

YANG, XIANGYU (杨翔宇)

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Personal Website: <https://xyangmsor.github.io/>

Research Interests: Monte Carlo simulation; stochastic optimization; data-driven analytics; healthcare

ACADEMIC POSITIONS

- | | |
|--|---------------------|
| Shandong University , School of Management | Jun 2022 – Present |
| • (Tenure-Track) Associate Researcher | Nov 2025 – Present |
| • (Special-Funded) Postdoctoral Researcher | Jun 2022 – Nov 2025 |
| – Advisor: Jianghua Zhang | |
| Stony Brook University , Department of Applied Mathematics & Statistics | Feb 2024 – Aug 2024 |
| • Visiting Scholar | |
| – Advisor: Jiaqiao Hu | |

EDUCATION

- | | |
|--|---------------------|
| Fudan University , School of Management, <i>Ph.D</i> | Sep 2017 – Jun 2022 |
| • Major: Management Science & Engineering | |
| • Advisor: Jian-Qiang Hu | |
| Shandong University , School of Management, <i>Bachelor</i> | Sep 2013 – Jun 2017 |
| • Major: Engineering Management | |
| • Minor: Financial Mathematics & Financial Engineering | |

PUBLICATIONS (CORRESPONDING AUTHOR*)

Journal

- **Xiangyu Yang***. 2027. Two-Timescale Stochastic Approximation for Smooth and Strongly-Convex-Strongly-Concave Stochastic Minimax Optimization: A New Convergence Rate, *Operations Research Letters* 71, 107550.
- Feng Xu, Jian-Qiang Hu, and **Xiangyu Yang***. 2026. Surrogate-Free Annealing Random Search for Continuous Stochastic Optimization, *Naval Research Logistics* 73(6), 953-968.
- Hao Cao, Jian-Qiang Hu*, Teng Lian, and **Xiangyu Yang**. 2025. Infinitesimal Perturbation Analysis (IPA) Derivative Estimation with Unknown Parameters, *Automatica* (Regular Paper) 174, 112140.
- **Xiangyu Yang**, Jianghua Zhang*, Jian-Qiang Hu, and Jiaqiao Hu*. 2024. Nonparametric Multi-Product Dynamic Pricing with Demand Learning via Simultaneous Price Perturbation, *European Journal of Operational Research* 319(1), 191-205.
- **Xiangyu Yang**, Jiaqiao Hu, and Jian-Qiang Hu*. 2024. Relative Q-learning for Average-Reward Markov Decision Processes with Continuous States, *IEEE Transactions on Automatic Control* (Regular Paper) 69(10), 6546-6560.
- Jiaqiao Hu, **Xiangyu Yang***, Jian-Qiang Hu, and Yijie Peng. 2024. A Q-learning Algorithm for Markov Decision Processes with Continuous State Spaces, *Systems & Control Letters* 187, 105782.
- Yanfeng Wu, Jian-Qiang Hu, and **Xiangyu Yang***. 2022. Moment Estimators for Parameters of Lévy-driven Ornstein-Uhlenbeck Processes, *Journal of Time Series Analysis* 43(4), 610-639.
- **Xiangyu Yang***, Yanfeng Wu, Zeyu Zheng, and Jian-Qiang Hu. 2021. Method of Moments Estimation for Lévy-driven Ornstein-Uhlenbeck Stochastic Volatility Models, *Probability in the Engineering and Informational Sciences* 35(4), 975-1004.
- 吴燕丰, **杨翔宇***, 胡建强. 2025. 仿射随机波动率模型的矩估计方法, 系统工程理论与实践. 录用.

Conference

- **Xiangyu Yang**, Jian-Qiang Hu, Jiaqiao Hu, and Yijie Peng. 2020. Asynchronous Value Iteration for Markov Decision Processes with Continuous State Spaces, *Proceedings of the 2020 Winter Simulation Conference*, Orlando, USA. 2856-2866.

PREPRINTS

- Queue-Stabilized Primal – Dual Methods for Constrained Markov Decision Processes, sole author. *Under Review*.
- Nonparametric Learning and Earning with One-Point Feedback under Nonstationarity, joint work with Feng Xu, Jian-Qiang Hu, and Jiaqiao Hu. *Under Review*.
- Steady-State Quantile Optimization for Controlled Markovian Systems, joint work with Teng Lian and Jian-Qiang Hu. *Major Revision*.
- A Penalty-Based Exterior-Interior Point Method for Stochastically Constrained Simulation Optimization, joint work with Jiaqiao Hu and Jianghua Zhang. *Under Review*.
- Optimizing Emergency Evacuation with Social Distancing under Compound Disasters: A Multi-Alternative Optimization Framework, joint work with Jianghua Zhang, Hongwei Shi, and Zizhuo Wang. *Minor Revision*.
 - Best Paper Award (3rd Prize), 20th International Conference on Services Systems & Services Management

RESEARCH GRANTS (AS PI)

National Natural Science Foundation of China, Young Scientists Fund	¥300k – Began
China Postdoctoral Science Foundation, General Fund	¥50k – Completed
Shandong Provincial Natural Science Foundation, Young Scientists Fund	¥150k – Began
Shandong Postdoctoral Science Foundation, Innovation Fund (Social Sciences)	¥30k – Completed

TEACHING

Undergraduate-Level Courses:

- Linear Algebra (线性代数), Spring 2026
- Frontiers of Supply Chain Management (供应链管理前沿), Spring 2026

Graduate-Level Courses:

- System Modeling and Simulation (系统建模与仿真), Spring 2023, 2025, and 2026
- Data and Decision-Making Methods (数据与决策方法专题), Fall 2022, 2023, 2024, and 2025
- Introduction to Machine Learning Theory (机器学习理论导引), Fall 2026

SERVICE & HONORS

Service:

- Session Chair: 2025 INFORMS International Meeting
- Reviewer: *Naval Research Logistics*, *Journal of Simulation*, American Control Conference (ACC), Winter Simulation Conference (WSC), 运筹与管理

Honors:

- First Prize for Outstanding Postdoc of Shandong University (10 awardees annually)
- Outstanding Graduate of Fudan University
- Outstanding Teaching Assistant of Fudan University

MISCELLANEOUS

- Programming & Software: Python, R, MATLAB, $\text{\LaTeX}$
- Erdős Number = 4