programming Club   June 2021 - June 2022
· The club is rated as a 4-star club and I am awarded as "Outstanding President"
· Lead students to practice in global programming contests like ICPC/CCPC.
· Hold the Programming Contest(USTCPC) for three hundred students in the college.

Member of The Student Union of School of the Gifted Young   September 2020 - June 2021
· Held the activities for students.
· Broadcast the activities via different ways.

Member of The Men's football team of School of the Gifted Young   September 2020 -

· Third Place in the "Champions Cup"   2021
· The Most Valuable Player(MVP) in the "Chuying Cup"   2020
· Second Place in the "Chuying Cup"(Captain)   2020

TECHNICAL STRENGTHS

Computer Languages	Python, C, C++, LaTeX, SQL, Assembly
Languages	Chinese(Native), English(CET-6 558, TOEFL 93, GRE 325)