XIAOJIE MAO

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Lihua Building B418, Tsinghua University

EDUCATION BACKGROUND

Cornell University   New York, NY
Ph.D. in Statistics, with minor in Operatiors Research.   2016.09 – 2021.05
- Thesis: *Machine Learning Methods for Data-Driven Decision Making.*
- Thesis Committee: Nathan Kallus (Chair), Madeleine Udell (Co-Chair), Peter Frazier, Thorsten Joachims.

M.S. in Statistics.   2019.12

Wuhan University   Wuhan, China
B.A. in Mathematical Economics.   2012.09 – 2016.06
Top 1% of 2016 graduates (among 7000+) awarded with 100% tuition waiver, major GPA 3.96 (rank 1/117), National Scholarship (   ) for 4 years.

WORK EXPERIENCE

Tsinghua University, School of Economics and Management (SEM)   Beijing, China
Associate Professor (untenured) in Management Scince and Engineering.   2024.07 – present
Assistant Professor in Management Scince and Engineering.   2021.07 – 2024.07
- Research Areas: data-driven decision making, causal inference, statistical machine learning.

1. Nathan Kallus, Xiaojie Mao, Angela Zhou. **Assessing Algorithmic Fairness with Unobserved Protected Class Using Data Combination.** *Management Science (Special Section*

1. Nathan Kallus, Xiaojie Mao, Masatoshi Uehara. **Causal Inference Under Unmeasured Confounding With Negative Controls: A Minimax Learning Approach.** *arXiv preprint arXiv: 2103.14029.*

TEACHING

Tsinghua University
Instructor
- Probability Theory and Mathematical Statistics (   ), 2022 - 2024 Fall (rated as top 5% of Tsinghua undergraduate level courses by students in 2023 Fall).
- Data Analytics: Inference and Decision-Making (:   ), 2022 - 2023 Spring, 2023 Fall (rated as top 5% of Tsinghua graduate level courses by students in 2023 Fall).
- Empirical Methods in Management Science (   ), 2022 - 2024 Spring.

Cornell University
Teaching assistant
- ORIE 5750/CS 5785 Applied Machine Learning, 2019 Fall.
- STSCI 5110/ILRST 5110 Statistical Methods for Social Science, 2018 Spring.
- BTRY 6010/ILRST 6100 Statistical Methods I, 2016 Fall, 2017 Fall.

Wuhan University
Teaching assistant
- Introduction to Probability Theory, 2015 Fall.
- Introduction to Mathematical Statistics, 2015 Spring.

GRANTS

Theory and Methods of Data-driven Decision-Making, National Science Fund for Excellent Young Scholars (   ), Principal Investigator (2024.01 - 2026.12)

Long-term Causal Inference and Decision-Making via Data Combination, Young Scientists Fund of NSFC (   ), Principal Investigator (2023.01 - 2025.12)

Intelligent Control Systems under Hardware Constraints, National Key R&D Program of China (2030   ), Participant (2023.01 - 2025.12)

Decision Theory and Methods for Supply Chain Resilience and Security, Major Program of NSFC (   ), Participant (2023.01 - 2027.12)

AWARDS

Tsinghua University: 2023 Award for Excellence in Teaching (   )

Tsinghua School of Economics and Management: 2023 Outstanding Faculty Award (   ), 2023 Award for Excellence in Research (   ), 2023 Second Prize for Excellence in Teaching (   )

AISTATS 2023 Top 10% Reviewer (2023.02)

Applied Probability Society Best Student Paper Competition, Finalist (2020)

Undergraduate National Scholarship (   ), Ministry of Education (2012 - 2016)

STUDENT MENTORING

Postdocs
- Xixi Li (, PhD in Statistics from University of Manchester), 2024-present.

Ph.D. Students (Main/Co-Advisor)
- Zhehao Li (,   21   ), 2021-present, co-advised with Jian Chen (   )

- Shiyuan Wang (　　,　　　　　20　), 2021-present, co-advised with Yong Liang (　　)
- Shangkun Che (　　,　　　　　20　), 2021-present, co-advised with Hongyan Liu (　　　)

Ph.D. Students (Ad-hoc Project Mentor)

- Yanchen Wu (　　,　　　　23　), 2024, project mentor
- Feiyu Shao (　　,　　　　　22　), 2023-present, project mentor, joint with Tianhu Deng (　　)
- Bowen Shi (　　,　　　　22　), 2021-2023, project mentor, joint with Bo Li (　　)

Master Students

- Shicheng Li (　　　-　　　　　　23　), 2023-present
- Haonan Zhou (　　　-　　　　　　23　), 2023-present
- Yaning Xu (　　,　　　　21　), 2021-2023, first position:　　　　　　　　.

Undergraduate Students

- Zijia Chen (　　　　　21　) 2024-present, first position: PhD in Management Science and Engineering, Tsinghua University.
- Songliang Chen (　　,　　　21　), 2023-present
- Boxuan Dong (　　　　21　), 2023, first position: Tsinghua-Columbia Dual Master's Degree Program in Business Analytics.
- Yihui He (　　,　　　20　), 2023, first position: PhD in Statistics, Upenn Wharton.
- Sijia Liu (　　,　　　20　), 2023, first position: Tsinghua-Columbia Dual Master's Degree Program in Business Analytics.
- Yuhui Li (　　,　　　20　), 2023, first position: Master in OR, Columbia University.
- Sijia Meng (　　,　　　20　), 2023-2024, first position: Master in Business Analytics, Guanghua School of Management at Peking University.
- Fuling Zhang (　　,　　　20　), 2023-2024, first position: Tsinghua-Columbia Dual Master's Degree Program in Business Analytics.
- Baojun Liao (　　,　　　19　), 2022-2023, first position:
- Zhiyuan Tang (　　,　　　18　), 2022-2023, first position: PhD in Operations Management, Naveen Jindal School of Management at UT Dallas

ACADEMIC SERVICE

Editorial Service

Guest editor for Journal of System Science and System Engineering　　　　　　2023 - present

Area Chair for NeurIPS 2024.

Journal Referee:

- Statistics and Econometrics: Biometrika, Econometrica, Journal of the American Statistical Association, Journal of Econometrics, Journal of the Royal Statistical Society (Series B), Review of Economics and Statistics, Statistics and computing, Statistica Sinica.

- Business and Management: Information & Management, Information Systems Research, Management Science, Operations Research, Production and Operations Management.

- Machine Learning and Data Mining: Journal of Machine Learning Research, Data Mining and Knowledge Discovery, NeurIPS 2018 - 2023, ICML 2019 - 2022, AISTATS 2019 - 2023, ACM FAccT 2021 - 2022.

- Others: Mathematical Programming, Transportations Research.

Conference Service

Session Chair for POMS-HK 2024, American Causal Inference Conference (ACIC) 2024.

Program committee for NeurIPS 2018 workshop *"Challenges and Opportunities for AI in Financial Services: the Impact of Fairness, Explainability, Accuracy, and Privacy"* and NeurIPS 2020 workshop *"Fair AI in Finance"*.

Administrative Service

MS&E Faculty Hiring Committee Member	2021 - present
MS&E Undergraduate Student Affairs Committee Member	2021 - present
MS&E Master Student Affairs Committee Member	2021 - present
MS&E Ph.D. Student Affairs Committee Member	2021 - present
MS&E Research and Conference Coordination Committee Member	2021 - present
Organizer, PhD student study group on Data-driven Decision-Making	2021 - present
Organizer, PhD student study group on Causal Inference + AI	2023 - present

INVITED PRESENTATIONS

Conference or Workshop Presentations

Workshop on "Robustness meets Causality", Shanghai Qizhi Institute	2024.07
Chinese Scholars Association for Management Science And Engineering Annual Conference	2024.07
Summer Workshop on AI for Business, INFORMS College on Artificial Intelligence	2024.07
Hangzhou International Conference on Frontiers of Data Science	2024.07
International Chinese Statistical Association Conference, Wuhan	2024.06
The 30th Anniversary of Wuhan University Institute of Advanced Study	2024.06
American Causal Inference Conference	2024.04
Chinese Causal Inference Conference	2024.03
The 14th POMS-HK International Conference	2024.01
National Conference on Supply Chain and Operation Management (ISCOM)	2023.12
INFORMS Annual Meeting 2023 Invited Session "Optimization for Experimentation and Personalization in Managerial Settings"	2023.10
Annual Conference on E-Commerce and Digital Innovations	2023.08
Hangzhou International Conference on Frontiers of Data Science	2023.08
International Conference on Service Systems and Service Management	2023.08
Chinese Scholars Association for Management Science and Engineering Annual Conference	2023.07
Productions and Operations Management Society Annual Conference	2023.05
American Causal Inference Conference	2023.05
INFORMS Annual Meeting 2021 Invited Session "Learning and Decision Making with Contextual Information"	2021.11
Tsinghua Symposium on Statistics and Data Science for Young Scholars	2021.10
INFORMS Annual Meeting 2021 Award Session for Applied Probability Society	2021.11
Kellogg-Wharton OM Workshop	2020.07
Conference of Learning Theory 2020	2020.07
Atlantic Causal Inference Conference (cancelled due to COVID19)	2020.05
INFORMS Annual Meeting 2019 invited session "Learning & Optimization in Healthcare"	2019.10

INFORMS Annual Meeting 2019 invited session "Data-Driven Models and Algorithms"	2019.10
Annual Young Researchers Workshop, Cornell ORIE Department	2019.10
ACM FAT* 2019	2019.01

Department Seminars

Institute of Statistics and Big Dat	2024.11
University of Chinese Academy of Sciences, School of Economics and Management	2024.09
Beijing Jiaotong University, School of Economics and Management	2024.06
Chinese University of Hong Kong (Shenzhen), School of Data Science	2024.04
Peking University, Guanghua School of Management	2024.03
Remin University, School of Statistics	2023.05
HKUST, Industrial Engineering and Decision Analytics	2023.05
New York University Shanghai	2023.04
Shanghai Jiaotong University, Antai College of Economics and Management	2023.03
Tsinghua University, Lab of Computational Social Science and State Governace	2022.12
Wuhan University, Department of Mathematical Economics and Mathematical Finance	2021.06
Tsinghua University, Department of Management Science and Engineering	2020.12
City University of Hong Kong, Department of Management Science	2020.12
Chinese University of Hong Kong, Department of Decision Science and Managerial Economics	2020.12
University of Hong Kong, Faculty of Business and Economics	2020.11
Shanghai University of Finance and Economics, Institute for Interdisciplinary Sciences	2020.11
Chinese University of Hong Kong, Department of Statistics	2020.11
Chinese University of Hong Kong (Shenzhen), School of Data Science	2020.11
Tsinghua University, Department of Management Science and Engineering	2020.01
Shanghai University of Finance and Economics, Institute for Interdisciplinary Sciences	2020.01
Shanghai Jiaotong University, John Hopcroft Center for Computer Science	2020.01
Wuhan University, Department of Mathematical Economics and Mathematical Finance	2020.01

Other Presentations

Plenary talk, NSFC Young Scientist Fund Workshop ( )	2024.09
Bear Club ( ) Online Seminar	2024.07
Online Causal Inference Seminar	2021.08
University College London, Arthur Gretton's Group in Center for CSML	2021.06
Peking University, Xiaohua Zhou's Group in Department of Biostatistics	2021.06
Online Causal Inference Seminar	2020.09
Capital One workshop on Fair and Responsible AI in Finance	2018.10