

## 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 – Jun. 2021

## PRE-PRINTS AND TECHNICAL REPORTS

(\* denotes equal contribution)

[P1] **Pingbang Hu**, Thatchaphol Saranurak, “Finding Minimal Balanced Separators with Detection Sets”. *Manuscript*

[P2] **Pingbang Hu**, “Travel the Same Path: A Novel TSP Solving Strategy”. *Preprint* 

## TEACHING EXPERIENCE

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### Instructional Aide, University of Michigan

Michigan

- Hold discussion and office hour weekly, design assignment and exam problems, grade and guide projects.
  - **Introduction to Cryptography** 🌟 : An upper-level course on the main undergraduate CS track.
  - **Randomness and Computation** 🌟 : A graduate-level course on the M.S. CS theory track.

Winter 2023

Fall 2022

### Teaching Assistant, Shanghai Jiao Tong University

Shanghai, China

- Hold discussion and office hour weekly, design and grade assignments and exams.
  - **Honor Mathematics III** 🌟 : An undergraduate-level course on the main B.Eng. ECE track.
  - \* **Competition**: Hold the 1<sup>st</sup> UM-SJTU JIntegration Bee competition 🌟 .
  - **Honor Mathematics II** 🌟 : An undergraduate-level course on the main B.Eng. ECE track.

Summer 2021

Fall 2020

## HONORS AND AWARDS

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### Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship

Shanghai, China

- First Prize (Ranked #2) among all HK, MC and TW students in Shanghai Jiao Tong University

Oct. 2021

### Undergraduate Excellent Scholarship

Shanghai, China

- Third Prize among all students in UM-SJTU Joint Institute

Nov. 2020

### Bao Gang Excellent Scholarship

Shanghai, China

- Second Prize (Ranked #3) among all Taiwan students in Shanghai Jiao Tong University

Jun. 2020

### Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship

Shanghai, China

- First Prize (Ranked #1) among all HK, MC and TW students in UM-SJTU Joint Institute

Dec. 2019

## PROFESSIONAL ACTIVITIES

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### IEEE International Conference on Big Data (IEEE BigData)

- Conference Reviewer

2023