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

- **Deep Learning Research, Susquehanna International Group** — **Pennsylvania**
  Machine Learning Ph.D. Intern — *(Incoming) May 2026–Aug. 2026*

- **Alignment Science Team, Anthropic** — **San Francisco**
  AI Safety Research Fellows — *(Incoming) Nov. 2025–May. 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

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

PEER-REVIEWED CONFERENCE PUBLICATIONS

(* denotes equal contribution)

[C1] **Pingbang Hu**, Joseph Melkonian, Weijing Tang, Han Zhao, Jiaqi W. Ma, "GRASS: Scalable Data Attribution with Gradient Sparsification and Sparse Projection". 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*