

# JIAMENG LYU

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## EDUCATION

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**Tsinghua University**, Beijing, China Aug. 2021 – Jun. 2025 (Expected)

Ph.D. Candidate in Operations Research *Department of Mathematics* **Advisor:** Prof. Yuan Zhou

**Georgia Institute of Technology**, Atlanta, USA Jul. 2024 – Present

Visiting Student *School of Industrial and Systems Engineering (ISyE)* **Host:** Prof. Xin Chen

**University of Science and Tchenology of China (USTC)**, Hefei, China Aug. 2017 – Jul. 2021

B.S. in Statistics (Honor Degree)

Rank: 2 / 40 **Guo Moruo Schlorship** (the highest honor for undergraduates in USTC)

## RESEARCH INTERESTS

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My research focuses on two important aspects of **data-driven decision-making for operations management**:

- Developing *flexibly applicable, computationally efficient, and provably optimal* data-driven decision-making frameworks that work for a wide range of problems.
- Designing *fairness-aware* data-driven decision-making methods within the context of OM scenarios.

For future research, I aim to:

- Advance *methodology* research in data-driven decision-making for OM and business analytics.
- Explore more *empirical* directions, e.g., integrating domain knowledge with modern AI in real business.

## RESEARCH WORKS

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**Publications** (\* refers to alphabetical order and \*\* refers to equal contribution)

- [1] **Jiameng Lyu\***, Jinxing Xie\*, Shilin Yuan\*, Yuan Zhou\*. [A Minibatch-SGD-Based Learning Meta-Policy for Inventory Systems with Myopic Optimal Policy](#). *Management Science* (forthcoming), 2024.
- [2] Xi Chen\*, **Jiameng Lyu\***, Yining Wang\*, Yuan Zhou\*. [Network Revenue Management with Demand Learning and Fair Resource-Consumption Balancing](#). *Production and Operations Management*, 33(2), 494-511, 2024.
- [3] Qi Qi\*\*, **Jiameng Lyu\*\***, Kung-Sik Chan, Er-Wei Bai, Tianbao Yang. [Stochastic Constrained DRO with a Complexity Independent of Sample Size](#). *Transactions on Machine Learning Research*, 2023.

### Papers Under Revision or Review

- [4] Xi Chen\*, **Jiameng Lyu\***, Xuan Zhang\*, Yuan Zhou\*. [Fairness-aware Online Price Discrimination with Nonparametric Demand Models](#). Under major revision at *Operations Research*.
- [5] Xin Chen\*, **Jiameng Lyu\***, Shilin Yuan\*, Yuan Zhou\*. [Learning in Lost-Sales Inventory Systems with Stochastic Lead Times and Random Supplies](#). Under major revision at *Management Science*.
- [6] Shilin Yuan, **Jiameng Lyu**, Jinxing Xie, Yuan Zhou. [Asymptotic Optimality of Base-Stock Policies for Lost-Sales Inventory Systems with Stochastic Lead Times](#). Under major revision at *Operations Research Letters*.
- [7] **Jiameng Lyu\***, Shilin Yuan\*, Bingkun Zhou\*, Yuan Zhou\*. [Closing the Gaps: Optimality of Sample Average Approximation for Data-Driven Newsvendor Problems](#). Under Review at *Operations Research*.

### Works in Progress

- [8] Xin Chen\*, **Jiameng Lyu\***, Shilin Yuan\*, Yuan Zhou\*. Nonstationary Sample Average Approximation with Applications in Inventory Management.

## TEACHING EXPERIENCES

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### At Tsinghua University:

- Co-Instructor: Probability Tutorial Course for Yau College Student Mathematics Contest Spring 2022
- Teaching Assistant: Mathematical Modelling (00420033) Spring 2024
- Teaching Assistant: Advanced Numerical Analysis (60420024) Fall 2023
- Teaching Assistant: Machine Learning Theory (84760144) Spring 2023
- Teaching Assistant: Mathematical Foundations of Machine Learning (44760153) Spring 2022
- Teaching Assistant: Linear Algebra (10421324) Fall 2021

### At University of Science and Technology of China:

- Teaching Assistant: Mathematical Analysis B2 (MATH1007) Spring 2021
- Teaching Assistant: Mathematical Analysis B1 (MATH1006) Fall 2020
- Teaching Assistant: Linear Algebra (001519) Spring 2020

## SELECTED AWARDS

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- National Scholarship (Top **1%**) Oct. 2023
- Yau Mathematical Sciences Center Outstanding Graduate Scholarship, First Prize (Top **5%**) Sept. 2023
- Honorary Rank in USTC (Top **5%**) Jun. 2021
- Outstanding Graduate in USTC (Top **10%**) Jun. 2021
- Outstanding Undergraduate Thesis Award in USTC (Top **5%**) Jun. 2021
- Guo Moruo Scholarship (Top **1%**) Apr. 2021

## PROFESSIONAL SERVICES

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- **Reviewer for:**
  - *Operations Research*
  - *Operations Research Letters*
  - *International Conference of Machine Learning (ICML 2022)*
  - *International Computing and Combinatorics Conference (COCOON 2022)*
- **Session Chair for:** *POMS-HK International Conference (2024)*

## INVITED TALKS

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- “A Minibatch-SGD-Based Learning Meta-Policy for Inventory Systems with Myopic Optimal Policy”
  - *Tsinghua University, Prof. Yong Liang’s Group in School of Economics and Management, Apr. 2024*
  - *Chinese Scholars Association for Management Science and Engineering (CSAMSE 2024), Jul. 2024*
- “Learning in Lost-Sales Inventory Systems with Stochastic Lead Times and Random Supplies”
  - *POMS-HK International Conference (2024), Jan. 2024*
  - *Chinese Scholars Association for Management Science and Engineering (CSAMSE 2024), Jul. 2024*
- “Network Revenue Management with Demand Learning and Fair Resource-Consumption Balancing” *POMS-HK International Conference (2024) Jan. 2024*