

Robert L. Bray

curriculum vitae

Academic Positions

- 2016– Associate Professor of Operations Management
Kellogg School of Management, Northwestern University, Evanston, IL
- 2013–16 Assistant Professor of Managerial Economics and Decision Sciences
Kellogg School of Management, Northwestern University, Evanston, IL
- 2012–13 Donald P. Jacobs Scholar of Managerial Economics and Decision Sciences
Kellogg School of Management, Northwestern University, Evanston, IL

Education

- 2007–12 Stanford Graduate School of Business, Stanford, CA
PhD, Operations, Information, and Technology
- 2002–06 University of California at Berkeley, Berkeley, CA
B.S. Industrial Engineering Operations Research
Graduated ‘High Honors’

Publications and Pre-Prints

Book

- 2021 Homage to R: Learn the Language of Data Science

Journal Articles

- 2012 [1] Information Transmission and the Bullwhip Effect: An Empirical Investigation.
Coauthor: Haim Mendelson
Outlet: *Management Science*, 58 (5), 860-875
Finalist: *Management Science* Best Paper in Operations Management Award, 2014
Finalist: *Management Science* Best Paper in Operations Management Award, 2015
Finalist: George Nicholson Student Paper Competition, INFORMS, 2011
Finalist: MSOM Student Paper Competition, MSOM Society, 2011
Winner: Best Student Paper Competition, POMS Supply Chain College, 2011
- 2015 [2] Production Smoothing and the Bullwhip Effect
Coauthor: Haim Mendelson
Outlet: *Manufacturing & Service Operations Management*, 17 (2), 208-220
Finalist: *M&SOM* Best Paper Award, 2018
Finalist: *M&SOM* Best Paper Award, 2017
- 2016 [3] Multitasking, Multi-Armed Bandits, and the Italian Judiciary
Coauthors: Decio Coviello, Andrea Ichino, and Nicola Persico
Outlet: *Manufacturing & Service Operations Management*, 18 (4), 545-558
- 2019 [4] Ration Gaming and the Bullwhip Effect
Coauthors: Yuliang Yao, Yongrui Duan, Jiazhen Huo
Outlet: *Operations Research* 67 (2), 453-467
- 2019 [5] Markov Decision Processes with Exogenous Variables
Outlet: *Management Science*, 65 (10), 4598-4606

Publications and Pre-Prints (continued)

- 2019 [6] Supply Chain Proximity and Product Quality
Coauthors: Juan Serpa, Ahmet Colak
Outlet: *Management Science*, 65 (9), 4079-4099
- 2019 [7] Strong Convergence and Dynamic Economic Models
Outlet: *Quantitative Economics*, 10 (1), 43-65
- 2019 [8] Operational Transparency: Showing When Work Gets Done
Outlet: *Manufacturing & Service Operations Management*
Winner: MSOM Data Driven Research Challenge, MSOM Society, 2018
- 2022 [9] Menu Costs and the Bullwhip Effect: Supply Chain Implications of Dynamic Pricing
Coauthor: Ioannis Stamatopoulos
Outlet: *Operations Research*, 70 (2), 748-765
- 2022 [10] A Comment on “Using Randomization to Break the Curse of Dimensionality”
Outlet: *Econometrica*, 90 (4), 1915-1929
- 2024 [11] Logarithmic Regret in Multisecretary and Online Linear Programs with Continuous Valuations
Outlet: *Operations Research*
- 2025 [12] A Tutorial on Teaching Data Analytics with Generative AI
Outlet: Forthcoming at *INFORMS Journal on Applied Analytics* (formerly known as *Interfaces*)

Working Papers

- 2025 [13] A Large Discrepancy Between Price Elasticities Estimated with Experimental Price Data and Observational Scanner Data
Coauthors: Ioannis Stamatopoulos and Robert Evan Sanders
Outlet: Revise and resubmit at *Econometrica*
- 2023 [14] Unnesting the Fixed Point in Dynamic Program Estimation
Outlet: Reject and resubmit at *Quantitative Economics*
- 2023 [15] Why Do Auto Manufacturers Initiate Recalls? A Structural Econometric Game
Coauthor: Ahmet Colak
Outlet: Revise and resubmit at *Management Science*
- 2023 [16] A Disquieting Lack of Evidence for Disintermediation in a Home-Cleaning Platform
Coauthors: Ekaterina Astashkina, Ruslan Momot, and Marat Salikhov
- 2025 [17] The Fluid and Offline Benchmarks are Equivalent in the Loss Queuing System
Coauthors: Itai Gurvich

Cases

- 2011 [18] The Kindle
Coauthor: Haim Mendelson
Outlet: Taught in Stanford GSB’s e-commerce class
- 2020 [19] Little’s Law and the Italian Judiciary
Outlet: Taught in Kellogg’s core operations class

Awards

- 2020 *Manufacturing & Service Operations Management* Meritorious Service Award
- 2019 *Manufacturing & Service Operations Management* Meritorious Service Award

Awards (continued)

2019	<i>Management Science</i> Distinguished Service Award
2018	Winner, MSOM Data Driven Research Challenge, MSOM Society
2018	Finalist, <i>Manufacturing & Service Operations Management</i> Best Paper Award
2017	<i>Management Science</i> Distinguished Service Award
2017	<i>Manufacturing & Service Operations Management</i> Meritorious Service Award
2017	Finalist, <i>Manufacturing & Service Operations Management</i> Best Paper Award
2016	<i>Management Science</i> Distinguished Service Award
2016	Outstanding Reviewer Recognition, Production & Operations Management Society
2015	<i>Management Science</i> Distinguished Service Award
2015	Finalist, <i>Management Science</i> Best Paper in Operations Management Award
2014	<i>Management Science</i> Distinguished Service Award
2014	Finalist, <i>Management Science</i> Best Paper in Operations Management Award
2011	Winner, Best Student Paper Competition, Production and Operations Management Society, College of Supply Chain Management
2011	Finalist, George Nicholson Student Paper Competition, INFORMS
2011	Finalist, MSOM Student Paper Competition, MSOM Society
2007–12	Doctoral Fellowship, Stanford GSB
2005	Undergraduate Research Opportunities Grant, UC Berkeley
2002-04	Alumni Scholarship for Leadership, UC Berkeley

Teaching

Courses

2021–	Descriptive and Predictive Analytics in R Role: Course creator and instructor Institution: Kellogg School of Management Level: MBA
2021–	Applied Advanced Analytics Role: Course creator and instructor Institution: Kellogg School of Management Level: MBA
2014–	Estimating Dynamic Programs Role: Course creator and instructor Institution: Kellogg School of Management and McCombs School of Business Level: PhD
2013–	Core Operations Management Role: Instructor Institution: Kellogg School of Management Level: MBA

Teaching (continued)

- 2009–11 Introduction to Operations Management
 Role: Part time lecturer
 Institution: Stanford GSB
 Level: PhD
- 2009–11 Electronic Commerce
 Role: Teaching assistant
 Institution: Stanford GSB
 Level: MBA
- 2006 Discrete Event Simulation
 Role: Teaching assistant
 Institution: UC Berkeley College of Engineering
 Level: Undergraduate

Advising

- 2013–17 PhD advisor to Ahmet Colak, at Kellogg
 Placement: Clemson University, Operations Management
- 2013 PhD committee member for Seyed Emadi, at Kellogg
- 2018 PhD committee member for Serasu Duran, at Kellogg
- 2018 PhD committee member for Nil Karacaoglu, at Kellogg
- 2018 PhD committee member for Simin Li, at Kellogg
- 2018 PhD committee member for Yue Yin, at Kellogg
- 2021 PhD co-advisor to Vadim Glinskiy, at Kellogg

Professional Experience

- 2023 Visiting Scholar at *McCombs School of Business*
- 2024– Associate editor at *Manufacturing & Service Operations Management*
- 2024– Associate editor at *Operations Research*
- 2020– Associate editor at *Management Science*
- 2016– Senior editor at *Production and Operations Management*
- 2015 Co-chair of the MSOM Supply Chain SIG
- 2013 Keynote speaker at E2Open's supply chain round-table
- 2009–10 President of PhD Association at Stanford GSB
- 2006–07 Semiconductor manufacturing consultant at Leachman & Associates
- 2005 Manufacturing engineering co-op at Intel
- 2005 Industrial engineering co-op at Disneyland
- 2004–05 Research assistant at Cohn Visual Detection Laboratory, UC Berkeley

Professional Experience (continued)

2009–	Referee <i>Management Science</i> <i>Operations Research</i> <i>Manufacturing & Service Operations Management</i> <i>Production and Operations Management</i> <i>Mathematics of Operations Research</i> <i>Journal of Operations Management</i> <i>International Journal of Production Research</i> <i>Econometrica</i> <i>Quantitative Economics</i> <i>The RAND Journal of Economics</i> <i>IIE Transactions on Healthcare Systems Engineering</i> <i>Journal of Operations Management</i> MSOM student paper competition MSOM supply chain SIG MSOM services SIG POMS Supply Chain Student Paper Competition INFORMS interactive poster session
2004–2014	Academic programs Kellogg Faculty Immersion Trip to Brazil Chicago-Argonne Initiative for Computational Economics Georgia Tech East Asia Industrial Engineering Program
2024	INFORMS Revenue Management and Pricing Section Prize Committee

Invited Presentations

2010-11	Information Transmission and the Bullwhip Effect Caterpillar Headquarters Wharton Workshop on Empirical Research in OM
2011-14	Production Smoothing and the Bullwhip Effect Marshall School of Business, University of Southern California Columbia Business School Fuqua School of Business, Duke University Harvard Business School Kellogg Graduate School of Management, Northwestern University Rady School of Management, University of California, San Diego Stern School of Business, New York University Wharton School, University of Pennsylvania Wharton Workshop on Empirical Research in OM MSOM Supply Chain SIG (2012, 2014)
2015	Multitasking, Multi-Armed Bandits, and the Italian Judiciary Lehigh University College of Business and Economics Wharton Workshop on Empirical Research in OM
2015	Why Do Auto Manufacturers Initiate Recalls? A Structural Econometric Game Lubar School of Business, University of Wisconsin, Milwaukee
2016-18	Strong Convergence and the Estimation of Markov Decision Processes University of Calgary Banff Empirical Microeconomics Workshop Northwestern University

Invited Presentations (continued)

- 2017-19 Ration Gaming and the Bullwhip Effect
McCombs School of Business, University of Texas, Austin
Desautels Faculty of Management, McGill University
CIRRELT, Montréal
Robert Smith School of Business, University of Maryland
MSOM Supply Chain SIG
Fisher College of Business, Ohio State University
Baruch College, The City University of New York
SC Johnson College of Business, Cornell University
HEC Montréal Workshop on Industrial Organization
- 2018 Operational transparency: Showing when work gets done
Emory ISOM Workshop on Empirical Research
- 2019 Unnesting the Fixed Point in Dynamic Program Estimation
Ross School of Business, University of Michigan
Stanford Graduate School of Business
Gies College of Business, University of Illinois
- 2019 Randomness Does Not Break the Curse of Dimensionality Unless the Dynamic Program is Trivial
Eccles School of Business, University of Utah
- 2017-21 Ration Gaming and the Coronavirus
W. P. Carey School of Business, Arizona State University
Indian School of Business
- 2022-23 Logarithmic Regret in Multisecretary and Online Linear Programs with Continuous Valuations
School of Management and Economics, The Chinese University of Hong Kong, Shenzhen
Tippie College of Business, University of Iowa
Centre for Supply Chain Management, Wilfrid Laurier University
McCombs School of Business, University of Texas at Austin
- 2023 What I Learned from Teaching MBAs Coding with ChatGPT in Spring 2023
Columbia Business School
- 2023 Prices are Endogenous. Evidence from a Large-Scale Pricing Experiment
Columbia Business School
- 2023 Prices are Endogenous. Evidence from a Large-Scale Pricing Experiment
Wharton School, University of Pennsylvania
- 2025 Teaching Data Analytics with Generative AI
University Hospitals, Cleveland, OH.

Press

- 2013 Whipping the Supply Line into Shape
Outlet: KelloggInsight
- 2015 A Smarter Way to Schedule
Outlet: KelloggInsight
- 2018 A Counterintuitive Way to Keep Shelves Stocked and Prices Down
Outlet: KelloggInsight
- 2018 Multi-tasking—why it's bad for court efficiency
- 2019 How to Increase Your Office's Productivity
Outlet: KelloggInsight

Press (continued)

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| 2019 | A Simple Way to Make Your Customers More Satisfied with Their Deliveries
Outlet: KelloggInsight |
| 2020 | How to Increase Your Office's Productivity
Outlet: KelloggInsight |
| 2020 | With Online Package-Delivery Alerts, Later in the Process Is Better
Outlet: Wall Street Journal |
| 2020 | What procurement managers should expect from a 'bullwhip on crack'
Outlet: Supply Chain Dive |
| 2023 | ChatGPT Has Arrived. What's a Manager to Do?
Outlet: KelloggInsight |
| 2024 | Business Schools Are Going All In on AI
Outlet: Wall Street Journal |
| 2024 | Everyone Wants to Ditch the Middleman. Or Do They?
Outlet: KelloggInsight |