Pingbang Hu

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RESEARCH INTEREST

Machine Learning
Trustworthy Machine Learning, Data-Centric AI, Statistical Learning Theory, Manifold and Graph Learning

Theoretical Computer Science
Fast Graph Algorithm, Approximation Algorithm, Learning Theory

EDUCATION

University of Illinois Urbana-Champaign — **Illinois**
Ph.D. Candidate in Information Science, School of Information Science — *Aug. 2023–Present*
- **Advisor**: Jiaqi Ma

University of Illinois Urbana-Champaign — **Illinois**
M.S. in Applied Mathematics, College of Liberal Arts & Sciences — *Aug. 2023–Aug. 2025*
- **Concentration**: Optimization and Algorithms

University of Michigan — **Michigan**
B.S. in Computer Science with **Summa Cum Laude**, *College of Engineering* — *Aug. 2021–May 2023*
- **Minor**: Mathematics, College of Literature, Science, and the Arts

Shanghai Jiao Tong University — **Shanghai, China**
B.E. in Electrical and Computer Engineering, UM-SJTU Joint Institute — *Aug. 2019–Aug. 2023*
- **Minor**: Computer Science, UM-SJTU Joint Institute

RESEARCH AND INDUSTRY EXPERIENCE

Machine Learning Research Team, Morgan Stanley — **New York**
Machine Learning Researcher Intern — *(Incoming) May 2026–Aug. 2026*

AWS AI Lab, Amazon — **New York**
Applied Scientist Intern — *May 2025–Aug. 2025*

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–Dec. 2023*
- **Advisor**: Thatchaphol Saranurak

SURE Program, University of Michigan — **Michigan**
Undergraduate Researcher — *May 2022–Apr. 2023*
- **Advisor**: Wei Hu

FORESEER Research Group, University of Michigan — **Michigan**
Undergraduate Research Assistant — *Dec. 2021–Jan. 2023*
- **Advisor**: Jiaqi Ma

Chief Noob — **Shanghai, China**
Backend Developer — *Oct. 2020–June 2021*

PEER-REVIEWED CONFERENCE PUBLICATIONS

(* denotes equal contribution)

[C1] **Pingbang Hu**, Joseph Melkonian, Weijing Tang, Han Zhao, Jiaqi W. Ma, "GRASS: Scalable Influence Function with Sparse Gradient Compression". In *Proceedings of the 39th Advances in Neural Information Processing Systems* (NeurIPS 2025) 📄

[C2] Yiwen Tu*, **Pingbang Hu***, Jiaqi W. Ma, "A Reliable Cryptographic Framework for Empirical Machine Unlearning Evaluation". In *Proceedings of the 39th Advances in Neural Information Processing Systems* (NeurIPS 2025) 📄

[C3] Xinhe Wang, **Pingbang Hu**, Junwei Deng, Jiaqi W. Ma, "Adversarial Attacks on Data Attribution". In *Proceedings of the 13th International Conference on Learning Representations* (ICLR 2025) 📄

[C4] Yuzheng Hu, **Pingbang Hu**, Han Zhao, Jiaqi W. Ma, "Most Influential Subset Selection: Challenges, Promises, and Beyond". In *Proceedings of the 38th Advances in Neural Information Processing Systems* (NeurIPS 2024) 📄

[C5] Junwei Deng[*], Ting-Wei Li[*], Shiyuan Zhang, Yijun Pan, Hao Huang, Xinhe Wang, **Pingbang Hu**, Xingjian Zhang, Jiaqi W. Ma, "`dattri`: A Library for Efficient Data Attribution". In *Proceedings of the 38th Advances in Neural Information Processing Systems Datasets and Benchmarks Track* (NeurIPS 2024) (**Spotlight**) 📄

PRE-PRINTS AND TECHNICAL REPORTS ([*] denotes equal contribution)

[P1] Junwei Deng[*], Yuzheng Hu[*], **Pingbang Hu**[*], Ting-Wei Li[*], Shixuan Liu[*], et al., "A Survey of Data Attribution: Methods, Applications, and Evaluation in the Era of Generative AI". *In submission* 📄

[P2] **Pingbang Hu**, Mahito Sugiyama, "Pseudo-Non-Linear Data Augmentation via Energy Minimization". *In submission* 📄

[T1] **Pingbang Hu**, "Travel the Same Path: A Novel TSP Solving Strategy". *Technical Report* 📄

TEACHING EXPERIENCE

Graduate Teaching Assistant, University of Illinois Urbana-Champaign **Illinois**
Hold discussion and office hours weekly, design assignments and exam problems, grade and guide projects.
- **Network Analysis**: A graduate-level course on the M.S. IS track. *Spring 2025*

Instructional Aide, University of Michigan **Michigan**
Hold discussion and office hours weekly, design assignments and exam problems, grade and guide projects.
- **Introduction to Cryptography**: An upper-level course on the main undergraduate CS track. *Winter 2023*
- **Randomness and Computation**: A graduate-level course on the M.S. CS theory track. *Fall 2022*

Teaching Assistant, Shanghai Jiao Tong University **Shanghai, China**
Hold discussion and office hours weekly, design and grade assignments and exams.
- **Honor Mathematics III**: An undergraduate-level course on the main B.Eng. ECE track. *Summer 2021*
  - **Competition**: Hold the 1st UM-SJTU JIntegration Bee competition.
- **Honor Mathematics II**: An undergraduate-level course on the main B.Eng. ECE track. *Fall 2020*

HONORS AND AWARDS

Graduate Conference Travel Award **Illinois**
Graduate College's Competition at University of Illinois Urbana-Champaign *Nov. 2024*

NeurIPS 2024 Scholar Award **British Columbia, Canada**
Financial Aid Award for NeurIPS 2024 *Oct. 2024*

Excellent Internship Award **Tokyo, Japan**
Excellent (best) internship evaluation at National Institute of Informatics *Aug. 2024*

Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship **Shanghai, China**
First Prize (Ranked #2) among all HK, MC, and TW students at Shanghai Jiao Tong University *Oct. 2021*

Undergraduate Excellent Scholarship **Shanghai, China**
Third Prize among all students at UM-SJTU Joint Institute *Nov. 2020*

Bao Gang Excellent Scholarship **Shanghai, China**
Second Prize (Ranked #3) among all Taiwan students at Shanghai Jiao Tong University *June 2020*

Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship **Shanghai, China**
First Prize (Ranked #1) among all HK, MC, and TW students at UM-SJTU Joint Institute *Dec. 2019*

PROFESSIONAL SERVICE

Program Committee
AAAI 2025

Conference Reviewer
ICLR 2026, NeurIPS 2025, ICLR 2025, ICML 2024, IEEE BigData 2023