

Luyi Gui

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Education

PhD in Operations Research, Georgia Institute of Technology, 2013.

BS in Mathematics, With Distinction, Zhejiang University, 2007.

Undergraduate Exchange Program, *Dean's List*, Hong Kong University of Science and Technology, 2005 – 2006.

Professional Positions

Associate Professor, Operations and Decision Technologies, Paul Merage School of Business, UC Irvine (2021 -).

Assistant Professor, Operations and Decision Technologies, Paul Merage School of Business, UC Irvine (2013 - 2021).

Publications

Journal Articles, Peer-Reviewed

1. Bai, J., Hu, S., **Gui, L.**, So, K.C., Ma, Z. (2021) Optimal Subsidy Schemes and Budget Allocations for Government Trade-in Programs. *Production and Operations Management*. Published Online.
2. Rahmani, M., **Gui, L.**, Atasu, A. (2021). The Implications of Recycling Technology Choice on Extended Producer Responsibility. *Production and Operations Management*. 30(2), 522-542.
3. **Gui, L.** (2020). Recycling Infrastructure Development under Extended Producer Responsibility in Developing Economies. *Production and Operations Management*, 29(8), 1858-1877.
 - Honorable Mention, Early-career Best Paper Award, INFORMS Section on Environment, Natural Resources and Energy. 2019
 - Accepted for presentation at the 10th Annual ARCS (Alliance for Research on Corporate Sustainability) Research Conference at MIT, Sloan School of Management in June 2018 (peer-reviewed).
4. **Gui, L.**, Tang, C., Yin, S. (2019). Improving Micro-Retailer and Consumer Welfare in Developing Economies: Replenishment Strategies and Market Entries. *Manufacturing and Service Operations Management*, 21(1), 231-250.
5. **Gui, L.**, Atasu, A., Ergun, O., Toktay, B. (2018). Design Incentives under Collective Extended Producer Responsibility: A Network Perspective. *Management Science*, 64(11), 5083-5104.

6. **Gui, L.**, Atasu, A., Ergun, O., Toktay, B. (2016). Efficient Implementation of Collective Extended Producer Responsibility Legislation. *Management Science*, 62(4), 1098-1123.
 - Finalist, MSOM Responsible Research in OM Award. 2019.
 - Honorable Mention for the Best Paper Award, INFORMS Section on Public Programs, Services and Needs. 2012.
7. Ergun, O., **Gui, L.**, Heier Stamm, J. L., Keskinocak, P., Swann, J. L. (2014). Improving Humanitarian Operations through Collaboration. *Production and Operations Management*, 23(6), 1002-1014. Wiley. doi: 10.1111/poms.12107.
8. **Gui, L.**, Atasu, A., Ergun, O., Toktay, B. (2013). Implementing Extended Producer Responsibility Legislation: A Multi-stakeholder Case Analysis. *Journal of Industrial Ecology*, 17(2), 262 - 276.

Book Chapters

9. **Gui, L.**, Tang, C., Yin, S. (2020) Collaborative Micro-Retailing in Developing Economies (Ch. 9). *Channel Strategies and Marketing Mix in a Connected World* (pp. 227-246). Springer Series in Supply Chain Management.
10. **Gui, L.**, Huang, X. N., Atasu, A., Toktay, B. (2016). Design Implications of Extended Producer Responsibility Legislation (Ch. 18). *Environmentally Responsible Supply Chains* (pp. 339-358). Springer.
11. Ergun, O., **Gui, L.**, Houghtalen, L., Özener, O. Ö. (2011). Shipper and Carrier Collaboration. *Encyclopedia of Operations Research and Management Science*.

Conference/Workshop/Symposium Proceedings, Peer-Reviewed

12. **Gui, L.**, Atasu, A., Ergun, O., Toktay, B. (2010). Fair Cost Allocation Mechanisms in Electronic Waste Collection and Recycling Networks. In *Proceedings of the Behavioral and Quantitative Game Theory: Conference on Future Directions*. Article 14. ACM.
13. **Gui, L.**, Ergun, O. (2008). Dual Payoffs, Core and a Collaboration Mechanism Based on Capacity Exchange Prices in Multicommodity Flow Games. In *Lecture Notes in Computer Science* (Vol. 5385, pp. 61-69). Workshop on Internet & Network Economics. Springer.

Other Published Writings

14. Ergun, O., **Gui, L.**, Heier Stamm, J. L., Keskinocak, P., Swann, J. L. (2011). Supply Chain Coordination and Collaboration in Haiti: A Case Study of the Salvation Army's Use of the UPS Trackpad® [Written Teaching Case].

Working Papers

15. **Gui, L.**, Atasu, A., Sarvary, M. Quality Competition in an Oligopolistic Market.
16. **Gui, L.**, Ergun O. Free Rider Avoidance in Resource Sharing in Multicommodity Networks.
17. **Gui, L.**, Long, X. Deadstock Reduction: The Role of Postponement and Upcycling Strategies.
18. **Gui, L.** Formal-informal Partnership for E-waste Collection in Developing Economies

Awards and Honors

Research Awards

Finalist, MSOM Responsible Research in OM Award. 2019.
Honorable Mention, Early-career Best Paper Award, INFORMS Section on Environment, Natural Resources and Energy. 2019
Paul Kleindorfer Award in Sustainability. POMS. 2019
Junior Faculty Research Award, Paul Merage School of Business. UC Irvine. 2018
Blanchard Scholarship Award in Sustainability (in honor of Ray Anderson), Georgia Chamber of Commerce. 2012
Honorable Mention, Best Paper Award, INFORMS Section on Public Programs, Services and Needs. 2012

Service Awards

M&SOM Meritorious Service Award. 2021, 2018
Outstanding Service as a Reviewer Award for the POM Journal. 2019

Funding

Council on Research, Computing & Library Resources (CORCLR) Award, UC Irvine. 2020 (\$4000), 2018 (\$4000), 2017 (\$2000), 2016 (\$2000), 2015 (\$2800)
UCI ADVANCE Career Development Award (\$1500), UCI ADVANCE Program. 2016

Invited Seminar Presentations (Since July 2013)

"Recycling Infrastructure Development under Extended Producer Responsibility in Developing Economies." **Gui, L.** Operations Management Seminar. Georgetown McDonough School of Business. (October 2020).

"Recycling Infrastructure Development under Extended Producer Responsibility in Developing Economies." **Gui, L.** Operations Management Seminar. Foster School of Business, University of Washington. (January 2020).

"Recycling Infrastructure Development under Extended Producer Responsibility in Developing Economies." **Gui, L.** Operations Management Seminar. Graduate School of Management, UC Riverside. (October 2019).

"Collaboration in Environmental Policy Implementation – A Study based on Extended Producer Responsibility Legislation", **Gui, L.** Management Science Research Centre Seminar, Desautels Faculty of Management, McGill University, Montreal. (April 2019).

"Efficient and Effective Implementation of Electronic Waste Recycling Legislation – A Cooperative Game Theory Practice", **Gui, L.**, IMBS Colloquium, UCI. (March 2019)

"Network Biform Games: An Application to the Implementation of Electronic Waste Legislation", **Gui, L.** Algorithms, Combinatorics and Optimization (ACO) seminar, UCI. (October 2018)

"Complementary Product Design and Process Technology Choices in Recycling", **Gui, L.** Operations Management Seminar, HEC Montreal, Canada. (December 2016).

- "Complementary Product Design and Process Technology Choices in Recycling", **Gui, L.** Operations Management Seminar, University of San Diego. (November 2016).
- "Complementary Product Design and Process Technology Choices in Recycling", **Gui, L.** Operations Management Seminar, Shanghai University of Finance and Economics, Shanghai, China. (August 2016).
- "Design Incentives under Collective Extended Producer Responsibility: A Network Perspective", **Gui, L.** Operations Management Seminar, UC San Diego, San Diego. (March 2016).
- "Design Incentives under Collective Extended Producer Responsibility: A Network Perspective", **Gui, L.** Management Science Seminar, Nanjing University, Nanjing, China. (August 2015).
- "Design Incentives under Collective Extended Producer Responsibility: A Network Perspective", **Gui, L.** Operations Management Seminar, Fudan University, Shanghai, China. (August 2015).
- "Design Incentives under Collective Extended Producer Responsibility: A Network Perspective", **Gui, L.** Operations Management Seminar, Krannert School of Management, Purdue University. (April 2015).
- "Robust Capacity Exchange Mechanism Design in Transportation Alliances", **Gui, L.** OM/OR Research Seminar, College of Business, Clemson University. (February 2015).
- "Design Incentives under Collective Extended Producer Responsibility: A Network Perspective", **Gui, L.** Management Science Research Centre Seminar, Desautels Faculty of Management, McGill University, Montreal. (September 12, 2014).

Conference Presentations (Since July 2013) ¹

- "Formal-informal Partnerships in Developing Economies." **Gui, L.** INFORMS Annual Meeting, Virtual. Invited. (October 2020)
- "Optimal Subsidy Schemes and Budget Allocations for Government Trade-in Programs ", **Gui, L.** Southern California OR/OM Day. Invited. (May 2019)
- "Optimal Subsidy Schemes and Budget Allocations for Government Trade-in Programs", **Gui, L.** POMS Annual Meeting, Washington D.C. Invited. (May 2019)
- "Extended Producer Responsibility in Developing Countries: Design Incentives and Infrastructure Development", **Gui, L.** Annual ARCS (Alliance for Research on Corporate Sustainability) Research Conference, Boston. Peer Reviewed. (June 2018)
- "The Implications of Recycling Technology Choice and Facility Ownership on Collective Recycling ", **Gui, L.** INFORMS Annual Meeting, Houston. Invited. (October 2017)
- "Extended Producer Responsibility in Developing Countries: Design Incentives and Infrastructure Development", **Gui, L.** INFORMS Annual Meeting, Houston. Invited. (October 2017)

¹ This list does not include two presentations that were invited and scheduled at the 2020 POMS Annual Meeting but were cancelled due to COVID-19.

- "Extended Producer Responsibility in Developing Countries: Design Incentives and Infrastructure Development", **Gui, L.** MSOM Annual Meeting, University of North Carolina. Peer Reviewed. (June 2017)
- "Extended Producer Responsibility in Developing Countries: Design Incentives and Infrastructure Development", **Gui, L.** Southern California OR/OM Day. Invited. (May 2017)
- "Improving Micro-Retailer and Consumer Welfare in Developing Economies: Replenishment Strategies and Market Entries", **Gui, L.** POMS Annual Meeting, Seattle. Invited. (May 2017)
- "Extended Producer Responsibility in Developing Countries: Design Incentives and Infrastructure Development", **Gui, L.** POMS Annual Meeting, Seattle. Invited. (May 2017)
- "Complementary Product Design and Process Technology Choices in Recycling", **Gui, L.** POMS Annual Meeting, Seattle. Invited. (May 2017)
- "Extended Producer Responsibility in Developing Countries: Design Incentives and Infrastructure Development", **Gui, L.** Early Career Sustainable Operations Workshop, University of Virginia. Peer Reviewed. (March 2017)
- "Improving Micro-Retailer and Consumer Welfare in Developing Economies: Replenishment Strategies and Market Entries", **Gui, L.** INFORMS Annual Meeting, Nashville. Invited. (November 2016)
- "Incentives for Recycling Infrastructure Development Under Extended Producer Responsibility", **Gui, L.** INFORMS Annual Meeting, Nashville. Invited. (November 2016)
- "Complementary Product Design and Process Technology Choices in Recycling", **Gui, L.** INFORMS Annual Meeting, Nashville. Invited. (November 2016)
- "Design Incentives under Collective Extended Producer Responsibility: A Network Perspective", **Gui, L.** 2016 Southern California Symposium on Network Economics and Game Theory. Invited. (November 2016)
- "The Impact of Technology-Design Interaction on Extended Producer Responsibility", **Gui, L.** MSOM Annual Conference, Auckland, New Zealand. Peer Reviewed. (June 2016).
- "Design and Technology Choice for Recycling: The Value of Capacity Ownership and Collaboration", **Gui, L.** POMS Annual Conference, Orlando. Invited. (May 2016).
- "Distribution Strategies for Supporting Poor Retailers in Developing Countries", **Gui, L.** POMS Annual Conference, Orlando. Invited. (May 2016).
- "Design and Technology Choice for Recycling: The Value of Collaboration and Capacity Ownership", **Gui, L.** INFORMS Annual Conference, Philadelphia. Invited. (November 2015).
- "Managing Decentralized Resource Sharing in Carrier Alliances under Demand Uncertainty", **Gui, L.** INFORMS Annual Conference, San Francisco. Invited. (November 11, 2014).
- "Design Incentives, Coalitional Stability, or Cost Efficiency? A Network Perspective on EPR", **Gui, L.** INFORMS Annual Conference, San Francisco. Invited. (November 9, 2014).
- "Design Incentives Under Collective Extended Producer Responsibility", **Gui, L.** Closed-loop Supply Chain Workshop, WHY AND HOW AN OM PERSPECTIVE CAN HELP DESIGN

BETTER ENVIRONMENTAL POLICY (Panel), INSEAD, Fontainebleau, France. Invited. (October 18, 2014).

"A Robustness Analysis of a Capacity Exchange Mechanism in Multicommodity Networks under Demand Uncertainty", **Gui, L.** Transportation Science and Logistics Annual Workshop, INFORMS, Chicago. Peer Reviewed. (July 2, 2014).

"Design Incentives under Collective Extended Producer Responsibility: A Network Perspective", **Gui, L.** Special Interest Group Conference in Sustainable Operations, MSOM Annual Conference, MSOM, Seattle. Peer Reviewed. (June 19, 2014).

"Design Incentives under Collective Extended Producer Responsibility: A Network Perspective", **Gui, L.** POMS Annual Conference, POMS, Atlanta. Invited. (May 3, 2014).

"Design Incentives under Collective Extended Producer Responsibility: A Network Perspective", **Gui, L.** INFORMS Annual Meeting, INFORMS, Minneapolis. Invited. (October 14, 2013).

"A Robustness Analysis of a Capacity Exchange Mechanism in Multicommodity Networks under Demand Uncertainty", **Gui, L.** INFORMS Annual Meeting, INFORMS, Minneapolis. Invited. (October 13, 2013).

Media Appearances and Interviews

"In Case You Missed It." INFORMS Journal Highlights from January 2018. Online.

"3 Ways to Fix E-Waste Regulations.," The Huffington Post, with Alliance for Research on Corporate Sustainability Blog. 3/2016. Online.

"Waste Electrical and Electronic Equipment (WEEE) Regulations: Individual Producer Responsibility (IPR) in a UK context," UK Department for Business, Innovation and Skills (DBIS), with IPR Working Group. 7/2012. Online.

Professional Service

Editorial Position

Senior Editor, *Production and Operations Management*. (June 2018 – present)

Service as a Reviewer

For Journals: Management Science, Operations Research, Manufacturing and Service Operations Management, Production and Operations Management, Transportation Science, Decision Sciences, IIE Transaction, Journal of Industrial Ecology, Navel Research Logistics, Asia-Pacific Journal of Operations Research, Transportation Research Part E, OR Spectrum, Sustainability, Computer and Operations Research, Omega, European Journal of Operations Research.

For Conferences: ARCS Conference (2015, 2016), POMS Sustainable Operations Student Paper Award (2017, 2018), MSOM Sustainable Operations SIG workshop (2019, 2021), MSOM Student Paper Competition (2020, 2021).

For Funding Agencies: Natural Sciences and Engineering Research Council of Canada (2019)

Service to Professional Societies

Manufacturing and Service Operations Management (MSOM) Society, Secretary/Treasurer, Elected. June 2020 – June 2021

College of Sustainable Operations at the Production and Operations Management Society

- Past President. (June 2020 – May 2021)
- President. (June 2019 – May 2020)
- President-Elect, Elected. (June 2018 – May 2019)
- Treasurer, Elected. (May 2016 - May 2018).

INFORMS Diversity Committee, Member. March 2017 – June 2020

Conference Organization Service

Sustainable Operations SIG conference at the MSOM Annual Conference², Co-chair. 2020. (Sept 2019 – June 2020)

2019 Southern California OR/OM Day, Organizer (Jan 2019 – May 2019)

2019 Early-career Sustainable Operations Management Conference, Co-organizer (2018 – 2019)

Sustainable Operations Cluster at the INFORMS Annual Meeting. Co-chair. 2017.

Closed-loop Supply Chain Track at the POMS Annual Meeting. Co-chair. 2017.

INFORMS Annual Conference, Session Chair. (November 2015, November 2017, November 2018, October 2019, November 2020, October 2021).

POMS Annual Conference, Session Chair. (May 2014, May 2016, May 2017, May 2019).

Professional Memberships

Production and Operations Management Society. (2012 - Present).

The Manufacturing and Service Operations Management Society. (2012 - Present).

The Institute for Operations Research and the Management Sciences. (2007 - Present).

Teaching

Teaching Interests

Supply Chain Management/Analytics, Operations Management, Network Theory/Economics, Business Sustainability

Teaching Innovations and Curriculum Development

Winter 2014-2016 and 2018-2019: "Management Science", MGMT, 101. Undergraduate core course.

- Instructor evaluation: 3.76/4, 3.78/4, 3.81/4, 3.80/4, 3.78/4, 3.77/4

Spring 2014-2017 and 2019: "Supply Chain Management", MGMTMBA, 285. MBA elective course.

- Instructor evaluation: 3.91/4, 3.95/4, 3.88/4, 3.77/4, 3.88/4

Spring 2020: "Supply Chain Analytics", BANA, 290. MSBA elective course.

- Instructor evaluation: 3.90/4 (remote instruction)

² This conference was cancelled due to COVID-19 in March 2020, but a large portion of the conference planning work (invitation for submissions, review process, paper selection) had been completed by then.

Spring 2014-2017 and 2019-2020: "Supply Chain Management", MGMT, 182. Undergraduate elective course.

- Instructor evaluation: 3.72/4, 3.87/4, 3.83/4, 3.76/4, 3.74/4, 3.83/4 (remote instruction)

Winter 2015, 2017, 2019: "Network Models and Applications", MGMTPHD, 291. PhD elective course.

- Instructor evaluation: 3.83/4, 4/4, 4/4

Winter-Spring 2018-2020: "Environmental Sustainability", EARTHSS, H30B&C. Undergraduate course for the Campus-wide Honors Program

- Instructor evaluation: 3.71/4, 3.59/4, 3.43/4 (remote instruction)
- I co-developed and co-taught this new interdisciplinary course for the 2nd Campus-wide Honors Program Track on Sustainable Societies with faculty members from Earth Sciences and Biology.

Doctoral Dissertation Committee

May 2020 – present, Lu Xu (PhD student in Civil & Environmental Engineering), Member

June 2019 – present, Ali Hassanzadeh Kalshani, Co-chair

2016, Ximin Huang (PhD student at Scheller College of Business at Georgia Tech), Member

Doctoral Candidacy Committee

2020, Lu Xu (PhD student in Civil & Environmental Engineering), Member

2019, Guoxi Wang (PhD student in Information and Computer Sciences), Member

2019, Ali Hassanzadeh Kalshani, Co-chair

2019, Seyed Mojtaba Hosseini, Member

2016, Vahid Nourbakhsh, Member

2015, Jiaru Bai, Member

2014, Seyed Ali Hojjat, Member

Directed Individual/Independent Study

August 2020 – present, Xianjia Gao, First year advisor

September 2017 – June 2019, Qi Yan, First year and summer paper advisor

June 2016 – present, Ali Hassanzadeh Kalshani, Co-Advisor

March 2016 - June 2016, Pramod Mallina, MBA

Independent Study Advisor

January 2016 - March 2016, Paul Nichols, Laura Wang, Melanie Henderson, Tsuyoshi Nojima,

I served as the coach to the MBA student team that represents UCI to participate in the International Nespresso Sustainability MBA Challenge. The team was selected as one of the 15 semi-finalists among over 85 teams participating in the Challenge.

September 2014 - December 2015, Yiwei Wang, First year and summer paper advisor

Undergraduate Research Supervision

June 2019 – June 2020, Aydin Yolar. Campuswide Honors Program Thesis Advisor.

Topic: The Strengths, Weaknesses, and Feasibility of Applying Blockchain and IoT in Supply Chains

August 2019 - present, The Zero Waste Anteater (ZOWA)

Working with ZOWA (a UCI undergraduate and graduate student body that is committed to creating a zero waste campus) in the project “Towards zero waste: technology-enabled waste management with smart space infrastructure”.
July 2019 - present, Ao Li, Supervisor
Ao Li is my Research Assistant on bike sharing networks
January 2016 - June 2016, Naomi Mori, Supervisor
Naomi Mori was my Research Assistant on Japanese environmental policies

Department Service

Organizer, Operations and Decision Technologies Seminar. (September 2014 – July 2020).

School/College Service

Member, Undergraduate Program Committee. (September 2014 - Present).

Member, PhD committee. (September 2013 - August 2014).

University Service

Associate Director, Algorithms, Combinatorics and Optimization (ACO) Center. (April 2018 - Present)

Curriculum planning and Interdisciplinary course development for a 2nd Campus-wide Honors Program Track on Sustainable Societies. (June 2016 - Present).

Member, Compliance Lab. School of Law. 2016 - Present