

MINGZHANG YIN

416 S. W. Mudd Building ◊ 500 West 120th Street ◊ New York, NY 10027
+1 206 519 8518 ◊ mingzhang.yin@columbia.edu ◊ <https://mingzhang-yin.github.io>

EDUCATION

| | |
|--|---------------------|
| Postdoctoral Research Scientist, Columbia University | July 2020 - present |
| Data Science Institute Advisor: David M. Blei | |
| Ph.D. Statistics, The University of Texas at Austin | 2015 - 2020 |
| Advisor: Mingyuan Zhou | |
| B.Sc. Mathematics and Applied Mathematics, Fudan University | 2011 - 2015 |
| Undergraduate Thesis Advisor: Zhijie Cai | |

PROFESSIONAL EXPERIENCE

| | |
|---|-----------------------|
| Research Intern , Google Research, Brain Team, Mountain View, CA | May 2019–August 2019 |
| Supervisor: Drs. George Tucker and Chelsea Finn | |
| Research Intern , Quantlab Financial LLC, Houston, TX | June 2017–August 2017 |
| Supervisor: Dr. Joe Masters | |
| Data Science Intern , HP Lab, Austin, TX | June 2016–August 2016 |
| Supervisor: Dr. Lakshminarayan Choudur | |

PUBLICATIONS

- **Mingzhang Yin**, George Tucker, Mingyuan Zhou, Sergey Levine and Chelsea Finn. “Meta-Learning without Memorization.” International Conference on Learning Representations (ICLR), **Spotlight**, 2020.
- Yuguang Yue, Yunhao Tang, **Mingzhang Yin** and Mingyuan Zhou. “Discrete Action On-Policy Learning with Action-Value Critic.” International Conference on Artificial Intelligence and Statistics (AISTATS), 2020.
- **Mingzhang Yin**, YX Rachel Wang and Purnamrita Sarkar. “A Theoretical Case Study of Structured Variational Inference for Community Detection.” International Conference on Artificial Intelligence and Statistics (AISTATS), 2020.
- Siamak Zamani Dadaneh, Shahin Boluki, **Mingzhang Yin**, Mingyuan Zhou and Xiaoning Qian. “Pair-wise Supervised Hashing with Bernoulli Variational Auto-Encoder and Self-Control Gradient Estimator.” The Conference on Uncertainty in Artificial Intelligence (UAI), 2020
- **Mingzhang Yin***, Yuguang Yue* and Mingyuan Zhou. (*equal contribution) “ARSM: Augment-REINFORCE-Swap-Merge Estimator for Gradient Backpropagation Through Categorical Variables.” International Conference on Machine Learning (ICML) 2019.
- **Mingzhang Yin** and Mingyuan Zhou. “ARM: Augment-REINFORCE-Merge Gradient for Stochastic Binary Networks.” International Conference on Learning Representations (ICLR), 2019.
- **Mingzhang Yin** and Mingyuan Zhou. “Semi-implicit Variational Inference.” International Conference on Machine Learning (ICML), **Long Talk**, 2018.
- **Mingzhang Yin** and Mingyuan Zhou. “Semi-Implicit Generative Model.” Bayesian Deep Learning Workshop, NeurIPS 2018.

- Bowei Yan, **Mingzhang Yin** and Purnamrita Sarkar. “Convergence of Gradient EM for Multi-component Gaussian Mixture.” Conference on Neural Information Processing Systems (NeurIPS) 2017.

PAPERS IN PREPARATION

- **Mingzhang Yin**, Nhat Ho, Bowei Yan, Xiaoning Qian, Mingyuan Zhou. “Probabilistic Best Subset Selection via Gradient-Based Optimization” **arXiv 2006.06448, 2020.**
- **Mingzhang Yin**, Yixin Wang, David M. Blei. “Optimization-based Causal Estimation from Heterogeneous Environments” **In submission, Journal of Machine Learning Research (JMLR); arXiv 2109.11990, 2021.**
- **Mingzhang Yin**, Claudia Shi, Yixin Wang, David M. Blei. “Conformal Sensitivity Analysis for Individual Treatment Effect” **In submission, Journal of the American Statistical Association (JASA); arXiv 2112.03493, 2021**
- Wenshuo Guo, **Mingzhang Yin**, Yixin Wang, Michael I. Jordan. “Partial Identification with Noisy Covariates: A Robust Optimization Approach” **In submission, Conference on Causal Learning and Reasoning (CLeaR), 2021.**

PRESENTATIONS

- “Machine leaning with heterogeneous data”, Microsoft Research, Cambridge, MA October 2021
- “Causal Inference with Multiple Environments”, Flatiron Institute, New York, NY August 2021
- “Semi-Implicit Variational Inference” *AI/ML Seminar Series*, Center for Machine Learning and Intelligent Systems, University of California, Irvine February 2020
- “The Big Problem with Meta-Learning and How Bayesians Can Fix It, *Bayesian Deep Learning Workshop*, Vancouver December 2019
- “Efficient Discrete Optimization with Correlated Samples”, *International Conference on Machine Learning*, Long Beach June 2019
- “Antithetic Sampling and Control Variates in Learning Binary Networks”, *UT Austin Statistics Seminar*, Austin December 2018
- “Black-box Variational Inference and Uncertainty Estimation”, *International Conference on Machine Learning*, Stockholm July 2018

SERVICE

Conference reviewing: NeurIPS 2017–2020; ICML 2019–2021; ICLR 2018–2020; AISTATS 2018; UAI 2019–2021; ACML 2018; AAAI 2018

Journal reviewing: IEEE TPAMI; JMLR; IEEE Trans. Signal Process

Member: American Statistical Association (ASA), 2015–present; International Society for Bayesian Analysis (ISBA), 2019–present

TEACHING AND ADVISING EXPERIENCE

| | |
|--|--------------------------|
| Teaching Assistant, Introduction to Probability and Statistics | Fall 2017, Fall 2019 |
| Teaching Assistant, Bayesian Statistical Methods | Spring 2016, Spring 2017 |
| Teaching Assistant, Design and Analysis of Experiments | Spring 2017 |
| Teaching Assistant, Linear Algebra | Fall 2018 |
| Undergraduate Mentorship, Directed Reading Program, UT Math Department | Fall 2018, Spring 2019 |

SELECTED AWARDS AND HONORS

| | |
|--|------------|
| Graduate School Professional Development Award | 2017, 2019 |
| Google Archimedes Program | 2019 |
| The Graduate Continuing Bruton Fellowship | 2018, 2019 |
| Travel Award, ICLR | 2019 |
| Travel Award, ICML | 2018, 2019 |
| Travel Award, NeurIPS | 2017 |
| Leo Tang Hsiang-chien Scholarship | 2014 |
| 1 st Prize in China Mathematical Olympiad | 2011 |