

Yanru Guo

PhD Candidate

Department of Industrial and Operations Engineering

University of Michigan, Ann Arbor

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EDUCATION

University of Michigan

Ph.D., Industrial and Operations Engineering, Advisor: Prof. Siqian Shen

Ann Arbor, MI

Aug. 2024 – May. 2028

University of Michigan

M.S., Industrial and Operations Engineering, GPA: 4.0/4.0

Ann Arbor, MI

Aug. 2022 – May. 2024

Beijing Foreign Studies University

B.S., Information Management and Information Systems, GPA: 3.8/4.0

Beijing, China

Sep. 2018 – Jun. 2022

HONORS AND AWARDS

2026, SIAM Conference on Optimization Student Travel Award, Society for Industrial and Applied Mathematics

2025, Michigan Institute for Computational Discovery and Engineering (MICDE) Graduate Fellowship, University of Michigan

2025, Student Travel Award, NeurIPS MLxOR Workshop

2024, Engineering Graduate Fellowship, University of Michigan

2023-2026, Rackham Conference Travel Grant, University of Michigan

2022, Outstanding Graduate, Beijing Foreign Studies University

2022, Outstanding Thesis Award, Beijing Foreign Studies University

PUBLICATIONS

Refereed Conference Proceedings

1. **Guo, Y.**, Jiang, R., & Shen, S. (2025, December). “From Stacked Predictions to Decisions: A Contextual Optimization Approach”, **Proceedings of NeurIPS 2025 Workshop MLxOR: Mathematical Foundations and Operational Integration of Machine Learning for Uncertainty-Aware Decision-Making**.
2. **Guo, Y.**, Zhou, B., Jiang, R., Yang, X.J. & Shen, S. (2024, December). “Distributionally Robust Resource Allocation with Trust-aided Parametric Information Fusion”, **Proceedings of the 2024 IEEE 63rd Conference on Decision and Control (CDC)**.

Working Papers

1. **Guo, Y.**, Jiang, R., & Shen, S. “Ensemble Methods for Multi-sourced Stochastic Optimization” [*working paper*].
2. **Guo, Y.**, Denton, B., & Shen, S. “Dynamic Data-driven Preventive Care Allocation Under Multi-source Predictions of Intervention Effectiveness” [*working paper*].
3. **Guo, Y.**, Fei, X., Jiang, R., Yang, X.J. & Shen, S. “Learning-enhanced Route Recommendation under Unknown and Uncertain Travelers’ Trust” [*working paper*].
4. **Guo, Y.**, Jiang, R., & Shen, S. “Optimization with Multi-sourced Information and Unknown Reliability: A Distributionally Robust Approach” [*submitted*].

CONFERENCE TALKS AND PRESENTATIONS

1. “Ensemble Methods for Multi-sourced Stochastic Optimization”, invited talk, 2026 INFORMS Optimization Society Conference, Atlanta, GA, March 2026.
2. “From Stacked Predictions to Decisions: A Contextual Optimization Approach”, poster, NeurIPS 2025 ML×OR Workshop: Mathematical Foundations and Operational Integration of Machine Learning for Uncertainty-Aware Decision-Making, San Diego, CA, December 2025.
3. “Incorporating Unknown Trust into Decision Recommendation with Multi-Sourced Reference Information”, invited talk, INFORMS 2025 Annual Meeting, Atlanta, GA, October 2025.
4. “Optimization with Multi-sourced Reference Information and Unknown Trust: A Distributionally Robust Approach”, poster, 2025 Midwest Optimization & Statistical Learning Conference, Evanston, IL, May 2025.
5. “Optimization with Multi-sourced Reference Information and Unknown Trust: A Distributionally Robust Approach”, invited talk, INFORMS 2024 Annual Meeting, Seattle, WA, October 2024.
6. “Trust-Aided Distributionally Robust Resource Allocation with Multi-Source Reference Information”, invited talk, 2023 INFORMS Annual Meeting, Phoenix, AZ, October 2023.
7. “Integrated Shift Schedules and Room Assignments for Interventional Radiology Technologists”, poster, 2023 Center for Healthcare Engineering & Patient Safety (CHEPS) Symposium, Ann Arbor, MI, November 2023.

TEACHING EXPERIENCE

Graduate Student Instructor, IOE 591-066 (Transportation and Logistics System Optimization), Winter 2026, University of Michigan

Graduate Student Instructor, IOE 510 (Linear Programming I), Fall 2025, University of Michigan

COURSEWORK

PhD qualifying courses: IOE 511 (Continuous Optimization Methods), IOE 610 (Linear Programming II), IOE 611 (Nonlinear Programming), IOE 516 (Stochastic Process II), IOE 574 (Simulation Design Analysis), IOE 614 (Integer Programming)

Other IOE courses: IOE 413 (Optimization Modeling in Health Care), IOE 510 (Linear Programming I), IOE 591 (Introduction to Data Analysis), IOE 618 (Stochastic Optimization)

Cognate courses: EECS 553 (Machine Learning), SI 649 (Info Visualization)

SERVICE ACTIVITIES

Secretary, Institute for Operations Research and the Management Sciences (INFORMS) Student Chapter at University of Michigan, 2025, Ann Arbor, Michigan

Mentor, IOE PhD Mentorship Program, 2025, Ann Arbor, Michigan

Mentor, Industrial and Operations Engineering (IOE) Graduate Application Mentoring Program (GAMP), 2024-2026, Ann Arbor, Michigan

Volunteer, National Olympic Committee (NOC) Assistant of Serbia, 2022 Winter Olympics, Beijing, China

PROFESSIONAL SKILLS

Languages: Chinese (Native), English (Advanced), Spanish (Basic)

Programming: Python, R, MATLAB, C/C++

Optimization Tools: Gurobi, CPLEX, Pyomo, CVX