Luhao Zhang

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Positions

Columbia University, New York, NY, USA — Sep 2023 -

Postdoctoral Research Scientist, Department of IEOR
Mentor: Xunyu Zhou

Education

The University of Texas at Austin, Austin, TX, USA

Ph.D. in Mathematics — Aug 2018 - Aug 2023
Advisor: Thaleia Zariphopoulou

Xi'an Jiaotong University, Xi'an, Shaanxi, China

B.S. in Mathematics and Applied Mathematics (Honors Program) — Aug 2014 - June 2018
Special Class for the Gifted Young

Research Papers

Publications

1. Luhao Zhang, Jincheng Yang, Rui Gao. *Optimal Robust Policy for Feature-Based Newsvendor* (2023), ***Management Science*** 70(4):2315-2329.
2. Luhao Zhang, Jincheng Yang, Rui Gao. *A Simple and General Duality Proof for Wasserstein Distributionally Robust Optimization* (2024), ***Operations Research***, forthcoming.

Preprints

3. Renyuan Xu, Thaleia Zariphopoulou, Luhao Zhang. *Decision Making under Costly Sequential Information Acquisition: the Paradigm of Reversible and Irreversible Decisions*, Submitted.
4. Jincheng Yang, Luhao Zhang, Ningyuan Chen, Rui Gao, Ming Hu. *Decision-making with Side Information: A Causal Transport Robust Approach*.

Conference papers

5. Luhao Zhang, Mohsen Ghassemi, Ivan Brugere, Alan Mishler, Niccolo Dalmasso, Vamsi Potluru, Tucker Balch, Manuela Veloso. *Conditional Demographic Parity Through Optimal Transport* (2022), accepted by ***NeurIPS*** Workshop on Algorithmic Fairness through the Lens of Causality and Privacy.

Industry Experience

J.P.Morgan Chase, AI Research, New York, NY

AI Researcher (Intern) June - Aug 2022

- Developed an efficient algorithm to achieve conditional demographic parity using causal transport distance
- Preliminary results accepted by *NeurIPS Workshop on Algorithmic Fairness through the Lens of Causality and Privacy*

Award

Frank Gerth III Teaching Excellence Award, UT Austin	2021
Selected to present at the Cornell ORIE Young Researchers Workshop	Summer 2021
Graduate School Summer Fellowship, UT Austin,	Summer 2021
Graduate Continuing Bruton Fellowship, UT Austin,	Spring 2022
Professional Development Award, UT Austin,	Spring, Fall 2022
Student Travel Award, SIAM,	May 2023
Meritorious Service Award, Mathematical Programming	2023

Professional Service

Referee

- Mathematical Programming
  (2023 Meritorious Service Award)
- Operations Research
- Management Science
- Production and Operations Management
- 3rd ACM International Conference on AI in Finance

Session Chair

- INFORMS 2021, Invited session of Learning and Decision-making with Contextual Information
- INFORMS 2022, Invited session of Data-driven Decision Making
- INFORMS 2023, Invited session of Decision-making under Uncertainty
- ICSP 2023, Mini-symposium of Causal transport and adapted Wasserstein distance
- INFORMS 2024, Invited session of Decision-making under Uncertainty

Invited Talks

- Robust Optimization Webinar Series — May 2021
- International Conference of the Chinese Scholars Association for Management Science and Engineering (CSAMSE), Shanghai Jiaotong University — July 2021
- Cornell ORIE Young Researchers Workshop, Ithaca, NY — Oct 2021
- INFORMS Annual Meeting, Anaheim, CA — Oct 2021
- Conference on Artificial Intelligence, Machine Learning, and Business Analytics, Rutgers University — Dec 2021
- Texas Women in Math Symposium, Rice University — Feb 2022
- INFORMS Optimization Society Conference, Greenville, SC — March 2022
- SIAM Annual Meeting, Pittsburgh, PA — July 2022
- INFORMS Annual Meeting, Indianapolis, IN — Oct 2022
- Western Conference on Mathematical Finance, UC Berkeley, CA — March 2023
- SIAM Conference on Optimization (OP23), Seattle, Washington — May 2023
- International Conference Stochastic Programming (ICSP), Davis, CA — July 2023
- INFORMS Annual Meeting, Phoenix, AZ — October 2023
- Workshop on Decision Making and Uncertainty, IMSI, Chicago, IL — February 2024
- INFORMS Optimization Society Conference, Houston, TX — March 2024
- Mathematical Finance Seminar Series, Columbia University, NY, — March 2024

Mentorship

Directed Reading Program

- Sonali Singh, on the topic of *Stochastic Calculus for Finance* — Spring 2020
- Wenxuan Jiang, on the topic of *Stochastic Calculus for Finance* — Fall 2021
- Haoze Yan, on the topic of *Stochastic Programming* — Spring, Fall 2022
- Yuxiang Gao, on the topic of *Elements of Statistical Learning* — Spring 2022