

ADITYA VEDANTAM

Department of Operations
Management and Strategy
University at Buffalo (SUNY)
Buffalo, NY 14260- 4000

Phone: (716) 645-5234
Fax: (716) 645-5078
Email: adityave@buffalo.edu
Web: <https://avedantam.github.io>

EDUCATION

Ph.D., Concentration: Operations Management, Purdue University Krannert School of Management, 2015

M.Engg., Concentration: Industrial and Operations Engineering, University of Michigan at Ann Arbor, 2009

B.Tech. and M.Tech., Electrical Engineering, Indian Institute of Technology, 2007

ACADEMIC EXPERIENCE

Associate Professor, Dept. of Operations Management and Strategy
Univ. at Buffalo (SUNY), Buffalo, NY, 2023-present.

Assistant Professor, Dept. of Operations Management and Strategy
Univ. at Buffalo (SUNY), Buffalo, NY, 2015-2023.

Graduate Teaching Assistant, Operations Management
Purdue University, 2010-2015

RESEARCH

Research interests include sustainable operations management, supply chain management, and circular economy business models.

Peer-Reviewed Journal Articles

A.V. Iyer, A. Vedantam and P. Lacourbe. "Recycled Content Claims Under Demand Benefit and Supply Uncertainty: Multi-Period Model and Application to Glasswool Insulation," *European Journal of Operations Research*, 2023, Vol. 309(2): 745-761

- ["How to optimize recycled content in products." *University at Buffalo School of Management News Release*. April 3, 2023.](#)

- [Techxplore, April 4, 2023](#)

A. Vedantam, N.C. Suresh, K. Ajmal and M. Shelly. "Impact of China's National Sword Policy on the U.S. Landfill and Plastics Recycling Industry," *Sustainability*, 2022, Vol. 14(4): 2456.

- ["UB research study reports the impact of China's National Sword policy on the U.S. landfill and plastics recycling industry." *University at Buffalo School of Management News Release*, March 29, 2022](#)
- [Waste Advantage Magazine, March 31, 2022](#)
- [Resource-Recycling, May 20, 2022](#)
- [Lithium News, March 31, 2022](#)
- [REM Market Intelligence, March 30, 2022](#)

A. Vedantam, E. Demirezen and S. Kumar. "Trade-in or Sell in My P2P Marketplace: A Game-Theoretic Analysis of Profit and Environmental Footprint," *Production and Operations Management*, 2021, Vol. 30(11), pp. 3923-3942.

- ["New research shows when apparel resale strategies benefit both planet, profit." *University at Buffalo School of Management News Release*, November 12, 2021](#)
- [Asia Garment Hub, November 23, 2021](#)
- [Insider, February 5, 2022](#)
- [Green Queen, November 22, 2021](#)
- [Ecotextile News, November 22, 2021](#)

A. Vedantam, A.V. Iyer. "Capacity Investment Under Bayesian Information Updates at Reporting Periods: Model and Application," *Production and Operations Management*, 2021, Vol. 30(8), pp. 2707-2725.

A. Vedantam, A.V. Iyer. "Revenue Sharing Contracts Under Quality Uncertainty in Remanufacturing," *Production and Operations Management*, 2021, Vol. 30(7), pp. 2008-2026.

- ["Extracting value from Surplus Equipment through IT Asset Disposition \(ITAD\)." *Reverse Logistics Magazine*, November 2022 \[The Reverse Logistics Magazine is a bi-monthly digital publication of the Reverse Logistics Association with a circulation of 30,000+ readers worldwide\]](#)

A. Vedantam, A.V. Iyer. "An Analysis of Voluntary Recycled Content Claims Under Demand Benefit and Uncertain Recycled Input Supply," *Operations Research Letters*, 2020, Vol. 48(3), pp. 249-256.

A.R. Mashhadi, A. Vedantam and S. Behdad. "Investigation of Consumer's Acceptance of Product-Service-Systems: A Case Study of Cell Phone Leasing," *Resources, Conservation and Recycling*, 2019, Vol. 143, pp. 36-44.

DD. Imholte, R.T. Nguyen, A. Vedantam, M. Brown, A.V. Iyer, B.J. Smith, J.W. Collins, C.G. Anderson and B. O'Kelley. "An Assessment of U.S. Rare Earth Availability for Supporting U.S. Wind Energy Growth Targets," *Energy Policy*, 2018, Vol. 113, pp. 294-305.

A.V. Iyer, A. Vedantam. "A Market Model for Evaluating Technologies That Impact Critical-Material Intensity," *Journal of Metals*, 2016, Vol. 68(7), pp. 1957-1963.

Under Review and Working Papers

A. Vedantam, L. Nittala, M.P. Vasimalai and A. Tekriwal. "Ensuring Financial Inclusion Through Self-Help Groups in Developing Economies," under revision for resubmission at *Production and Operations Management*

A. Vedantam, M. Gangwar, S. Kumar, Raja N and Merle F. "Should Firms Allow Self-selection or Lock-in Consumers under Sequential Choices?," target journal: *Management Science*

A. Vedantam, E. Demirezen and S. Kumar. "Quality Curation or Not: An Analysis of P2P Resale Marketplaces," target journal: *Management Science*

A. Vedantam, E. Demirezen and S. Kumar. "The Role of the Employing School's Research Status in Appointments of Editors of Management and Business Journals," target journal: *Production and Operations Management*

GRANT SUPPORT

A.V. Iyer (PI), N.C. Suresh (PI), A. Vedantam (Co-PI) **UB Vice President for Research and Economic Development** (2023-2024), "Building a manufacturing company database for New York State," Amount Funded: \$100,000

Goyal, A. (PI), A. Vedantam (Co-PI), Suresh. N, Paschalis, A., Atkinson, J.D., Yang, J., Thundat, T. and Shelly, M. **New York State Department of Environmental Conservation** (2022 – 2025), "Initiative on Plastics Recycling & Innovation, a NYS Center of Excellence," Amount Funded: \$4,500,000.

- ["DEC Announces \\$4.5 Million for New Center at University at Buffalo to focus on Plastics Recycling." *New York State Department of Environmental Conservation News Release*, April 27, 2022](#)
- [*Recycling Today*, May 3, 2022](#)
- [*Buffalo News*, January 4, 2023](#)
- [*Resource-Recycling*, May 4, 2022](#)

A.V. Iyer (PI), A. Vedantam (Co-PI), **U.S. Department of Energy** (2023), ``Critical Materials Institute (CMI) 4.3.12 Impact of research in Global Material Supply Chains," Direct Cost: \$62,500; Indirect Cost: \$37,500 (Awarded total: \$100,000).

Atkinson, J.D. (PI), A. Vedantam (Co-PI), Shelly, M., and Ranade, R. **SSISTL Sponsored Pilot Research Program** (2022-2023), "Motivating Use of Scrap Tire-Derived Asphalt in New York State Roadways," Amount Funded: \$55,240.

Goyal (PI), A. Vedantam (Co-PI), Atkinson, J.D., Shelly, M. and Zhang, Yi. **New York State Department of Environmental Conservation** (2021 – 2022), "Waste Tire Market Study," Amount Funded: \$249,712

- ["To study and improve tire recycling, New York State turns to UB RENEW Institute." *University at Buffalo News Release*, January 28, 2021](#)
- ["DEC Partners with University at Buffalo Researchers to Improve Waste Tire Recycling in New York State." *New York State Department of Environmental Conservation News Release*, January 28, 2021](#)

Goyal (PI), A. Vedantam (Co-PI), Paschalis, A., Atkinson, J.D., and Shelly, M. **New York State Department of Environmental Conservation** (2019 – 2021), "Plastics Recycling Market Proposal," Amount Funded: \$744,588.

- ["New York State turns to UB RENEW Institute to study, improve plastic recycling." *University at Buffalo News Release*, September 11, 2020](#)

A.V. Iyer (PI), A. Vedantam (Co-Investigator and PI on subcontract awarded to University at Buffalo, 100%), **U.S. Department of Energy** (2017-2020), ``Critical Materials Institute," Subcontract Direct Cost: \$36,812; Subcontract Indirect Cost: \$21,903.

PROPOSALS UNDER REVIEW

A.V. Iyer (PI), A. Vedantam (Co-PI), N.C. Suresh (Co-PI), K. Rajan (Co-PI), **New York State Energy Research and Development Authority** (2023-2024), "A Digital Twin to Accelerate Hydrogen's technical and economic potential for UB's North Campus Energy Planning," Amount requested: \$585,000

RESEARCH MEDIA MENTIONS

Popular Science, Quartz, Resource Recycling, World Economic Forum, and Insider, among others. 262,764,000 media impressions during 2021-2023 academic year.

RESEARCH PRESENTATIONS (Presenter in Bold.)

Vedantam, A., Demirezen, E. and Kumar, S. "Should I Curate by Quality or Not? An Analysis of P2P Resale Marketplaces." Annual Conference of the Institute for Operations Research and the Management Sciences, Indianapolis, October 2022

Vedantam, A., Demirezen, E. and Kumar, S. "Should I Curate by Quality or Not? An Analysis of P2P Resale Marketplaces." Annual Conference on Information Systems and Technology, Indianapolis, October 2022

Chen, L., Gavirneni, S., Vedantam, A. and Zhang, S. "Relative vs. Absolute Volume-Based Export Restrictions: Choice, Design, and Effectiveness." Annual Conference of the Production and Management Society, Virtual Conference, April 2022

Vedantam, A., Demirezen, E. and Kumar, S. "Trade-In or Sell in My P2P Marketplace: A Game Theoretic Analysis of Profit and Environmental Impact." Doctoral Seminar, University of Florida, April 2022

Vedantam, A., Demirezen, E. and Kumar, S. "Trade-In or Sell in My P2P Marketplace: A Game Theoretic Analysis of Profit and Environmental Impact." 2022 Spring OMS noon Research Seminar, University at Buffalo, February 2022

Vedantam, A., Demirezen, E. and Kumar, S. "Trade-In or Sell in My P2P Marketplace: A Game Theoretic Analysis of Profit and Environmental Impact." Annual Conference of the Decision Sciences Institute, Virtual Conference, November 2021

Vedantam, A., Demirezen, E. and Kumar, S. "Trade-In or Sell in My P2P Marketplace: A Game Theoretic Analysis of Profit and Environmental Impact." Annual Conference of the Institute for Operations Research and the Management Sciences, Virtual Conference, October 2021

Vedantam, A., Demirezen, E. and Kumar, S. "Trade-In or Sell in My P2P Marketplace: A Game Theoretic Analysis of Profit and Environmental Impact." Manufacturing and Service Operations Management Conference 2021, Virtual Conference, Indiana University, June 2021

Xiao, W., **Huang, N.** and Vedantam, A. "Manufacturer's Voluntary Environmental Efforts Under Product Ban." Annual Conference of the Production and Management Society, Virtual Conference, May 2021

Vedantam, A., Demirezen, E. and Kumar, S. "Manufacturer Trade-ins and Peer-to-Peer Online Marketplace for Durable Goods." Annual Conference of the Production and Management Society, Virtual Conference, May 2021

Vedantam, A., **Demirezen, E.** and Kumar, S. "Manufacturer Trade-ins and Peer-to-Peer Online Marketplace for Durable Goods." INFORMS Conference on Information Systems and Technology, November 2020

Xiao, W., Huang, N. and Vedantam, A. “Manufacturer’s Voluntary Environmental Efforts Under Product Ban Uncertainty.” Annual Conference of the Institute for Operations Research and the Management Sciences, Seattle, WA, October 2019

Vedantam, A. and Iyer, A.V. “Capacity Investment Under Technology Readiness Level Based Bayesian Information Updates: An Application to DOE R&D.” Annual Conference of the Production and Management Society, Washington D.C., May 2019

Vedantam, A. and Iyer, A.V. “Supplier Planned Replacement and Contracting for Reuse at a Third-Party Remanufacturer.” Annual Conference of the Production and Management Society, Washington D.C., May 2019

Vedantam, A. “Sustainability and the Supply Chain.” Institute of Supply Chain Management, Buffalo Chapter, December 2018.

Nguyen, R., Iyer, A.V., Eggert, R. and Vedantam, A. “Impact of Research on Global Material Supply Chains.” Winter Conference of the Critical Materials Institute, Poster Presentation, September 2018

Vedantam, A. and Iyer, A.V. “Real Option Value of Critical Material R&D: An Optimal Capacity Addition Model.” Annual Conference of the Production and Management Society, Houston, May 2018

Vedantam, A., Iyer, A.V. and Lacourbe, P. “An Analysis of Recycled Content Claims Under Demand Benefit and Supply Uncertainty.” Annual Conference of the Production and Management Society, Houston, May 2018

Vedantam, A. and Iyer, A.V. “Supplier Contracting for Reuse at a Third-Party Remanufacturer.” Annual Conference of the Production and Management Society, Houston, May 2018

Vedantam, A. and Iyer, A.V. “Real option value of critical materials R&D: An optimal capacity addition model.” 5th ISB POMS Workshop, Indian School of Business, December 2017

Vedantam, A. and Iyer, A.V. “Supplier Contracting for Reuse at a Third-Party Remanufacturer.” Doctoral Noon Seminar, University at Buffalo, October 2017

Vedantam, A. and Iyer, A.V. “Impact of Critical Material R&D on Wind Turbine Technology: An Option Value Model & Application.” Annual Conference of the Production and Management Society, Houston, May 2017

Vedantam, A. “Sustainability and Supply Chains.” Webinar, UB Alumni Association, April 2017.

Vedantam, A., Iyer, A.V. and Lacourbe, P. “An Analysis of Recycled Content Claims Under Supply Uncertainty and Demand Benefit.” Doctoral Student Seminar, Cornell University, April 2016

Vedantam, A., Iyer, A.V. and Lacourbe, P. “An Analysis of Recycled Content Claims Under Supply Uncertainty and Demand Benefit.” Second Annual Environmentally Sustainable Supply Chain Management Workshop for Early-Career Faculty, Raleigh, February 2016

Vedantam, A., Iyer, A.V. and Lacourbe, P. “An Analysis of Recycled Content Claims Under Supply Uncertainty and Demand Benefit.” Annual Conference of the Production and Management Society, Washington D.C., May 2015

TEACHING

University at Buffalo, School of Management

- MGO 303: Introduction to Supply Chain Management (Undergraduate core course)
 - Fall 2015, Course Evaluation: 4.0/5.0 (class size: 85 students)
 - Fall 2016, Course Evaluation: 4.4/5.0 (class size: 62 students)
 - Fall 2017, Course Evaluation: 4.0/5.0 (class size: 75 students)
 - Fall 2018, Course Evaluation: 4.1/5.0 (class size: 76 students)
 - Fall 2019, Course Evaluation: 4.0/5.0 (class size: 78 students)
 - Fall 2020, Course Evaluation: 4.2/5.0 (class size: 88 students)
 - Fall 2021, Course Evaluation: 4.5/5.0 (class size: 47 students)
 - Fall 2022, Course Evaluation: 4.2/5.0 (class size: 60 students)
- MGO 439/639: Sustainable Operations (Dual listed course)
 - Spring 2022, Course Evaluation: 4.8/ 5.0 (class size: 15 students)
 - Spring 2021, Course Evaluation: 4.7/ 5.0 (class size: 12 students)
 - Spring 2019, Course Evaluation: 4.8/ 5.0 (class size: 6 students)
- MGO 695: Sustainability in Global Supply Chains (MBA Elective), Spring 2017

Purdue University, Krannert School of Management

- MGMT 361: Introduction to Operations Management (Undergraduate core course), Fall 2012 and Summer 2014

STUDENT RESEARCH SUPERVISION

Doctoral Student Dissertation Committee Member

- Khadija Ajmal (Ph.D. in Operations Management), current
 - PhD Showcase Poster Competition Award, 2020
- Nima Alizadeh Basban (Ph.D. in Operations Management), current
- Lakshmi Mudigonda (Ph.D. in Strategy), graduated in 2022
- Behzad Zahiri (Ph.D. in Operations Management), graduated in 2019 (took position at Norfolk Southern Corp., VA)
- Ardeshir Raihanian Mashhadi (Ph.D. in Mechanical Engineering), graduated in 2018 (currently Assistant Professor of Teaching, University at Buffalo)

Master's Student Research

- Eniyachandramouli Gunasekaran, (MS in Sustainable Transportation and Logistics), current

- Yang Cai (MS in Sustainable Transportation and Logistics), graduated in 2022 (took position at Penske Transportation Solutions, WA)

Undergraduate Student Research

- James Chen (SOM Undergraduate Honors program), MGG498 Management Undergraduate Research, Spring 2022

HONORS & AWARDS

Finalist INFORMS 2021 Service Science Best Cluster Paper Award
 Purdue University Operations Management Scholar Award, 2013-2014
 Krannert Certificate for Distinguished Teaching, 2014
 Purdue University Ross Fellowship, 2010-2011
 Ford Motor Company Scholarship, University of Michigan, 2009-2010

ACADEMIC SERVICE AND ENGAGEMENT

Member, Editorial Review Board of Production and Operations Management Journal and Decision Sciences Journal (2020- present)

Ad hoc manuscript reviewer for *Management Science*, *Manufacturing and Service Operations Management*, *Production and Operations Management*, *European Journal of Operations Research*, *Decision Sciences*, *Naval Research Logistics*, *International Journal of Production Research*, *Omega*, *Resources, Conservation and Recycling*, *Sustainability*, and *Technological Forecasting and Social Change*, *NSF Future Manufacturing Panel*

Conference Session Chair and Co-Chair for Production and Operations Management Conference (2017 – 2022) and Manufacturing and Service Operations Management Conference (2018)

Co-organizer for the 2019 Production and Operations Management College of Sustainable Operations Student Paper Competition

Reviewer for the 2020 Production and Operations Management College of Sustainable Operations Student Paper Competition

Reviewer for the 2021 Manufacturing and Service Operations Management Conference's Sustainable Operations Special Interest Group Meeting

UNIVERSITY SERVICE AND ENGAGEMENT

Served on the UB School of Management Policy Committee (2021 - current)

UB School of Management Honors program faculty mentor for the supply chain/operations area (2021 - current)

Panel Discussant, New Faculty Brown Bag Luncheon Series, UB Office of the Vice Provost for Faculty Affairs (2016)

Faculty Judge for the Annual UB Supply Chain and Operations Management Case Competition (since 2016)

Faculty Advisor for the UB Sustainable Business Association (since 2021)

Featured in the UB School of Management newsletter 'Buffalo Insights', May 2022 issue. ("Going green — or greenwashing?" and "Why more plastics end up in landfill")

Participated in the UB School of Management Case Method Teaching Seminar facilitated by Harvard Business Publishing (2017)

Guest Lecturer on the topic "Carbon Footprinting in Supply Chains" in UB course GLY479/579 (Carbon Reduction Challenge) (Spring 2019, 2020)

Panel discussant, 'The New Normal - Preparing for Climate Change Impacts on Supply Chain Management' for the Western New York Sustainable Business Roundtable (2018)

SELECTED MEDIA COVERAGE

1. Another big shipping line is refusing to export the West's plastic waste. *Quartz*, April 15, 2022. Available at: <https://qz.com/2155412/shipping-lines-are-refusing-to-export-the-wests-plastic-waste/>
2. Study: National Sword increased US landfilled plastic. *Resource Recycling*, April 12, 2022. Available at: <https://resource-recycling.com/recycling/2022/04/12/study-national-sword-increased-us-landfilled-plastic/>
3. UB research study reports the impact of China's National Sword policy on the U.S. landfill and plastics recycling industry. *University at Buffalo News*, March 29, 2022. Available at: <https://www.buffalo.edu/news/releases/2022/03/029.html>
4. It is time to make plastic-recycling labels less confusing. *Popular Science*, March 10, 2022. Available at: <https://www.popsci.com/environment/plastic-recycling-label/>
5. Retailers are jumping on the resale bandwagon now that secondhand clothes are cool (and profitable). *Insider*, February 5, 2022. Available at: <https://www.businessinsider.com/clothing-resale-popular-with-retailers-gen-z-sustainable-shoppers-2022-2>
6. New research compared fashion resale models. *Ecotextile News*, November 22, 2021. Available at: <https://www.ecotextile.com/2021112228646/fashion-retail-news/new-research-compares-fashion-resale-models.html>

7. New study shows which resale fashion strategies are best for the planet and business. *Green Queen*, November 22, 2021. Available at: <https://www.greenqueen.com.hk/resale-fashion-strategies-study/>
8. Secondhand clothing is big business, but is it truly green? *Futurity*, November 15, 2021. Available at: <https://www.futurity.org/secondhand-clothing-2657182-2/>
9. New research shows when apparel resale strategies benefit both planet, profit. *University at Buffalo News*, November 12, 2021. Available at: <https://www.buffalo.edu/ubnow/stories/2021/11/apparel-resale.html>
10. Your secondhand clothes might not be as sustainable as you think they are. Here's why. *World Economic Forum*, November 6, 2021. Available at: <https://www.weforum.org/agenda/2021/11/secondhand-clothing-big-business-green-environment/>
11. To study and improve tire recycling, New York State turns to UB RENEW Institute. *University at Buffalo News*, January 28, 2021. Available at: <https://www.buffalo.edu/news/releases/2021/01/024.html>
12. New York State turns to UB RENEW Institute to study, improve plastics recycling. *University at Buffalo News*, September 11, 2020. Available at: <https://www.buffalo.edu/ubnow/stories/2020/09/dec-grant-plastics-recycling.html>