MICHAEL ROBERT WAGNER

Foster School of Business ◇ University of Washington ◇ Paccar Hall, Box 353226 ◇ Seattle, WA 98195

1–206–685–2755 ◇ mrwagner@uw.edu

EDUCATION

Massachusetts Institute of Technology   *Cambridge, MA*
Ph.D. degree in Operations Research   *June 2006*
Thesis title: Online Optimization in Routing and Scheduling
Thesis Advisor: Professor Patrick Jaillet

Massachusetts Institute of Technology   *Cambridge, MA*
Master of Engineering degree in Electrical Engineering & Computer Science   *June 2001*
Thesis title: Hedging Optimization Algorithms for Deregulated Electricity Markets
Thesis Advisor: Professor Marija Ilic.

Massachusetts Institute of Technology   *Cambridge, MA*
Bachelor of Science degree in Electrical Engineering & Computer Science   *June 2000*
Bachelor of Science degree in Mathematics   *June 2000*

ACADEMIC EXPERIENCE

University of Washington, Michael G. Foster School of Business   Seattle, WA

Professor of Operations Management   *September 2024 – Present*
Marion B. Ingersoll Endowed Professorship   *July 2024 – Present*

Associate Professor of Operations Management (tenured)   *September 2018 – August 2024*
Neal and Jan Dempsey Endowed Faculty Fellow   *July 2015 – June 2024*

Assistant Professor of Operations Management   *July 2012 – August 2018*

Saint Marys College of California   Moraga, CA
Chevron Assistant Professor of Operations Management   *July 2009 – June 2012*

California State University - East Bay   Hayward, CA
Assistant Professor of Management   *September 2006 – June 2009*

TEXTBOOK

A. Siegel and **M. Wagner**, "Practical Business Statistics," 8th edition, Elsevier, 2022.

PUBLICATIONS

P1. A. Siegel and **M. Wagner**, "Technical Note – Data-Driven Profit Estimation Error in the Newsvendor Model," Operations Research, volume 71, number 6, pp. 2146-2157, 2023.

P2. S. Fatehi and **M. Wagner**, "Crowdsourcing Last-Mile Deliveries," Manufacturing & Service Operations Management, volume 24, number 2, pp. 791-809, 2022.

- Urban Transportation Outstanding Paper Award, Informs Transportation Science and Logistics Society (2021).

P3. A. Siegel and **M. Wagner**, "Profit Estimation Error in the Newsvendor Model under a Parametric Demand Distribution," Management Science, volume 67, number 8, pp. 4863-4879, 2021.

P4. S. Chen, T. Klastorin and **M. Wagner**, "Designing Practical Coordinating Contracts in Decentralized Projects," Naval Research Logistics, volume 68, number 2, pp. 183-198, 2021.

P5. **M. Wagner**, "Crowdvoting Judgment: An Analysis of Modern Peer Review," <u>Stochastic Systems</u>, volume 10, number 3, pp. 193-222, 2020.

P6. M. Arbabian and **M. Wagner**, "The Impact of 3D Printing on Manufacturer-Retailer Supply Chains," <u>European Journal of Operational Research</u>, volume 285, pp. 538-552, 2020.

P7. S. Fatehi and **M. Wagner**, "Crowdfunding via Revenue-Sharing Contracts," <u>Manufacturing & Service Operations Management</u>, volume 21, number 4, pp. 875-893, 2019.

P8. **M. Wagner**, "Robust Inventory Management: An Optimal Control Approach," <u>Operations Research</u>, volume 66, number 2, pp. 426-447, 2018.

P9. H. Mamani, S. Nassiri and **M. Wagner**, "Closed-Form Solutions for Robust Inventory Management," <u>Management Science</u>, volume 63, number 5, pp. 1625-1643, 2017.

P10. T. Chen, T. Klastorin and **M. Wagner**, "Incentive Contracts in Serial Stochastic Projects," <u>Manufacturing & Service Operations Management</u>, volume 17, number 3, pp. 290-301, 2015.

P11. **M. Wagner**, "Robust Purchasing and Information Asymmetry in Supply Chains with a Price-Only Contract," <u>IIE Transactions</u>, volume 47, number 8, pp. 819-840, 2015.

  - Best Paper Award in the IIE Transactions (Scheduling and Logistics) Best Paper Award Competition (2017).
  - Featured in the Industrial Engineer magazine, volume 47, number 7, pp. 52-53, 2015.

P12. D. Hochbaum and **M. Wagner**, "Range Contracts: Risk Sharing and Beyond," <u>European Journal of Operational Research</u>, volume 243, number 3, pp. 956-963, 2015.

P13. D. Hochbaum and **M. Wagner**, "Production Cost Functions and Demand Uncertainty Effects in Price-Only Contracts," <u>IIE Transactions</u>, volume 47, number 2, pp. 190-202, 2015.

  - Honorable Mention in the IIE Transactions (Design and Manufacturing) Best Paper Award Competition (2016).

P14. Z. Radovilsky and **M. Wagner**, "Optimal Allocation of Resources at U.S. Coast Guard Boat Stations," <u>Journal of Supply Chain and Operations Management</u>, volume 12, number 1, pp. 50-65, 2014.

  - Alan Khade Award for the best paper at the 2014 CSU-POM conference.

P15. **M. Wagner** and Z. Radovilsky, "Optimizing Boat Resources at the U.S. Coast Guard: Deterministic and Stochastic Models," <u>Operations Research</u>, volume 60, number 5, pp. 1035-1049, 2012.

P16. **M. Wagner**, "Online Lot-Sizing Problems with Ordering, Holding and Shortage Costs," <u>Operations Research Letters</u>, volume 39, number 2, pp. 144-149, 2011.

P17. **M. Wagner**, "Fully Distribution-Free Profit Maximization: The Inventory Management Case," <u>Mathematics of Operations Research</u>, volume 35, number 4, pp. 728-741, 2010.

P18. P. Jaillet and **M. Wagner**, "Almost Sure Asymptotic Optimality for Online Routing and Machine Scheduling Problems," <u>Networks</u>, volume 55, number 1, pp. 2-12, 2010.

  - Glover-Klingman Prize for the best paper published in Networks in 2010.

P19. J. Correa and **M. Wagner**, "LP-Based Online Scheduling: From Single to Parallel Machines," <u>Mathematical Programming</u>, volume 119, number 1, pp. 109-136, 2009.

P20. **M. Wagner**, J. Bhadury and S. Peng, "Risk Management in Uncapacitated Facility Location Models with Random Demands," <u>Computers & Operations Research</u>, volume 36, number 4, pp. 1002-1011, 2009.

P21. P. Jaillet and **M. Wagner**, "Generalized Online Routing: New Competitive Ratios, Resource Augmentation and Asymptotic Analyses," Operations Research, volume 56, number 3, pp. 745-757, 2008.

P22. **M. Wagner**, "Stochastic 0-1 Integer Linear Programming under Limited Distributional Information," Operations Research Letters, volume 36, number 2, pp. 150-156, 2008.

P23. **M. Wagner**, "Decision Making under Uncertainty using Mathematical Optimization: A Survey," California Journal of Operations Management, volume 6, number 1, pp. 56-60, 2008.

P24. P. Jaillet and **M. Wagner**, "Online Routing Problems: Value of Advanced Information as Improved Competitive Ratios," Transportation Science, volume 40, number 2, pp. 200-210, 2006.

P25. **M. Wagner**, A. Auger and M. Schoenauer, "EEDA: A New Robust Estimation of Distribution Algorithm," Rapport de Recherche (Research Report) RR-5190, Institut National de Recherche en Informatique et en Automatique (INRIA), 2004.

REVISIONS, PAPERS UNDER REVIEW, WORKING PAPERS, AND CURRENT RESEARCH

W1. J. Lei and **M. Wagner**, "Data-Driven Distributionally Robust Newsvendor Models with Censored Demand," major revision at Production and Operations Management.

W2. S. Fatehi, L. Nageswaran and **M. Wagner**, "Capacity Flexibility via On-Demand Warehousing," major revision at Service Science.

W3. A. Siegel and **M. Wagner**, "Data-Driven Profit Estimation Error in the Newsvendor Model for a Discrete Demand Distribution, submitted to Mathematics of Operations Research."

W4. X. Hou and **M. Wagner**, "Leveraging Embedded Time Series Forecasting in Dynamic Programming for Storage Optimization," in progress.

W5. D. Ma and **M. Wagner**, "Crowdsourced Last-Mile Deliveries with Time Windows: A Robust Optimization Approach for On-Demand Food and Grocery Services," in progress.

W6. L. Boussioux, R. Narad, and **M. Wagner**, "Understanding AI-Predicted TSP Solutions via Mechanistic Interpretability, in progress.

REFEREED CONFERENCE PROCEEDINGS

C1. **M. Wagner**, "A Robust Dynamic Block Release Model," proceedings of Amazon Consumer Science Summit, 2023.

C2. K. Bimpikis and **M. Wagner**, "Adaptive Last-Mile Supply Chains via Multiple Modes of Transportation," proceedings of Amazon Principal Offsite, 2023.

C3. **M. Wagner**, "Solving Dynamic Programs at Scale via Machine Learning," proceedings of Amazon Machine Learning Conference, 2022.

C4. J. Gan, S. Wollenstein-Betech, K. Bimpikis, **M. Wagner**, "Personalized Onboarding Plans for Gig Drivers," proceedings of Amazon Machine Learning Conference, 2022.

C5. **M. Wagner**, "Layering Reinforcement Learning over Dynamic Programming: Incorporating Human Adjustments," proceedings of Amazon Machine Learning Conference, 2021.

C6. **M. Wagner**, "A Dynamic Programming Model for Crowdsourced Labor Planning at Amazon Flex," proceedings of Amazon Consumer Science Summit, 2021.

C7. S. Fatehi, L. Nageswaran and **M. Wagner**, "Capacity Flexibility via On-Demand Warehousing," extended abstract in proceedings of the Manufacturing & Service Operations Management Conference, 2021.

C8. S. Fatehi and **M. Wagner**, "A Robust Optimization Approach to Crowdsourcing Last-Mile Deliveries," extended abstract in proceedings of the Manufacturing & Service Operations Management Conference, 2018.

C9. M. Arbabian and **M. Wagner**, "3D Printing in Supply Chains," extended abstract in proceedings of the Manufacturing & Service Operations Management Conference, 2018.

C10. S. Fatehi and **M. Wagner**, "Crowdfunding via Revenue-Sharing Contracts," extended abstract in proceedings of the Manufacturing & Service Operations Management Conference, 2018.

C11. M. Arbabian and **M. Wagner**, "The Impact of 3D Printing on Manufacturer-Retailer Contractual Relationships," extended abstract in proceedings of the Manufacturing & Service Operations Management Conference, 2017.

C12. **M. Wagner**, "Crowdsourcing Judgment:An Analysis of Modern Peer Review," extended abstract in proceedings of the Manufacturing & Service Operations Management Conference, 2014.

C13. J. Ho and **M. Wagner**, "The Influence of Economic Crisis on Market Sectors," extended abstract in proceedings of the 24th Annual California State University – Production and Operations Management (CSU-POM) Conference, 2012.

C14. **M. Wagner** and Z. Radovilsky, "Optimizing Boat Resources at the U.S. Coast Guard," extended abstract in proceedings of the 2nd Annual European Decision Science Institute (EDSI) Conference, 2011.

C15. P. Jaillet and **M. Wagner**, "New Competitive Ratios for Generalized Online Routing," extended abstract in proceedings of the Sixth Triennial Symposium on Transportation Analysis (TRISTAN VI), 2007.

C16. J. Correa and **M. Wagner**, "LP-Based Online Scheduling: From Single to Parallel Machines," extended abstract in proceedings of the 11th Conference on Integer Programming and Combinatorial Optimization (IPCO 2005). Lecture Notes in Computer Science 3509, pp. 196-209, Springer-Verlag, Berlin, 2005.

C17. **M. Wagner**, P. Skantze and M. Ilic, "Hedging Optimization Algorithms for Deregulated Electricity Markets," proceedings of the 12th Conference on Intelligent Systems Application to Power Systems (ISAP), 2003.

REFEREED BOOK CHAPTERS

B1. **M. Wagner**, "Robust Inventory Management," chapter in Research Handbook on Inventory Management, edited by J. Song, Research Handbooks in Business and Management series, Edward Elgar Publishing, 2023.

B2. S. Fatehi and **M. Wagner**, "Crowdfunding via Revenue-Sharing Contracts," chapter in Supply Chain Finance, edited by P. Kouvelis, L. Dong, and D. Turcic, Foundations and Trends in Technology, Information and Operations Management, volume 10, number 3-4, pp. 407-424, 2017.

B3. P. Jaillet and **M. Wagner**, "Online Optimization – An Introduction," chapter in TutORials in Operations Research, edited by J. Hasenbein, Informs, 2010.

B4. P. Jaillet and **M. Wagner**, "Online Vehicle Routing Problems: A Survey," chapter in The Vehicle Routing Problem: Latest Advances and New Challenges, edited by B. Golden, S. Raghavan, and E. Wasil, Springer, 2008.

DOCTORAL STUDENT MENTORING

- Advisor (committee chair) and co-author

1. Emisa Nategh (operations management), committee chair and co-author, graduated December 2022 and accepted an assistant teaching professor position at the McDonough School of Business, Georgetown University.

2. Soraya (Nadia) Fatehi (operations management), committee chair and co-author, graduated June 2020 and accepted an assistant professor position at the Naveen Jindal School of Management, University of Texas at Dallas.

- Committee member and co-author

    1. Junfei Lei (operations management), committee member and co-author, post-doc at INSEAD.

    2. Mohammad Arbabian (operations management), committee member and co-author, assistant professor at University of Portland.

    3. Saumya Sinha (applied mathematics), committee member and co-author, post-doc at Rice University.

    4. Tony I-fu Chen (operations management), committee member and co-author, data scientist at Facebook.

- Co-author

    1. Shima Nassiri (operations management), co-author, assistant professor at Ross School of Business, University of Michigan.

- Committee member

    1. Arman Rahimzamani (electrical and computer engineering).

    2. Sivaramakrishnan Ramani (industrial and systems engineering).

    3. Victoria Diaz (industrial and systems engineering).

    4. Klaas Fiete Krutein (industrial and systems engineering).

    5. Zahra Ghatrani (industrial and systems engineering).

    6. Arman Rahimzamani (electrical and computer engineering).

    7. Hasan Manzour (industrial and systems engineering).

    8. Yushi Tan (electrical engineering).

    9. Sevnaz Nourollahi (industrial and systems engineering).

    10. Mahshid Salemi Parizi (industrial and systems engineering).

    11. Elnaz Jalilipour Alishah (operations management).

    12. Chad Ho (information systems).

INVITED PRESENTATIONS

1. "Data-Driven Profit Estimation Error in the Newsvendor Model," ESSEC, February 20th, 2024.

2. "Crowdsourced Labor Planning for Last-Mile Deliveries," Amazon Consumer Science Summit, August 13-16, 2023.

3. "Data-Driven Profit Estimation Error in the Newsvendor Model," Supply Chain Finance & Risk Management Workshop, Boeing Center for Supply Chain Innovation, Washington University in St. Louis, May 31st, 2023.

4. "Data-Driven Profit Estimation Error in the Newsvendor Model," Stanford Graduate School of Business, September 28th, 2022.

5. "Crowdsourcing Last-Mile Deliveries," University of Washington (Industrial & Systems Engineering), January 11th, 2022.

6. "Data-Driven Profit Estimation Error in the Newsvendor Model," MIT Data Science Lab, December 10th, 2021.

7. "Robust Inventory Management via the Limit Theorems of Probability," West Point, December 2nd, 2021.

8. "Profit Estimation Error in the Newsvendor Model," MIT Sloan, October 6th, 2020.

9. "Robust Inventory Management via the Limit Theorems of Probability," Amazon, February 26th, 2020.

10. "Profit Estimation Error in the Newsvendor Model," University of Southern California, November 19th, 2019.

11. "Statistical Bias in the Newsvendor Model," University of Washington (Foster School of Business), September 28th, 2018 (joint presentation with A. Siegel).

12. "Crowdfunding via Revenue-Sharing Contracts," Supply Chain Finance & Risk Management Workshop, Boeing Center for Supply Chain Innovation, Washington University in St. Louis, May 13th, 2018.

13. "Crowdfunding via Revenue-Sharing Contracts," Crowdsourcing in the Sharing Economy Conference, Johns Hopkins University, April 21th, 2018.

14. "Robust Purchasing and Information Asymmetry in Supply Chains with a Price-only Contract," best-paper award presentation at IISE Conference, May 22nd, 2017.

15. "Crowdfunding via Revenue-Sharing Contracts," Supply Chain Finance & Risk Management Workshop, Boeing Center for Supply Chain Innovation, Washington University in St. Louis, May 14th, 2017.

16. "Crowdfunding via Revenue-Sharing Contracts," University of Washington (Foster School of Business), April 7th, 2016.

17. "Closed-Form Solutions for Robust Inventory Management," University of Washington (Industrial & Systems Engineering), January 24th, 2017.

18. "Crowdvoting Judgment: An Analysis of Modern Peer Review," University of Washington (Foster School of Business), May 29th, 2015.

19. "Range Contracts: Risk Sharing and Beyond," University of Washington (Foster School of Business), May 31st, 2013.

20. "The Benefit/Detriment of Information in Coordinating Supply Chains," Universidad de Chile, October 24th, 2012.

21. "Follow Your Own Path," Student Technology Career Fair, Cisco Systems, March 16th, 2012.

22. "The Benefit/Detriment of Information in Coordinating Supply Chains," UC Berkeley, January 30th, 2012.

23. "The Benefit/Detriment of Information in Coordinating Supply Chains," University of Washington (Foster School of Business), January 27th, 2012.

24. "The Benefit/Detriment of Information in Coordinating Supply Chains," Santa Clara University, December 20th, 2011.

25. "The Benefit/Detriment of Information in Coordinating Supply Chains," Saint Mary's College of California, April 7, 2011.

26. "Distribution-Free Lot-Sizing Problems," Universidad de Chile, January 19th, 2011.

27. "Online Optimization – An Introduction," a tutorial, joint with Patrick Jaillet, at INFORMS Annual Meeting, November 8, 2010.

28. "Online Optimization in Operations Research," Mathematical Sciences Research Institute, April 5th, 2008.

29. "Distribution Free Inventory Management," California State University East Bay, April 1st, 2008.

30. "Online Routing Problems," University of Arizona, February 26th, 2008.

31. "Teaching Effectiveness," California State University East Bay, January 23, 2008.

32. "Online Routing Problems," Universidad de Chile, August 17, 2007.

33. "Online Optimization," Pontificia Universidad Católica de Chile, August 8, 2007.

34. "An Introduction to Operations Research," California State University East Bay, October 25, 2006.

35. "Online Optimization in Routing and Scheduling," Ph.D. defense, MIT Operations Research Center, April 12, 2006.

36. "The Value of Information for the Online Traveling Salesman Problem," Akamai Technologies, February 8, 2006.

37. "An Introduction to Online Optimization," College of William and Mary, January 17, 2006.

38. "The Value of Information for the Online Traveling Salesman Problem," College of William and Mary, January 16, 2006.

CONFERENCE PRESENTATIONS

1. "Optimizing Trace Slicing via Shortest Path," INFORMS Annual Meeting, invited session, October 20-23, 2024.

2. "Adaptive Last-Mile Supply Chains via Multiple Modes of Transportation," Amazon Principal Offsite, March 13-15, 2023.

3. "Layering Reinforcement Learning over Dynamic Programming: Incorporating Human Adjustments," Amazon Machine Learning Conference, October 4-7, 2021.

4. "A Dynamic Programming Model for Crowdsourced Labor Planning at Amazon Flex," Amazon Consumer Science Summit, August 16-19, 2021.

5. "Statistical Bias in the Newsvendor Model," INFORMS Annual Meeting, invited session, October 20-23, 2019.

6. "Range Contracts: Risk Sharing and Beyond," POMS Conference, Seattle, WA, May 5-8, 2017.

7. "Crowdsourcing Judgment: An Analysis of Modern Peer Review," MSOM Conference, Seattle, WA, June 21-22, 2014.

8. "The Benefit/Detriment of Information in Coordinating Supply Chains," INFORMS Annual Meeting, invited session, Phoenix, AZ, October 14-17, 2012.

9. "Online Lot-Sizing Problems," INFORMS Annual Meeting, sponsored session, Charlotte, NC, November 13-16, 2011.

10. "The Benefit/Detriment of Information in Coordinating Supply Chains," International Conference on Operations Research, Zurich, Switzerland, August 30-September 2, 2011.

11. "Optimizing Boat Resources at the U.S. Coast Guard," INFORMS Annual Meeting, sponsored session, Austin, TX, November 7-10, 2010.

12. "Distribution-Free Inventory Management," 16th International Symposium on Inventories, Budapest, Hungary, August 23-27, 2010.

13. "Optimizing Boat Resources at the U.S. Coast Guard," 24th European Conference on Operational Research (EURO XXIV), Lisbon, Portugal, July 11-14, 2010.

14. "Distribution-Free Inventory Management in Fast Fashion," INFORMS Annual Meeting, sponsored session, San Diego, CA, October 11-14, 2009.

15. "Fully Distribution-Free Inventory Management," INFORMS Annual Meeting, sponsored session, Washington D.C., October 12-15, 2008.

16. "Risk Management in Uncapacitated Facility Location Models with Random Demands," The International Symposium on Locational Decisions (ISOLDE XI), Santa Barbara, CA, June 27th, 2008.

17. "Decision Making under Uncertainty using Mathematical Optimization: A Survey," 20th Annual California State University Production and Operations Management (CSU-POM) Conference, Hayward, CA, February 23rd, 2008.

18. "Almost Sure Asymptotic Optimality in Online Routing," INFORMS Annual Meeting, sponsored session, Seattle, WA, November 4-7, 2007.

19. "Stochastic 0-1 Integer Linear Programming under Limited Distributional Information," INFORMS International Meeting, invited session, Puerto Rico, July 8-11, 2007.

20. "Online Vehicle Routing Problems," INFORMS International Meeting, sponsored session, Puerto Rico, July 8-11, 2007.

21. "New Competitive Ratios for Generalized Online Routing," Sixth Triennial Symposium on Transportation Analysis (TRISTAN VI), Phuket Island, Thailand, June 10-15, 2007.

22. "The Value of Information and Resources in Online Routing," INFORMS Annual Meeting, sponsored session, Pittsburgh, PA, November 5-8, 2006.

23. "Resource Augmentation in Online Routing," INFORMS Annual Meeting, sponsored session, San Francisco, CA, November 13-16, 2005.

24. "LP-Based Online Scheduling: From Single to Parallel Machines," INFORMS Annual Meeting, San Francisco, CA, November 13-16, 2005.

25. "LP-Based Online Scheduling: From Single to Parallel Machines," 11th Conference on Integer Programming and Combinatorial Optimization (IPCO 2005), Berlin, Germany, June 8-10, 2005.

26. "LP-Based Online Scheduling: From Single to Parallel Machines," 7th Workshop on Models and Algorithms for Planning and Scheduling Problems (MAPSP 2005), Siena, Italy, June 6-10, 2005.

27. "Online Routing Problems: Value of Advanced Information and Asymptotic Analyses," VII French-Latin American Congress on Applied Mathematics (FLACAM 2005), Santiago, Chile, January 11-18, 2005.

28. "Online Routing Problems: Value of Advanced Information and Asymptotic Analyses," INFORMS Annual Meeting, sponsored session, Denver, CO, October 24-27, 2004.

29. "Simulation Based Solution to Value at Risk Hedging," New Concepts and Software for Competitive Power Systems: Operations and Management (MIT Energy Laboratory Consortium Workshop), Cambridge, MA, November 2000.

INDUSTRY EXPERIENCE

Amazon Seattle, WA
Amazon Scholar *June 2020 – present*

· Creating mathematical models to solve science problems, exploring A.I., advising leadership, and mentoring junior scientists in Last Mile Science.

Convoy Seattle, WA
Consultant *December 2019 – May 2020*

· Advised on the design of a digital platform to more effectively match shippers and carriers, with the objective of lowering shipping costs and increasing carrier earnings through increased efficiencies (e.g., more full truckloads).

Flexe Seattle, WA
Consultant *March 2019 – May 2020*

· Advised on the design of an on-demand warehousing system, where warehouses with excess capacity are matched via Flexe's platform with firms that have short-term warehousing needs.

Amazon Seattle, WA
Consultant *October 2017 – December 2017*

· Advised on the design of the Amazon Flex system, which crowdsources last-mile deliveries, and supports the Amazon Now ultra-fast deliveries (e.g., 1-2 hours) and Amazon Fresh (grocery deliveries).

Microsoft Redmond, WA
Consultant *May 2013 – May 2015*

· Advised on the design of the proprietary Enforcement United program for the Xbox Live online video game platform.
· This crowdsourcing system for the Xbox Live Policy and Enforcement Team (XBLPET) utilizes a "crowd" of Xbox users to assess the complaints generated by other users, hence allowing enforcement activities to be transferred from XBLPET employees to the Xbox community, freeing up valuable employee resources for other activities.

United States Coast Guard Washington, D.C.
Consultant *July 2008 – July 2012*

· Designed and implemented a decision support system, using mixed integer linear programming, that the United States Coast Guard is currently utilizing to optimally allocate their fleet of approximately 1,000 boats to 178 stations nationwide, while adhering to business and operational constraints.
· The utilization of the entire fleet was increased from 85% to 95%, the demand shortfall rate was reduced from 9.9% to 0.7% and the fleet operating cost was reduced by more than $2 million per year.

ROIC Analytics, LLC Boise, ID
Consultant *October 2011 – December 2011*

· Performed a strategic expansion analysis for a ROIC client who considered a nationwide deployment of franchises.
· Designed and implemented a large-scale integer programming model that determines the maximum number of franchises that can be created nationwide, such that each franchise has at least 100,000 customers and other operational constraints are satisfied.

Genworth Financial   Raleigh, NC
Consultant   *April 2011 – August 2011*

· Analyzed nationwide mortgage insurance underwriting operations.
· Utilized queuing theory, regression and time-series techniques to demonstrate to senior management that existing productivity objectives were negatively correlated with overall profitability, due to stochastic characteristics of the underwriting system.
· Introduced new productivity measures that were positively correlated with overall profitability, which are now being utilized.

Hedge Fund Industry   Various Locations
Consultant   *January 2010 – July 2011*

· Designed and implemented a variety of analysis and trading models for various hedge funds (that wish to remain anonymous).
· Projects include (1) a portfolio optimization model based on robust optimization, (2) a time-series optimization model used to predict very short term stock movements, (3) an ETF pairs trading strategy based on mean reversion, and (4) various back-testing applications.

SERVICE

Referee for National Science Foundation, Army Research Office, Management Science, Operations Research, Manufacturing & Service Operations Management, Production and Operations Management, Information Systems Research, IIE Transactions, European Journal of Operational Research, INFORMS Journal on Computing, Interfaces, Decision Sciences, Mathematical Programming, Transportation Science, Naval Research Logistics, Journal of Scheduling, Discrete Optimization, IEEE Transactions on Automatic Control, Information Processing Letters, Asia-Pacific Journal of Operational Research, RAIRO, Computers and Industrial Engineering, Journal of Combinatorial Optimization, Latin American Algorithms, Graphs and Optimization Symposium (LAGOS, 2009) and Latin American Theoretical Informatics (LATIN, 2006).

HONORS

1. Marion B. Ingersoll Endowed Professorship (2024 - present)

2. Meritorious Service Award for Manufacturing & Service Operations Management (2022).

3. Urban Transportation Outstanding Paper Award, Informs Transportation Science and Logistics Society (2021).

4. Excellence in Teaching Award for the Master of Science in Business Analytics program at the University of Washington (2021).

5. Best Paper: IIE Transactions (Scheduling and Logistics) Best Paper Award Competition (2017).

6. Meritorious Service Award for Manufacturing & Service Operations Management (2016).

7. Honorable Mention: IIE Transactions (Design and Manufacturing) Best Paper Award Competition (2016).

8. Neal and Jan Dempsey Endowed Faculty Fellowship (2015-2024).

9. Ron Crockett Award for Innovation in Education (2014).

10. Alan Khade Award for the best paper at the CSU-POM conference (2014).

11. Meritorious Service Award for Operations Research (2013).

12. Glover-Klingman Prize for the best paper published in Networks in 2010 (2012).

13. Outstanding Research Award, Saint Marys College of California (2011).

14. INFORMS Teaching Colloquium (2007).

15. INFORMS Doctoral Colloquium (2004).

16. MIT Presidential Fellowship (2001; awarded to the top incoming graduate students, university-wide).

SKILLS

Programming Skills	Python, R, Matlab, Octave, AMPL, VBA, C++, Java
Languages	English (native), Spanish (fluent), Italian (proficient), French (basic)

CITIZENSHIP

Citizen of the United States of America