Yifan Guo

guoyifan2003@gmail.com (preferred) | yifanguo@stanford.edu | (+1) 650-441-8023

EDUCATION

Stanford University

Ph.D. in Operations, Information, and Technology, Graduate School of Business — Sep. 2024–present
M.S. in Statistics — Sep. 2026–Jun. 2027 (expected)
Data Science Scholar, Stanford Human-centered AI

Selected coursework: Machine Learning (CS 229); Decision Making Under Uncertainty (CS 238); Machine Learning with Graphs (CS 224W); Natural Language Processing with Deep Learning (CS 224N); Convex Optimization I (EE 364A); Theory of Probability I (STATS 310A); Reliability and Validity in Artificial Intelligence (STATS 357); Causal Inference (MGTECON 661, in progress).

University of Science and Technology of China

B.S. in Mathematics (Highest Honor), School of the Gifted Young — Sep. 2020–July 2024

Visiting Student University of Chicago — Mar. 2023–Aug. 2023
Hosted by Prof. Haifeng Xu and Prof. Ozan Candogan.

TECHNICAL SKILLS

Programming: Python, C++, C, SQL, Assembly | **Tools:** LaTeX

SELECTED RESEARCH

I study the intersection of economics, operations, and AI. I use game theory and mechanism design to model human–AI collaboration, optimization methods and algorithms to design optimal human–AI interactions and systems, and causal inference and stochastic modeling to evaluate AI systems and align them with human interests.

An Isotonic Mechanism for Overlapping Ownership Paper

With Weijie Su, Jibang Wu and Haifeng Xu | Major revision, Operations Research

- Designed an isotonic-regression mechanism for noisy score calibration under overlapping ownership; established truthful-equilibrium results and a near-linear-time greedy partition algorithm with approximation guarantees.
- Tested at ICML 2023–2025 and deployed at ICML 2026 to support the peer-review process.

Presentations: IDEAL Annual Meeting (Jun. 2023); Oxford University (Feb. 2024); University of Chicago (Mar. 2024).

Algorithmic Feature Highlighting for Human–AI Decision-Making Paper

With Jann Spiess | Working paper; accepted to ESIF 2026

- Formulated Bayesian feature selection under information constraints; proposed efficient algorithms to highlight a subset of case-specific information to support human decision-making.
- Developed minimum-cost matching formulations; compared exact and greedy policies in simulations calibrated to Ames housing data under naive and sophisticated belief updating.

Presentations: ESIF Conference on Economics and AI+ML (Jun. 2026); Stanford University (Aug. 2026); INFORMS Annual Meeting (Nov. 2026, forthcoming).

On Information Design with Spillovers Paper

With Ozan Candogan and Haifeng Xu | Major revision, ACM Transactions on Economics and Computation

- Developed dynamic programming algorithms for optimal experiment allocation on directed networks with global information spillovers; characterized tractability and NP-hardness across network structures.

Presentations: INFORMS Annual Meeting (Oct. 2025).

HONORS AND AWARDS

Stanford Graduate Fellowship — 2024–2029
Stanford Human-centered AI Fellowship — 2026–2028
The ICPC National Programming Contest (Gold Medal) — 2024
S.-T. Yau College Student Mathematics Contest (Final, 8th in Applied Mathematics) — 2022
Guo Moruo Scholarship (Highest Honor) — 2024
China National Scholarship (Top 1%) — 2022, 2023
SGY Class of 87 Innovation Scholarship (Top 1%) — 2021

TEACHING EXPERIENCE

Teaching Assistant Optimization and Simulation Modeling (OIT 245) — Stanford, Fall 2025
Teaching Assistant Functional Analysis — USTC, Fall 2023
Teaching Assistant Algorithmic Game Theory — USTC, Fall 2023
Teaching Assistant Foundations of Algorithms — USTC, Fall 2022

LEADERSHIP

Student Lead, Evaluation of AI Evaluations, Stanford Human-centered AI student group (2026–2027).
Social Chair, Stanford GSB PhD Association (2025–2026).
President, USTC Programming Club (2021–2022); led the club to a 4-star rating; Outstanding President award.
Captain, School of the Gifted Young Men's Soccer Team (2020–2024); gold, silver and bronze medals; MVP award.