Kan Xu

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Education

University of Pennsylvania — Philadelphia, PA
Ph.D. in Economics — 2018 – 2023 (Expected)

University of Chicago — Chicago, IL
M.S. in Statistics — 2015 – 2017

Tsinghua University — Beijing, China
B.S. in Mathematics — 2011 – 2015
B.A. in Economics — 2013 – 2015

Research Interests

Data-collaborative machine learning: multitask learning, transfer learning, federated learning
(Sequential) data-driven decision making: bandit algorithms, reinforcement learning
High-dimensional statistics: LASSO, matrix factorization
Others: safety, robustness, natural language processing, healthcare operations, dynamic pricing

Working Papers

Learning Across Bandits in High Dimension via Robust Statistics
(with Hamsa Bastani)
Major Revision, **Management Science**
- **3rd Place**, IBM Service Science Best Student Paper Award (2022)

Group-Sparse Matrix Factorization for Transfer Learning of Word Embeddings
(with Xuanyi Zhao, Hamsa Bastani and Osbert Bastani)
Under Review, **Management Science**
- Preliminary version in **ICML**, 2021

Safely Bridging Offline and Online Reinforcement Learning
(with Wanqiao Xu, Jason Yecheng Ma, Hamsa Bastani and Osbert Bastani)
To Be Submitted To **Management Science**
- Preliminary version in **AISTATS**, 2023

Two-Stage Maximum Score Estimator
(with Wayne Gao, Sheng Xu)
To Be Submitted To **Econometrica**

Robust Generalization of Quadratic Neural Networks via Function Identification
(with Hamsa Bastani and Osbert Bastani)
- ICML OPPO Workshop, 2021

Work in Progress

Collaborative Linear Learning under Sparse Heterogeneity
(with Xinmeng Huang, Hamsa Bastani, Edgar Dobriban)
To Be Submitted To **Journal of the American Statistical Association**

Bandits with ReLU Neural Networks
(with Hamsa Bastani, Osbert Bastani, Surbhi Goel)

Publications

Uniformly Conservative Exploration in Reinforcement Learning
(with Wanqiao Xu, Jason Yecheng Ma, Hamsa Bastani and Osbert Bastani)
International Conference on Artificial Intelligence and Statistics (AISTATS), 2023

Group-Sparse Matrix Factorization for Transfer Learning of Word Embeddings
(with Xuanyi Zhao, Hamsa Bastani and Osbert Bastani)
International Conference on Machine Learning (ICML), 2021

Talks

Learning Across Bandits in High Dimension via Robust Statistics

INFORMS Annual Meeting	2022
Cornell Young Researchers Workshop (Poster)	2022
MSOM Conference	2022
RMP Conference	2022
NYC Operations Day (Poster)	2022

Group-Sparse Matrix Factorization for Transfer Learning of Word Embeddings

INFORMS Annual Meeting	2021
ICML Conference	2021
MSOM Conference	2021
RMP Conference	2021
INFORMS Annual Meeting	2020

Teaching Experience

The Wharton School, University of Pennsylvania

Teaching Assistant, OIDD 612 Business Analytics (MBA)	2021

University of Pennsylvania

Teaching Assistant, ECON 705 Econometrics I (PhD)	2020

Service

Reviewer for Management Science, Operations Research, AISTATS

Session Chair, INFORMS Annual Meeting	2022

Awards and Honors

3rd Place, IBM Service Science Best Student Paper Award	2022
Xingmei Zhang & Yongge Dai Fellowship	2020 − 2021

Professional Experience

Moelis & Company	New York, NY
Data Science Intern	Summer 2020
University of Chicago, Department of Economics	Chicago, IL
Research Specialist	2017 − 2018

Skills

Programming: Python, R, MATLAB, SQL, Bash, Git, STATA, ArcGIS
Languages: English (professional), Chinese (native)

References

Prof. Hamsa Bastani (Advisor)
Operations, Information and Decisions
The Wharton School
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(215) 573 5365

Prof. Noah Gans
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The Wharton School
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Prof. Osbert Bastani
Computer and Information Science
University of Pennsylvania
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