

# YIFAN HAO

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🏛 University of Illinois Urbana-Champaign

## RESEARCH INTERESTS

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Neural Network Theory · Distribution Learning · Statistic Machine Learning

## EDUCATION

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University of Illinois Urbana-Champaign

2024.9. – present

Ph.D student, Computer Science

Advisor: Prof. [Tong Zhang](#)

The Hong Kong University of Science and Technology

2022.9. – 2024.8

MPhil, Mathematics

Advisor: Prof. [Tong Zhang](#)

University of Science and Technology of China

2018.9. – 2022.6

Bachelor of Science, School of the Gifted Young

Ranking: 5/91 in Statistics, GPA: 3.87/4.30, Major GPA: 4.09/4.30

## RESEARCH EXPERIENCE

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### Publications

- **Spurious feature diversification improves out-of-distribution generalization.** ICLR 2024  
[Yong Lin\\*](#), [Lu Tan\\*](#), [Yifan Hao\\*](#), [Honam Wong](#), [Hanze Dong](#), [Weizhong Zhang](#), [Yujia Yang](#) and [Tong Zhang](#)
- **Monte Carlo Sampling without Isoperimetry: A Reverse Diffusion Approach.** ICLR 2024  
[Xunpeng Huang\\*](#), [Hanze Dong\\*](#), [Yifan Hao](#), [Yi-An Ma](#) and [Tong Zhang](#).

### Pre-prints

- **The Surprising Harmfulness of Benign Overfitting for Adversarial Robustness.**  
[Yifan Hao](#) and [Tong Zhang](#)
- **On the Benefits of Over-parameterization for Out-of-Distribution Generalization.**  
[Yifan Hao\\*](#), [Yong Lin\\*](#), [Difan Zou](#) and [Tong Zhang](#)
- **SFQRA: Scaled Factor-augmented Quantile Regression with Aggregation in Conditional Mean Forecasting.**  
[Lei Shu](#), [Yifan Hao](#), [Yu Chen](#) and [Qing Yang](#)

where \* means alpha-order or equal contribution.

## SELECTED HONORS AND AWARDS

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Hong Kong PhD Fellowship	2022
Outstanding Graduation of Anhui Province	2022
Outstanding Graduation of University of Science and Technology of China	2022
China National Scholarship (top 1.8% by China' s Ministry of Education)	2021
Gold Prize for Outstanding Student Scholarship	2020, 2018

## TEACHING ASSISTANT EXPERIENCE

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MATH 2011 - Introduction to Multivariable Calculus	Fall 2023
MATH 2421 - Probability	Spring 2023, Spring 2024
Mathematical Analysis B3	Fall 2021
Complex Analysis	Spring 2021

## PROFESSIONAL ACTIVITIES

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Conference Reviewer: NeurIPS 2024  
Journal Reviewer: SIAM Journal on Mathematics of Data Science, JMLR

## OTHER ACTIVITIES

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Minister in student union in School of the Gifted Young, USTC  
Member of USTC Rubik's Cube club