

RESEARCH INTEREST

Machine Learning

- *Explainable Machine Learning, Trustworthy Machine Learning, Algorithmic Fairness, Graph Learning, Statistical Learning Theory*

Theoretical Computer Science

- *Fast Graph Algorithm, Approximation Algorithm, Computational Complexity, Hardness of Approximation*

EDUCATION

University of Illinois Urbana-Champaign

Illinois

- *Ph.D. Student in Information Science, School of Information Science*

Aug. 2023 – Present

- **Advisor:** Jiaqi Ma

University of Michigan

Michigan

- *B.Sc. in Computer Science, College of Engineering*

Aug. 2021 – May 2023

- Graduate with *Summa Cum Laude*

- **Minor:** Mathematics, College of Literature, Science, and the Arts

National Yang Ming Chiao Tung University

Hsinchu, Taiwan

- *Visiting Scholar*

Jan. 2020 – Jul. 2020

Shanghai Jiao Tong University

Shanghai, China

- *B.Eng. in Electrical and Computer Engineering, UM-SJTU Joint Institute*

Aug. 2019 – Aug. 2023

- **Minor:** Computer Science, UM-SJTU Joint Institute

RESEARCH AND INDUSTRY EXPERIENCE

Sugiyama Laboratory, National Institute of Informatics

Tokyo, Japan

- *Research Intern*

May 2024 – Aug. 2024

- **Advisor:** Mahito Sugiyama

Theory of Computation Laboratory, University of Michigan

Michigan

- *Undergraduate Researcher*

Mar. 2022 – Present

- **Advisor:** Thatchaphol Saranurak

- Design the first almost linear time algorithm on finding minimal balanced separator.

SURE Program, University of Michigan

Michigan

- *Undergraduate Researcher*

May 2022 – Apr. 2023

- **Advisor:** Wei Hu

- Theoretical analysis on intrinsic dimension under isoperimetry assumptions.

FORESEER Research Group, University of Michigan

Michigan

- *Undergraduate Research Assistant*

Dec. 2021 – Jan. 2023

- **Advisor:** Jiaqi Ma

- Prove the asymptotic separability of a 1-layer GCN on node classification tasks.

Chief Noob

Shanghai, China


- *Backend Developer*


Oct. 2020 – June 2021

PRE-PRINTS AND TECHNICAL REPORTS


(* denotes equal contribution)

[P1] **Pingbang Hu**, Mahito Sugiyama, “Pseudo-Non-Linear Data Augmentation with Information Geometry”. *Preprint*

[P2] Xinhe Wang, **Pingbang Hu**, Junwei Deng, Jiaqi Ma, “Adversarial Attacks on Data Attribution”. *Preprint* 

[P3] Yiwen Tu*, **Pingbang Hu***, Jiaqi Ma, “Towards Reliable Empirical Machine Unlearning Evaluation: A Game-Theoretic View”. *Preprint* 

[P4] Yuzheng Hu*, **Pingbang Hu***, Han Zhao, Jiaqi Ma, “Most Influential Subset Selection: Challenges, Promises, and Beyond”. *In submission*

[P5] **Pingbang Hu**, “Travel the Same Path: A Novel TSP Solving Strategy”. *Preprint* 

TEACHING EXPERIENCE

- | | |
|---|------------------------|
| Instructional Aide, University of Michigan | Michigan |
| ▪ <i>Hold discussion and office hour weekly, design assignment and exam problems, grade and guide projects.</i> | |
| ◦ Introduction to Cryptography : An upper-level course on the main undergraduate CS track. | <i>Winter 2023</i> |
| ◦ Randomness and Computation : A graduate-level course on the M.S. CS theory track. | <i>Fall 2022</i> |
| Teaching Assistant, Shanghai Jiao Tong University | Shanghai, China |
| ▪ <i>Hold discussion and office hour weekly, design and grade assignments and exams.</i> | |
| ◦ Honor Mathematics III : An undergraduate-level course on the main B.Eng. ECE track. | <i>Summer 2021</i> |
| * Competition : Hold the 1 st UM-SJTU JIntegration Bee competition. | |
| ◦ Honor Mathematics II : An undergraduate-level course on the main B.Eng. ECE track. | <i>Fall 2020</i> |

HONORS AND AWARDS

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| Excellent Internship Evaluation | Tokyo, Japan |
| ▪ <i>Best internship evaluation result in National Institute of Informatics</i> | <i>Aug. 2024</i> |
| Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship | Shanghai, China |
| ▪ <i>First Prize (Ranked #2) among all HK, MC and TW students in Shanghai Jiao Tong University</i> | <i>Oct. 2021</i> |
| Undergraduate Excellent Scholarship | Shanghai, China |
| ▪ <i>Third Prize among all students in UM-SJTU Joint Institute</i> | <i>Nov. 2020</i> |
| Bao Gang Excellent Scholarship | Shanghai, China |
| ▪ <i>Second Prize (Ranked #3) among all Taiwan students in Shanghai Jiao Tong University</i> | <i>June 2020</i> |
| Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship | Shanghai, China |
| ▪ <i>First Prize (Ranked #1) among all HK, MC and TW students in UM-SJTU Joint Institute</i> | <i>Dec. 2019</i> |

PROFESSIONAL SERVICE

- Conference Reviewer**
- *ICML 2024, IEEE BigData 2023, ICLR 2025*