Retsef Levi - Curriculum Vitae
J. Spencer Standish (1945) Professor of Operations Management,
MIT Sloan School of Management (Operations Management Group)

PERSONAL

Date of birth: March, 1971
Place of birth: Israel
Languages: Hebrew - mother-tongue; English - fluent, at mother-tongue level; Arabic – basic + level
Citizenship: Israel and U.S.
Contact:
T: 617.253.4155
E: retsef@mit.edu
Website: https://mitmgmtfaculty.mit.edu/retsef/

EDUCATION

Cornell University
Ph.D. in Operations Research (ORIE Department)
January 2002 – July 2005
GPA: 4.2368/4.3

Tel-Aviv University
B.Sc. in Mathematics, trend of Operation Research
1996-1997 & 1999-2001
Final Grade: 96 (out of 100), Summa cum Laude

Note: B.Sc. studies were part of service in the IDF (Israeli Defense Forces). First academic year completed: *1996-1997*, and then I was back to active service upon requests from IDF during *1997-1999*. Second and third academic years completed during *1999-2001 (graduated July 2001)*

DOCTORAL THESIS

Co-Advisors: Robin Roundy and David Shmoys
Minor Advisors: James Renegar (Applied Math) and Shane Henderson (Applied probability)
Thesis: *"Computing Provably Near-Optimal Policies for Stochastic Inventory Control Models"*
under the supervision of Robin Roundy and David Shmoys

RESEARCH INTERESTS

Healthcare management
Food and agriculture supply chains
Food safety
Bio-manufacturing analytics
Cybersecurity
Risk management
Transportation
Supply chain and inventory management
Revenue management and pricing
Multistage stochastic optimization
Data-driven algorithms
Combinatorial optimization

MIT SLOAN FACULTY IN THE SAME FIELD

Operations Management Group:

Professor Steven Eppinger, Professor Vivek Farias, Professor Charles Fine, Assistant Professor Daniel Freund, Professor Stephen Graves, Professor Georgia Perakis, Operations Research Group, Associate Professor Karen Zheng, Associate Professor Nikos Trichakis, Associate Professor Jonas Jonasson, Assistant Professor Negin Golrezaei, Assistant Professor Joann de Zegher, Assistant Professor Daniel Freund, Assistant Professor Thodoris Lykouris

NON-MIT EMPLOYMENT

Feinberg Fellow, Weizmann Institute for Science
Israel, *July 2013 – July 2014*

Herman Goldstine Postdoctoral Fellowship in the Department of Mathematical Sciences, IBM T.J. Watson Research Center Yorktown Heights, NY, *July 2005–August 2006*

OR&IE Department, Cornell University (Instructor of several courses) Ithaca, NY, *January 2002–July 2005*

Business Development Consultant, Wisair Inc. Israel, *2001*

Officer in the Israeli Defense Forces (IDF):

1990-2001
Served as an Officer in an elite unit of the Intelligence Corps of the IDF since 1991. Filled different positions throughout the years, which involved highly complicated analysis of interdisciplinary projects. Work was identified by high pressure and required high level of creativity and original thinking:

1990-1992
Lieutenant, Intelligence Analyst Officer (analyzing technical intelligence material)
- Managed 1 officer and 2 soldiers

1992-1994
Captain, Head of Section
-Supervised 8 soldiers and officers
-Designated as an extra merit officer (received prize from IDF Intelligence Department)

1994-1996
Major, Head of Section
-Supervised more than 25 soldiers and officers
-Received prize for "Creative Thinking" (Awarded by Head of the IDF Intelligence Corps)

1997-1999, 1999-2001
Tel-Aviv University

MIT EMPLOYMENT

J. Spencer Standish (1945) Professor of Operations Management
July 2013-

J. Spencer Standish (1945) Associate Professor of Operations Management
July 2010– June 2013

Associate professor (with tenure)
July 2009–June 2013

Affiliated with Operations Research Center (ORC) and the Computations for Design and Optimization (CDO) programs at MIT
September 2006-

Robert N. Noyce Career Development Professor Assistant Professor of Management
-Affiliated with Operations Research Center (ORC) and Computations for Design and Optimization (CDO) program at MIT
September 2006-June 2009

PROFESSIONAL ACTIVITIES

MIT Activities

- Member: Research Administration Faculty Advisory Committee (RAFAC) (2022-)
- Member: MIT Research Computing Committee (2021-)
- Member: Planning & operating committee of the reopening of MIT Sloan (2020 – 2021)

- Member: MIT Planning for COVID19 – Institute committee (2020)
- Member: CoC planning – computing infrastructure – Institute committee (2020)
- Member: Organizing committee of the 2019 INFORMS Healthcare Conference hosted by MIT
- Member: MIT faculty committee to recommend what the required institute future computing infrastructure and policies are
- Faculty Director: MIT Sloan Food Supply Chain Analytics and Sensing Initiative (2018 –)
- Faculty Co-Director: MIT Sloan Health System Innovation Initiative (July 2015- June 2019)
- MIT Sloan Faculty Co-Director: Leaders for Global Operations Program (2015-)
- Co-Chair of MIT Committee: (tasked with proposing what MIT should do in the area of Health) (2017-2018)
- Participant: Massachusetts Economics Delegation to Israel (with the governor of Massachusetts) (December 2016)
- Co-Chair: MIT Sloan Initiative of Health System Innovation Conference "MIT Health Innovations: Technology, Analytics, and Systems" (October 2016)
- Member: MIT Sloan Faculty Committee to develop Masters in Analytics program (2015-2016)
- Co-Chair: 2013 MIT Healthcare Innovation Conference (December 2013)
- Member: institute committee for explaining a strategic relationship with Kaiser Permanente (2013)
- Co-Lead Faculty: institute effort to develop a strategic relationship with the FDA (materialized into a contract – *see awards section below), 2013
- Lead: development and launch of new Healthcare Certificate (launched in AY - 2013), currently serve as Academic Director of the certificate
- Co-Chair (with Tom Kochan) and Organizer: half-day symposium at Sloan, jointly with Partners Healthcare Systems: "Collaborating to Control Costs and Deliver Quality: The Role of Organization Design and Capabilities in Health Care Policy"(participants included: MA Governor, Deval Patrick, MIT President, Susan Hockfield, CEO & President of Partners Healthcare Systems, Gary Gottlieb and many healthcare industry leaders), May 18, 2012
- Member: Non-degree Executive Education Committee (2011-2012)
- Member: Committee that developed the "Enterprise Management" MBA track (served as Faculty Lead of track) (2012-2014)

Other Activities
- Chair: POMs Best Student Paper Competition in Supply Chain Management (2021)
- Member: IPCO Conference Committee (2019)
- Member: MSOM Health Care SIG Conference Committee (2017, 2018)
- Member: Health Care Operations Management Special Interest Group (SIG) Paper Selection Committee (2013)
- Associate Editor:
  -Operations Research, December 2011-January 2018
  -Management Science, January 2009-January 2014
  -Mathematics of Operations Research, March 2009-December 2015
  -Naval Research Logistics, May 2009-2018
  -Area Editor: Operations Research Letters, January 2009-December 2011

-Associate Editor: Surveys of Operations Research and Management Science, May 2009-December 2010

- Referee:
  - Mathematics of Operations Research
  - Operations Research
  - Management Science
  - Manufacturing and Service Operations Management (MSOM)
  - Naval Research of Logistics
  - Discrete Mathematics
  - European Journal of Operations
  - Research, IEEE Transactions
  - Food Policy
  - Scientific Reports
- Judge:
  -2006, 2007 and 2008 MSOM Student Paper Competitions
  -2008, 2009 and 2012 Nicholson Student Paper Competition
- Participant: National Science Foundation (NSF) panel, 2008, 2009, 2010, 2011
- Inventory Cluster Chair: INFORMS, 2007

GRANTS AND AWARDS

2022

MIT – Takeda Program: "MT17 Predictive Signal Detection and Analyses – PRISM" ($300K) Co-PI with Tony Sinsky and Stacy Springs, *duration (2022-2024)*

Flexport: "Improving Efficiency and Resilience of the Global Shipping Supply Chain" ($259,164), *duration (2022-2024)*

WizSoft: " Algorithms to improve detection of associations and predictive power in tabular data" ($80K), *duration* (2022-2023)

2021

Sponsored Research Target: "Sorting Problems in Omni-Channel Settings" ($452,896), with Co-PI Vivek Farias, *duration (2021 – 2023)*

FDA Grant: "Smart Data Analytics for Risk Based Regulatory Science and Bioprocessing Decisions" ($5M), Co-PI with Tony Sinsky, Stacy Springs and Richard Braatz, *duration (2021–2024)*

2020

2020 MSOM Responsible Research Award for the paper "The Impact of Unifying Agriculture Wholesale Markets on Prices and Farmer's Profitability" (coauthored with Manoj Rajan, Somya Singhvi and Yanchong Zheng)

<u>2019</u>

Walmart Foundation Award: "Systemic Risk Management of Food Supply Chains in China" ($7.5M), lead PI (with other PIs: Yasheng Huang, Stacy Springs, Tony Sinskey, Michael Strano, Tauhid Zaman and Karen Zheng), duration: October 2019- October 2021

CSAIL Alliance Grant: "Towards Evidence-based Cyber-Risk Assessment– A Systematic Data Analytics Approach" ($150K) *duration: 2019 –2021*

World Wildlife Foundation: "Matching Local, Wasted Agriculture Produce to Unmet Demand: A Systemic Approach" ($50K) *duration: 2019*

<u>2018</u>
Sponsored Research Target: "Sorting Problems in Omni-Channel Settings"($208K), Co-PI with Vivek Farias, *duration: September 2018-August 2020*
FDA Grant: "Smart Data Analytics for Risk Based Regulatory Science and Bioprocessing Decisions" ($4.9M), Co-PI with Tony Sinsky, Stacy Springs and Richard Braatz, *duration: September 1, 2018– August 31, 2021*

TimeSense MIT grant: "Machine Learning for Manufacturing" ($200K), Co-PI with Duane Boning, *duration: 2018-2019*

<u>2017</u>

MISTI, MIT-Israel Award: An Innovative Computational Framework for Dynamic Assortment Planning" ($23K), lead PI with Co-PI Danny Segev (Haifa University, Israel)
Hainan Airlines Gift: "Risk management of food in China" ($2.5M), *duration: 2017-2022*

<u>2016</u>

Walmart Foundation Award: "Systemic Risk Management of Food Supply Chains in China" ($7.5M), lead PI (with other PIs: Yasheng Huang, Stacy Springs, Tony Sinskey, Michael Strano, Tauhid Zaman and Karen Zheng), *duration: October 2016-October 2021*

Harold W. Kuhn Award: annual prize which recognizes an exceptional paper, published in *Naval Research Logistics* (NRL) for three years. Awarded to: "Maintenance Scheduling for Modular Systems: Modeling and Algorithms" with Jack Muckstadt (Cornell), Danny Segev (Univ. of Haifa) and Eric Zarybnisky (U.S. Air Force)

<u>2015</u>

NSF Award: "An Innovative Optimization and Computational Framework for Assortment Problems under Consider-then-Rank Choice Models" ($300K) with Vivek Farias, *duration: September 2015-August 2018*

Abdul Latif Jameel World Water and Food Security LAB MIT Award: "A Data-Driven Approach to Managing Food Safety in Global Supply Chains" ($200K) with Tauhid Zaman and Karen Zheng, *duration: 2015-2017*

<u>2013</u>

Moore Foundation Award: (as part of a Beth Israel Deaconess Medical Center team) "Optimizing ICU Safety through Patient Engagement, System Science and Information Technology" ($5M), *duration:*

<u>2013-2014</u>

Food and Drug Association (FDA) Contract Award: "A Systematic Approach to Addressing Nontraditional Adulteration of FDA-Regulated Food and Drug Products and Ingredients Emanating from the Global Supply Chain" ($2.61M) with Stacy Springs and Tony Sinskey (MIT), *duration: October 2013-September 2016*

Daniel M. Wagner Prize for Excellence in Operations Research Practice

<u>2012</u>

"Jamieson Prize for Excellence in Teaching": Sloan School of Management, MIT

First prize: "Best Case Competition" in the "First Case Writer" category by the European Case Clearing House (ECCH)

British Petroleum (BP) grant: "Managing Risk in Contractors and Suppliers Networks– Models, Data and Decisions" ($110K) with Georgia Perakis (MIT), *duration: January 2012-December 2012*

AFOSR Grant: "An Optimization Framework for Air Force Logistics Models" ($612k) with Tom Magnanti (MIT), *duration: July 2011-June 2014*

<u>2010</u>

Singapore-MIT Alliance (SMA): Data-Driven Algorithms ($70k) with Georgia Perakis (MIT), *duration: July 2010-June 2012* *in 2011: grant extended for 1 year with additional $60K

<u>2009</u>

NSF CAREER Award: "New Algorithmic Approaches to "Computationally Challenging Stochastic Supply Chain and Revenue Management Models" ($400K), *duration: 2009-2014*

<u>2008</u>

"Optimization Prize for Young Researchers": awarded by the INFORMS Optimization Society: "A 2-Approximation Algorithm for Stochastic Inventory Control Models with Lost-Sales," Retsef Levi, Ganesh Janakiraman and Mahesh Nagarajan

MIT Sloan Outstanding Teaching Award

AFOSR Grant: "An Optimization Framework for Air Force Logistics Models" ($522k), with Tom Magnanti, *duration: 2008-2010*
*supplemented by additional $80k: *November 2009*

Singapore-MIT Alliance (SMA):"Data-Driven Algorithms" ($160k) with Georgia Perakis (MIT), *duration: 2008-2010*

<u>2007</u>

NSF Grant DMS-0732175: MSPA-MCS, Collaborative Research: "Algorithms for Near- Optimal Multistage Decision-Making Under Uncertainty: Online Learning from Historical Samples" (172, 330), with David Gamarnik (MIT), David Shmoys and Paat Rusmevichientong (Cornell University) and Tim Huh (Columbia University), *duration:2007- 2010*

IBM Faculty Award: ($15K) Awarded by the Department of Mathematical Sciences, IBMT.J. Watson Research Center, Yorktown Heights, NY

<u>2006</u>

MIT Buchsbaum Grant: ($50K)

<u>2005</u>

IBM Herman Goldstine Postdoctoral Fellowship: Department of Mathematical Sciences, T.J. Watson Research Center, Yorktown Heights, NY

<u>2004</u>

First Prize: MSOM Student Paper Competition

<u>2001</u>

Award for Excellence: BA Studies at the School of Mathematics in Tel-Aviv University

<u>1999</u>

Head of Intelligence Corps for "Creative Thinking" Prize: designated as an Extra Merit Officer (by the Head of the IDF Intelligence Corps) *1996*

PROFESSIONAL MEMBERSHIPS

Institute of Operations Research and Management Science (INFORMS)
Manufacturing and Service Operations Management (MSOM)
Applied Probability Society (APS)
Mathematical Programming Society (MPS)

TEACHING

Courses
15.S51 (Innovation Through Analytics and Sensing in Food and Agriculture Systems) - MIT Executive
MBA Program & Sloan Fellows Program – *Spring 2022, 2023*

15700 (Leadership and Integrative Management) – MIT EMBA 1st year
MIT Sloan School of Management – *Fall 2021*

15.734 (Operations Management) - MIT Executive MBA Program
MIT Sloan School of Management – *Spring 2011, 2012, 2013, 2015, 2017, 2018, 2019, 2020, 2021*

15.761 (Introduction to Operations Management) –MIT Sloan School of Management MBA Program
– *Spring 2011, 2012, Fall 2012, 2014, 2015, 2016*

15.731 (Risk Management) – MIT Executive MBA Program & Sloan Fellows Program
MIT Sloan School of Management - *Spring 2012, 2013, 2015, 2016, 2017, 2018, 2019, 2021, 2022, 2023*

15.S03, 15.967, 15.767, 15.777 (Healthcare Lab: Introduction to Healthcare Delivery in the U.S. –
Market & System Challenges), MIT Sloan School of Management - *Fall 2010, 2011, 2012, 2014, 2015, 2016, 2017, 2018*

15.060 (Data, Models, Decisions) – MIT Sloan School of Management MBA Program
MIT Sloan School of Management - *Fall 2008, 2009, 2020*

15.760 (Introduction to Operations Management) –MIT Sloan School of Management MBA Program
MIT Sloan School of Management - *Spring 2007, 2008*

15.764 (The Theory of Operations Management) – PhD course
MIT Sloan School of Management (part of Operations Research Center program) - *Spring 2008, 2010, 2012*

OR320/520 (Optimization 1) – Undergraduate Program ORIE Department
Cornell University - *Summer 2003, 2004*

OR522 (Topics in Linear Optimization) – Master of Engineering course ORIE Department
Cornell University - *Fall 2003*

OR115 (Introduction to Operations Research) – Freshman year course ORIE Department
Cornell University - *Spring 2004*

STUDENT THESIS SUPERVISON

PhD Students

Past:
Ali Aouad (ORC, co-advised with Vivek Farias, graduated summer 2017, assumed faculty position at LBS) Assaf Avrahami (Technion, Israel, co-advised with Yale Herer, graduated 2012, assumed position at Yedioth IT), Fernando Bravo (Sloan PhD, graduated 2015, assumed faculty position at Anderson School of Management, UCLA), Daniel Chen (ORC, co-advised with Georgia Perakis, graduated in 2018 and assumed a position at Amazon), Shi Cong (ORC, won Nicholson Student Paper Competition, graduated 2012, assumed faculty position at Industrial Engineering Department, Michigan University), Adam El-Machtoub (ORC, graduated 2014, assumed faculty position in IEOR Department, Columbia University), Andreea Georgescu (graduated 2021, co- advised with Vivek Farias, assumed position at Fletch), Michael Hu (ORC, graduated in 2020, assumed position at MGH), Phillip Keller (ORC, co-advised with Georgia Perakis, graduated in 2012, assumed position at Google), Elisabeth Paulson (graduated 2021, co-advised with Georgia Perakis, assumed position as Assistant Professor position at Harvard Business School), Jonathan Paynter (ORC, graduated 2022), Nick Renegar (ORC, graduated 2021, assumed position at Yield10 Bioscience), Gonzalo Romero (Sloan PhD, co-supervised with Georgia Perakis, graduated 2014, assumed faculty position at Rothman School of Management, University of Toronto), Yaron Shaposhnik (ORC, co-advised with Tom Magnanti, graduated 2016, assumed faculty position at Simon School of Business, University of Rochester), Somya Singhvi (ORC, year co- advised with Karen Zheng, graduated 2021, assumed Assistant Professor position at USC Marshall School), Joline Ann Villaranda Uichanco (ORC, co-advised with Georgia Perakis, graduated 2013, assumed faculty position Ross School of Business, University of Michigan), Shujing Wang (ORC, co- advised with Karen Zheng, graduated 2018, assumed position at Airbnb), Eric Zarybnisky (ORC, co-advised with Tom Magnanti, graduated summer 2011, now in U.S. Air Force), Josh Wilde (ORC, graduated 2022)

Current:
Bonnie Akhavan (ORC, 1st year PhD student), Kevin Kaiwen Hu (ORC, 4th year PhD student), Qingxuan Jiang (ORC, 2nd year PhD student co-advised with Vivek Farias), Xinming "Lily" Liu (ORC, 3rd year PhD student, co-advised with Yanchong (Karen) Zheng), Cindy Wang (ORC, 1st year PhD student), Jane Wang (ORC, 1st year PhD student), Evan Yao (ORC, 4th year PhD student), Emily Zhang (ORC, 2nd year student co-advised with Georgia Perakis), El Ghali Zerhouni (ORC 3rd year PhD student)

Master Students

Past:
Christian Adib (LGO, graduated 2019), Amine Anoun (ORC, co- advised with Tauhid Zaman, graduated 2017), Noa Ben-Zvi (LGO, graduated 2012), Wongsakorn Chaiwanon (ORC, graduated 2010, co-advised with David Gamarnik), Phil Cho (ORC, graduated 2011, co-advised with Tom Magnanti),Benjamin Christensen (LGO, graduated 2012), Katherine Davis (LGO, graduated 2016), Sara Dolcetti (LGO, graduated 2014), Philip Ebben (LGO, graduated 2018), Celia Escribe (ORC, Graduated 2021), Jazmin Furtado (ORC, graduated 2018), Andrew Foster (LGO, graduated 2019), Donna Gan (MBAN, graduated 2022), Yanai Gollani (LGO, graduated 2013), Jonas Hiltrop (LGO, graduated 2014), Jordan Hoffmann (LGO, graduated 2017), Yiqun Hu (CDO), Andrew Johnston (LGO, graduated 2016), John Kessler (ORC, co-advised with Tom Magnanti, graduated 2012), Dan Kress (LGO, graduated 2015), Luis Costa Laveron (MBAN, graduated 2022), Wendi Li (LGO, graduated 2015), Jessamyn Jade Liu (ORC), Alexander Leo Casati Judge (LGO, graduated 2022), Yi Yin Ma (LGO, graduated 2013), Adam Ryan Marshall (LGO, graduated 2016), Sean Timothy McNichols (LGO, graduated 2014), Mariam Al-Meer (LGO, graduated 2017), Kristala Prather (LGO, graduated 2022), Vaishal Patel (LGO, graduated 2015), Devon Price (LGO, graduated 2011), Tinting Rao (CDO, co-advised with Georgia Perakis, graduated 2008), Ashleigh Royalty Range (LGO, graduated 2013), Thomas Sanderson (LGO, graduated 2014), Matthew Ross Schlanser (LGO, graduated 2013), Trevor Schwartz (LGO, graduated 2012), Ryan Shofnos (LGO, graduated 2015), Jason Stuck (LGO, graduated 2016), Adam Traina (LGO, graduated 2013), Liz Ugraph (LGO, graduated 2017), Alexandra Unger (LGO, graduated 2018), Uichanco Joline Ann Villaranda (CDO, co-advised with Georgia Perakis, graduated 2007), Andrew Vanden Berg (ORC, graduated 2018), Kfir Yeshayahu (LGO, graduated 2016), Qian Yu (CDO, graduated January 2010), Jonathan Zanger (LGO, graduated 2018), Alexander Zhang (LGO, graduated 2022), Emily Kehne (LGO), graduated 2019), Brian Martin (LGO, graduated 2019), Lydia Thurman (LGO, graduated 2021)

Current:
Daniel Ayane (LGO, 2nd year Master's student), John Barstow (LGO, 2nd year Master's student), Caeley Harihara (LGO, 1st year Master's student), Matthew Habel (LGO, 1st year Master's student), Mariam Ibrahim (LGO, 2nd year Master's student), Thomas David Kyle (ORC, 1st year Master's student), Michelle Ma (Business Analytics, 1st year Master's student), Ismael Guereca Valdivia (LGO, 1st year Master's student), Sajiree Vivek Vaidya (LGO, 1st year Master's student)

Mentored Undergraduate Students
Luwen Huang (UROP, co-supervised), Katherine Lin (UROP student), So Yeon Min (UROP student)

Supervised Postdoctoral Fellows
Gohram Baloch (2021-2022), Aleida Braaksma (2015-2017), Dominic Johannes Breuer (2017-2018), Tim Carnes (2010-2012), Farhad Ghassemi (2009-2011), Kimia Ghobadi (2015-2018), Taghi Khaniyev (2018-present), David Scheinker (2013-2015, assumed position at Stanford Children's Hospital), Danny Segev (2008- 2009), Christopher Sun (2019-present), Liron Yedidson (2009-2010), Cecilia Zenteno (2012-2014)

PUBLICATIONS

Theses

"Computing Provably Near-Optimal Policies for Stochastic Inventory Control Models" under the supervision of Robin Roundy and David Shmoys (PhD Thesis)

Refereed Journals

"Machine Learning for the Discovery of Molecular Recognition Based on Single-Walled Carbon Nanotube Corona-Phases" Xun *Gong, Nicholas Renegar, Retsef Levi and Michael Strano, NPJ Computational Material* **8**, Article number: 135 (2022)

"A Risk-Sharing Pricing Contract for Healthcare Referral Services" Fernanda Bravo, Retsef Levi, Georgia Perakis and Gonzalo Romero (To Appear in *Production of Operations Management*), 2022

"Competitive Algorithms for the Online Minimum Peak Appointment Scheduling" Célia Escribe, Michael Hu & Retsef Levi (Conditionally accepted to *Operations Research*), 2022

"The Link Between Food Safety and Zoonotic Disease Risks at Wholesale and Wet Markets in China", Jennifer Gao, Retsef Levi and Nick Renegar, *Scientific Reports* **12**, Article number: 21650 (2022)

"Increases Emergency Cardiovascular Events Among Under-40 Population in Israel During Vaccine Rollout and Third Covid-19 Wave" Christopher Sun, Eli Jaffe, Retsef Levi, *Scientific Reports* **12**, Article number: 6978 (2022)

"Scheduling with Testing of Heterogeneous Jobs" "Retsef Levi, Yaron Shaposhnik and Thomas Magnanti (To appear in *Management Science)*, 2022

"Evaluation of individual and ensemble probabilistic forecasts of COVID-19 mortality in the US", see https://www.medrxiv.org/content/10.1101/2021.02.03.21250974v1 for complete list of authors, *Proceedings of the National Academy of Sciences*, April 8, 2022, 119 (15) e2113561119

"Artificial Shortage in Agricultural Supply Chains" Retsef Levi, Somya Singhvi, Yanchong Zheng, *Manufacturing and Service Operations Management (MSOM),* March-April 2022, Pages 691-1260

"Understanding Primary Care Physicians' Work via Text Analytics on EHR Inbox Messages" Celia Escribe, Stephanie A. Eisenstat, Walter O'Donnell and Retsef Levi, *American Journal of Managed Care*), 2022 Jan 1;28(1): e24-e30

"Understanding Physician Work and Well-Being Through Social Network Modelling Using Electronic Health Record Data: A Cohort Study" Célia Escribe, Stephanie A. Eisenstat, Kerri Palamara, Walter J. O'Donnell, Jason H. Wasfy, Marcela G. Del Carmen, Sara R. Lehrhoff, Marjory A. Bravard and Retsef Levi, *Journal* of *General Internal Medicine* 37, pages3789–3796, 2022

"Public health risks arising from food supply chains: Challenges and opportunities", Lu Chen, Donovan Guttieres, Retsef Levi, Elisabeth Paulson, Georgia Perakis, Nicholas Renegar and Stacy Springs, *Naval Research Logistics, Volume 68, Issue8, Special Issue: OR Models for Developmental Studies, December 2021, Pages 1098-1112*

"Worse Cardiac Arrest Outcomes During the COVID-19 Pandemic In Boston Can Be Attributed to Patient Reluctance to Seek Care." Sun, Christopher L.F., Sophia Dyer, James Salvia, Laura Segal, and Retsef Levi, *Health Affairs, Volume 40 (6), May 2021, pages 886-895*

"Food Safety Inspection and the Adoption of Traceability in Aquatic Wholesale Markets: A Game-theoretic Model and Empirical Evidence" Retsef Levi, Cangyu Jin, Qioa Liang, Nicholas Renegar & Jiehong Zhou (*Journal of Integrative Agriculture (JIA) Volume 20 (10), 2021, pages 2807-2819*)

"Testing at the Source: Analytics-Enabled Risk-Based Sampling of Food Supply Chains in China" Retsef Levi, Cangyu Jin, Qiao Liang, Nicholas Renegar, Stacy Springs, Jiehong Zhou, Weihua Zhou (*Management Science, Volume 67 (5), pages 2657-3320, 2021*)

"Assortment Optimization under Consider-then-Choose Choice Models" Ali Aouad, Vivek Farias and Retsef Levi (*Management Science, Volume 67, Issue 6, June 2021 Pages 3321- 3984*)

"Predicting Coronavirus Disease 2019 Infection Risk and Related Risk Drivers in Nursing Homes: A Machine Learning Approach" Christopher L. F. Sun, Eugenio Zuccarelli, El Ghali A. Zerhouni, Jason Lee, James Muller, Karen M. Scott, Alida M. Lujan, and Retsef Levi (*JAMDA, Volume 21, Issue 11, November 2020, Pages 1533-1538.e6*)

"The Impact of Unifying Agricultural Wholesale Markets: on Market Prices and Farmers' Profitability" Retsef Levi, Manoj Rajan, Somya Singhvi, Yanchong Zheng (PNAS February 4, 2020 117 (5) 2366-2371) *(MSOM, *winner of the MSOM 2020 Responsible Research Award*, recipient of People's Choice Award, 2020 Early-career Sustainable Operations Workshop (Singhvi), winner of 2020 POMS College of Sustainable Operations Student Paper Competition (Singhvi))*

"Development and validation of a machine learning model to aid discharge processes in surgical inpatients" Kyan Safavi, Taghi Khaniyev, Martin Copenhaver, Mark Seelen, Ana Zenteno Langle, Jonathan Zanger, Bethany Daily, Retsef Levi, Peter Dunn (*JAMA Network Open*. 2019;2(12)")

"Strategic Capacity Planning Problems in Revenue Sharing Joint Ventures" Levi, Retsef, Georgia Perakis, Cong Shi, and Wei Sun. Production and Operations Management Vol. 29, No. 3 (2020): 664-687

"Health Systems Innovation: Analytics in Action" Martin S. Copenhaver, Michael Hu, Retsef Levi, Kyan Safavi, M.D., Ana Cecelia Zenteno Langle (Tutorials in *Operations Research,* October 2019)

"Non-clinical delays in transfer out of the ICU are associated with increased hospital length of stay and delayed progress of care" Jazmin Furtado, Kyan C Safavi, David Scheinker, Ana Cecilia Zenteno Langle, Retsef Levi and Peter Dunn, 2019 (*Journal of Critical Care,* Volume 50, pages 126-131)

"Near-Optimality of Uniform Co-payments for Subsidies and Tax Allocation Problems" Gonzalo Romero, Retsef Levi and Georgia Perakis, 2016 (*Operations Research*, volume 67 (2), pages 548–561, March-April 2019)

"Scheduling with Testing" Retsef Levi, Tom Magnanti and Yaron Shaposhnik, 2013 (*Management Science,* volume 65 (2), pages 776–793, February 2019)

"Greedy-Like Algorithms for Dynamic Assortment Planning Under Multinomial Logit Preferences" Ali Aouad, Danny Segev and Retsef Levi (*Operations Research*, volume 66 (5), pages 1321-1345, November 2018)

"The Approximability of Assortment Optimization under Ranking Preferences" Ali Aouad, Vivek Farias, Retsef Levi and Danny Segev (*Operations Research*, volume 66 (6), pages 1661–1669, November 2018)

"Changing the patient safety paradigm" Jennifer Stevens, Retsef Levi and Kenneth Sands, 2016 (published in advance in *Journal of Patient Safety*)

"Approximation Algorithms for Dynamic Assortment Optimization Models" Ali Aouad, Retsef Levi and Danny Segev, 2018 (*Mathematics of Operations Research,* Articles in Advance, pp. 1– 25)

"Translating a Biologic Revolution into an Organizational Overhaul" Kimia Ghobadi, Cecilia Zenteno, Adam Marshall, Peter Dunn, Retsef Levi and John Stone (*Catalyst, New England Journal of Medicine,* February 2017)

"Revenue Management of Reusable Resources with Advanced Reservations" Yiwei Chen, Retsef Levi and Cong Shi (*POMS*, Volume 26 (5), pages 836-859, May 2017)

"Provably Near-Optimal Balancing Policies for Stochastic Multi-Echelon Inventory Control Models" Retsef Levi, Robin Roundy and Van Anh Truong (published in *Mathematics of Operations Research*, Volume 42 (1), pages 256-276, 2017)

"On the Effectiveness of Uniform Subsidies in Increasing Market Consumption" Retsef Levi Georgia Perakis and Gonzalo Romero (*Management Science*, Volume 63 (1), pages 40-57, 2017)

"The Submodular Joint Replenishment Problem" Maurice Cheung, Adam Elmachtoub, Retsef Levi and David Shmoys (*Mathematical Programming*, Volume 158 (1-2), pages 207– 233, 2016)

"Systematic OR Block Allocation in Large Academic Medical Centers" Tim Carnes, Cecilia Zenteno, Retsef Levi, Devon Price, Peter Dunn and Bethany Daily (*Annals of Surgery*, Volume 264 (6), pages 973–981, 2016)

"Supply Chain Management and Logistics Models with Online Customer Selection" Adam Elmachtoub and Retsef Levi (*Operations Research*, Volume 64 (2), pages 458- 473, 2016)

"Near-Optimal Algorithms for the Assortment Planning Problem Under Dynamic Substitution and Stochastic Demand" Vineet Goyal, Retsef Levi and Danny Segev (*Operations Research*, Volume 64 (1), pages 219-235, 2016)

"The Data Driven Newsvendor Problem – New Bounds and Insights" Retsef Levi, Georgia Perakis, Joline Uichanco (*Operations Research,* Volume 63 (6), pages 1294-1306, 2015)

"From Cost Sharing Mechanisms to Online Selection Problems" Adam Elmachtoub and Retsef Levi (*Mathematics of Operations Research,* Volume 40 (3), pages 542-557, 2015)

"Nature and Sources of Variability in Surgical Case Duration" Fernanda Bravo, Lynne Ferrari, Retsef Levi and Mike McManus (*Pediatric Anesthesia,* Volume 25 (10), pages 999- 1006, 2015)

"Pooled Open Blocks Shorten Wait Times for Non-Elective Surgical Cases" Ana C. Zenteno, Tim Carnes, Retsef Levi, Bethany Daily, Devon Price, Sue Moss and Peter Dunn (2012 *Annals of Surgery,* Volume 262 (1), pages 60–67, 2015)

"Maintenance and Flight Scheduling of Low Observable Aircraft" Philip Cho, Vivek Farias, John Kessler, Retsef Levi and Thomas Magnanti (2013 *Naval Research Logistics*, Volume 62 (1), pages 60-80, February 2015)

"A continuous knapsack problem with separable convex utilities: Approximation algorithms and applications" Retsef Levi, Georgia Perakis and Gonzalo Romero (*Operations Research Letters,* Issue 42 (5), pages 367–373, 2014)

"Matching Supply and Demand: Delayed Two-Phase Distribution at Yedioth Group- Models, Algorithms and Information Technology" Assaf Avrahami, Yale Herer and Retsef Levi (*Interfaces*, Volume 44 (5), pages 445–460, 2014) *awarded the 2013 Daniel H. Wagner Prize for Excellence in Operations Research Practice*

"Maintenance Scheduling for Modular Systems – New Models and Algorithms" Retsef Levi, Tom Magnanti, Jack Muckstadt, Danny Segev and Eric Zarybnisky (*Naval Research Logistics*, Volume 61 (6), pages 472–488, September 2014) *awarded the 2016 *Harold W. Kuhn Award*, an annual prize which recognizes an exceptional paper published in *Naval Research Logistics**

"Approximation Algorithms for Capacitated Stochastic Inventory Systems with Setup Cost" Xiuli Chao, Retsef Levi, Cong Shi and Huanan Zhang (*Naval Research Logistics*, Volume 61 (4), pages 304–319, June 2014)

"Efficient Formulations for Product Pricing Under Attraction Demand Models" Phil Keller, Retsef Levi, Georgia Perakis (*Mathematical Programming*, Volume 145 (1-2), pages 223-261, June 2014)

"Delay of Transfer from the Intensive Care Unit: A Prospective Observational Study of Incidence, Causes and Financial Impact" Daniel W. Johnson, Ulrich Schmidt, Edward A. Bittner, Benjamin Christensen, Retsef Levi and Richard M. Pino (*Critical Care,* Volume 17: R128, 2013)

"Online Make-to-Order Joint Replenishment Model: Primal-Dual Competitive Algorithms" Niv Buchbinder, Tracy Kimbrel, Retsef Levi, Konstantin Makarychev and Maxim Sviridenko (*Operations Research*, Volume 61 (4), pages 1014-1029, July-August 2013)

"Approximation Algorithms for the Stochastic Lot-Sizing Problem with Order Lead Times" Retsef Levi and Cong Shi (*Operations Research*, Volume 61 (3), pages 593-602, May- June 2013) *won the 2009 Nicholson Student Paper Competition*

"NP-Hardness Proof for the Assembly Problem with Stationary Setup and Additive Holding Costs" Retsef Levi and Liron Yedidsion (*Operations Research Letters*, Volume 41 (2), Pages 134–137, March 2013)

Commentaries to "The Vital Role of Operations Analysis in Improving Healthcare Delivery" Retsef Levi and Ann Prestipino (*Manufacturing & Services Operations Management (MSOM)*, Volume 14 (4), pages 499-504, fall 2012) *invited paper for special issue on Healthcare Operations Management

"Modeling the Impact of Changing Patient Transportation System on Perioperative Process Performance in a Large Hospital: Insights from a Computer Simulation Study" Danny Segev, Retsef Levi, Peter Dunn, Warren Sandberg (*Health Care Management Science*, Volume 15 (2), pages 155-169, June 2012)

"Technical Note- A Sampling-based Approach to Appointment Scheduling" Mehmet Begen, Retsef Levi and Maurice Queyranne (*Operations Research,* Volume 60 (3), pages 675-681, June 2012)

"LP-based Approximation Algorithms for Capacitated Facility Location" Retsef Levi, David Shmoys and Chaitanya Swamy (*Mathematical Programming*, Volume 131 (1-2), pages 365-379, February 2012) (extended abstract appeared in IPCO 2004)

"Approximation Algorithms for Supply Chain Planning and Logistics Problems with Market Choice" Joseph Geunes, Retsef Levi, Edwin Romeijn and David Shmoys (*Mathematical Programming*, Volume 130 (1), pages 85-106, November 2011) (extended abstract appeared in IPCO 2005)

"Adaptive Data-Driven Inventory Control Policies Based on Kaplan-Meier Estimator" Tim Huh, Retsef Levi, Paat Rusmevichientong and Jim Orlin (*Operations Research*, Volume 59(4), pages 929-941, July 2011)

"Provably Near-Optimal Approximation Algorithms for Operations Management Models" Retsef Levi (*INFORMS Tutorials in Operations Research*, Chapter 8, pages 179- 192, 2014) *invited paper*

"Provably Near-Optimal LP-Based Policies for Revenue Management in Systems with Reusable Resources" Retsef Levi and Ana Radovanovic (*Operations Research*, Volume 58 (2), pages 503-507, March-April 2010)

"A Model for Understanding the Impacts of Demand & Capacity on Waitlists in a Congested Recovery Room" Tor Schoenmyer, Peter F. Dunn, David Gamarnik; Retsef Levi, David L. Berger, Bethany J. Daily, Wilton C. Levine, and Warren S. Sandber, (*Anesthesiology*, Volume 110 (6), pages 1293-1304, June 2009)

"Algorithms for Capacitated Rectangle Stabbing and Lot-Sizing with Joint Set-Up Costs" Guy Even, Retsef Levi, Dror Rawitz, Baruch Schieber, Shimon (Moni) Shahar and Maxim Sviridenko (*ACM Transactions on Algorithms*, Volume 4 (3), Article No. 34, 2008)

"Approximation Algorithms for Capacitated Stochastic Inventory Control Models" Retsef Levi, Robin Roundy, David Shmoys and Van Anh Truong (*Operations Research*, Volume 56(5), pages 1184-1199, September-October, 2008)

"Approximation Algorithms for the Capacitated Multi-Item Lot-Sizing Problem Via Flow-Cover Inequalities" Retsef Levi, Andrea Lodi and Maxim Sviridenko *(Mathematics of Operations Research*, Volume 33 (2), pages 461-474, May 2008)

"A 2-Approximation Algorithm for Stochastic Inventory Control Models with Lost Sales" Retsef Levi, Ganesh Janakiraman and Mahesh Nagarajan (*Mathematics of Operations Research*, Volume 33 (2), pages 351-374, May 2008) *awarded the "2008 Optimization Prize for Young Researchers" by INFORMS Optimization Society*

"A Constant Approximation Algorithm for the One-Warehouse Multi-Retailer Problem" Retsef Levi, Robin Roundy, David Shmoys and Maxim Sviridenko (*Management Science*, Volume 54 (4), pages 763–776, April 2008)

"Provably Near-Optimal Sampling-Based Policies for Stochastic Inventory Control Models" Retsef Levi, Robin Roundy and David Shmoys (*Mathematics of Operations Research*, Volume 32 (4), pages 821-839, November 2007)

"Approximation Algorithms for Stochastic Inventory Control Models" Retsef Levi, Martin Pál, Robin Roundy and David Shmoys (*Mathematics of Operations Research*, Volume 32 (2), pages 284-302, May 2007) *awarded first prize in the 2004 MSOM Student Paper Competition*

"Primal-Dual Algorithms for Deterministic Inventory Problems" Retsef Levi, Robin Roundy and David Shmoys (*Mathematics of Operations Research*, Volume 31 (2), pages 267-284, February 2006)

Refereed Conferences

"The Limits to Learning a Diffusion Model" Jackie Baek, Vivek F. Farias, Andreea Georgescu, Retsef Levi, Tianyi Peng, Deeksha Sinha, Joshua Wilde, Andrew Zheng,
(*ACM Conference on Economics and Computation, July 2021*)

"Optimal interventions for increasing healthy food consumption among low-income populations"
Elisabeth Paulson, Retsef Levi & Georgia Perakis *MD4SG '20*

"Submodular Batch Scheduling for Warehouse Picking" Daniel Chen, Retsef Levi and Georgia Perakis, *MSOM 2018*

"Impact of access and value on fresh food consumption: Policy implications"
Retsef Levi, Georgia Perakis and Elisabeth Paulson, *MSOM 2018*

"Speculative Shortages in Agricultural Supply Chains: The Effect of Government Interventions"
Retsef Levi, Somya Singhvi and Karen Zheng, *MSOM 2018*

"Economically Motivated Adulteration in Farming Supply Chains" Retsef Levi, Somya Singhvi, and Yanchong Zheng, *MSOM Supply Chain Management SIG 2018*

"Valuing and Optimizing Non-facetime Work in Determining Practice Workload"
Stephanie Eisenstat, Michael Hu and Retsef Levi, *2018 Annual SGIM Meeting*

"Scheduling and Testing" Retsef Levi, Tom Magnanti and Yaron Shaposhnik, *MSOM Service SIG 2014*

"Modeling and Optimizing Network Costs and Resource Allocation in Healthcare Delivery Systems"
Fernanda Bravo, Marcus Braun, Vivek Farias and Retsef Levi,
MSOM 2014

"Approximation Algorithms for Capacitated Lot-Sizing Models with Fixed Ordering Cost" Xiuli Chao, Retsef Levi, Cong Shi and Huanan Zhang, *MSOM 2013*

"Systematic Block Allocation in Academic Medical Centers" Tim Carnes, Bethany Daily, Peter Dunn, Retsef Levi, Devon Price and Cecilia Zenteno, *2013 Healthcare Operations Management SIG*

"Co-payment Allocation in Imperfect Markets" Retsef Levi, Georgia Perakis and Gonzalo Romero,
2013 MSOM Conference

"Approximation Algorithms for Inventory Problems with Generalized Setup Costs"
Maurice Cheung, Adam El-Machtoub, Retsef Levi and David Shmoys, *MSOM 2012*

"Allocating Subsidies to Minimize a Commodity's Market Price: A Network Design Approach" Retsef Levi, Georgia Perakis and Gonzalo Romero, *MSOM 2012*

"Contract Designs with Incentive Alignment for Joint Ventures in the Healthcare Industry" Retsef Levi, Georgia Perakis, Cong Shi and Wei Sun, *MSOM 2012*

"From Cost-Sharing Mechanisms to Online Selection Problems" Adam El- Machtoub and Retsef Levi, *MSOM 2012*

"Approximation Algorithms for the Multi-Item Lot-Sizing Problem with Non Uniform Capacities" Retsef Levi, Maxim Sviridenko and Liron Yedidsion, *MSOM 2012*

"Cycle Limited Maintenance Scheduling with Submodular Costs" Retsef Levi, Tom Magnanti, Jack Muckstadt, Danny Segev and Eric Zarybnisky, *MSOM 2011*

"Revenue Management of Reusable Resources with Advanced Reservations" Retsef Levi and Cong Shi, *MSOM 2011*

"Regret optimization for stochastic inventory models with spread information"
Retsef Levi, Georgia Perakis and Joline Uichanco, *MSOM 2011*

"Supply Chain Management and Logistics Models with Online Demand Selection" Adam ElMachtoub and Retsef Levi, *MSOM 2011*

"The Value of Information in a Retailer-Based Distribution Network" Assaf Avrahami, Retsef Levi and Yale Herer, *MSOM 2011*

"The Data-Driven Newsvendor Problem – New Bounds and Insight, (Extended Abstract)" Retsef Levi, Georgia Perakis and Joline Uichanco, *MSOM 2010*

"Maintenance Scheduling for Modular Systems – New Models and Algorithms, (Extended Abstract)" Retsef Levi, Tom Magnanti and Eric Zarybnisky, *MSOM 2010*

"Approximation Algorithms for the Stochastic Lot-Sizing Problem, (Extended Abstract)" Retsef Levi and Cong Shi, *MSOM 2009*

"Near-Optimal Algorithms for Assortment Planning under Substitution and Stochastic Demand, (Extended Abstract)" Vineet Goyal, Retsef Levi and Danny Segev, *MSOM 2009*

"Online Make-to-Order Joint Replenishment Model: Primal-Dual Competitive Algorithms (Extended Abstract)" Niv Buchbinder, Tracy Kimbrel, Retsef Levi, Konstantin Makarychev and Maxim Sviridenko, *SODA 2008,* pages 952-961, 2008

"Approximation Algorithms for the Multi-Item Capacitated Lot-Sizing Problem via Flow- Cover Inequalities (Extended Abstract)" Retsef Levi, Andrea Lodi and Maxim Sviridenko, *Proceedings of IPCO 2007,* pages 454-468, 2007

"Improved Approximation Algorithms for the One-Warehouse-Multi-Retailer Problem (Extended Abstract)" Retsef Levi and Maxim Sviridenko, *Proceedings of APPROX 2006,* pages 188-199, 2006

"Provably Near-Optimal Balancing Policies for Multi-Echelon Stochastic Inventory Control Models" Retsef Levi, Robin Roundy and Van Anh Truong, presented at *2006 Multi- Echelon Conference*

"Provably Near-Optimal Sampling-Based Policies for Stochastic Inventory Control Models (Extended Abstract)" Retsef Levi, Robin Roundy and David Shmoys, *Proceedings of the 38th Annual ACM Symposium on Theory of Computing,* pages 739- 748, 2006

"Approximation Algorithms for Stochastic Inventory Control Models (Extended Abstract)" Retsef Levi, Martin Pál, Robin Roundy and David Shmoys, *Proceedings of IPCO 2005,* pages 306-320 "Inventory and Facility-Location Models with Market Selection (Extended Abstract)" Retsef Levi, Joseph Geunes, Edwin Romeijn and David Shmoys, *Proceedings of IPCO 2005,* pages 111-124

"First Constant Approximation Algorithm for the One-Warehouse-Multi-Retailer Problem (Extended Abstract)" Retsef Levi, Robin Roundy and David Shmoys, *Proceedings of SODA 2005,* pages 365-374

"Primal-Dual Algorithms for Deterministic Inventory Problems (Extended Abstract)" Retsef Levi, Robin Roundy and David Shmoys, *Proceedings of the 36th Annual ACM Symposium on Theory of Computing,* pages 353-362, STOC 2004

"LP-Based Approximation Algorithms for Capacitated Facility Location (Extended Abstract)" Retsef Levi, David Shmoys and Chaitanya Swamy, *Proceedings of IPCO 2004,* pages 206- 218

"Facility Location with Service Installation Costs (Extended Abstract)" David Shmoys, Chaitanya Swamy and Retsef Levi, *Proceedings of SODA 2004,* pages 1081-1090

Submitted Papers

"Surveillance of Adverse Event Variability across Manufacturing Lots in Biologics" Retsef Levi, Stacy Springs, Joshua Wilde, and Jacqueline Wolfrum, 2020 (Submitted to *Drug Safety*)

"Predicting the Spread of SARS-CoV-2 Variants: An AI-Enabled Early Detection", Retsef Levi and El Ghali Ahmed Zerhouni, (Submitted to *Science Advances*), 2022

"Supply Chain Characteristics as Predictors of Cyber Risk: A Machine-Learning Assessment" Kevin Hu, Retsef Levi, Dr. Raphael (Rafi) Yahalom and El Ghali Zerhouni, (Submitted to *Proceedings of the National Academy of Sciences* (*PNAS*)), 2022

"The Limits to Learning a Diffusion Model" Jackie Baek, Vivek F. Farias, Andreea Georgescu, Retsef Levi, Tianyi Peng, Deeksha Sinha, Joshua Wilde, Andrew Zheng (Submitted to *Management Science*), 2021

"Supply Chain Network Analytics Guiding Food Regulatory Operational Policy" Retsef Levi, Nicholas Renegar, Stacy Springs, Tauhid Zaman, 2018 (*Operations Research* – 4th revision requested), 2021

"Sparse Solutions for the Unbounded Minimum Knapsack Problem with Procurement Applications" Retsef Levi, Georgia Perakis, and Gonzalo Romero (Submitted to *Management Science*), 2021

"Picking Multi-item Orders in a Warehouse: Data, Models and Simulation" Daniel Chen, Retsef Levi and Georgia Perakis *(Submitted to Management Science)*, 2021

"Fresh Fruit and Vegetable Consumption: The Impact of Access and Value" Retsef Levi, Georgia Perakis and Elisabeth Paulson (Submitted to *Production and Operations Management)*, 2021

"Optimal interventions for increasing healthy food consumption among low-income populations" Elisabeth Paulson, Retsef Levi & Georgia Perakis (Under second revision in *Management Science*), 2021

"Submodular Batch Scheduling for Warehouse Picking" Daniel Chen, Retsef Levi and Georgia Perakis (Submitted to *Mathematical Programming)*, 2021

"Robustly minimizing a piecewise-linear cost function with respect to uncertainty in mixed Demand" Daniel Chen, Retsef Levi and Georgia Perakis, (Submitted to *Production and Operations Management*)

"Improving Farmers' Income on Online Agri-platforms: Evidence from the Field" Retsef Levi, Manoj Rajan, Somya Singhvi, Yanchong Zheng (Submitted to *Manufacturing and Service Operations Management(MSOM)), 2022*

Note: First place winner of the 4th POMS Applied Research Challenge*, Winner of Best Paper Award: INFORMS 2020 Public Sector Operations Research, College of Supply Chain Management*, Winner of *2020 MSOM Responsible Research Award*, Winner of *2020 INFORMS Public Sector Operations Research Section Best Paper Award*, First Prize, *2020 POMS College of Supply Chain Management Best Student Paper Competition (Singhvi)*, First Place, *2020 POMS College of Behavioral Operations Management Junior Scholar Paper Competition (Singhvi)*, Finalist, *2020 POMS Applied Research Challenge*, Winner of *2019 INFORMS Doing Good with Good OR Competition (Singhvi)*)

"Reverse information sharing: Reducing costs in supply chains with yield uncertainty" Pavithra Harsha, Ashish Jagmohan, Retsef Levi, Elisabeth Paulson & Georgia Perakis (Reject and resubmit from *Management Science*), 2021

"Evaluation and Implementation of a Just-In-Time Bed-Assignment Strategy to Reduce Wait Times for Surgical Inpatients", Aleida Braaksma, Ana Cecilia Zenteno, Elizabeth Ugarph, Retsef Levi, Bethany J. Daily, Benjamin Orcutt, Kathryn M. Turcotte, and Peter F. Dunn (Submitted to *Healthcare Management Science*), 2021

Working Papers (Drafts Exist)

"Transmission Iteration Persistence (TIP): A Supply Chain Epidemiology Model for Zoonotic Diseases Outbreaks", Lu Chen, Retsef Levi and El Ghali Zerhouni, 2021

"Green Pass and COVID-19 Vaccine Booster Shots in Israel – A More 'Realistic' Empirical Assessment Analyzing the National Airport Data", Oz Koren, Retsef Levi, Shoshi Altuvia, 2021

"The Impact of Systematic Bed Reallocation in Large Academic Centers on Patient Wait Times and Misplacement", Martin S. Copenhaver, Andrew Vanden Berg, Cecilia Zenteno Langle, Suzanne Algeri, Theresa Gallivan, Barbara Cashavelly, Rhodes Berube, Marjory Bravard, Bethany Daily, Retsef Levi and Peter F. Dunn, 2021

"A Prescriptive Approach to Surgical Inpatient Discharges", Taghi Khaniyev, Kyan Safavi, Martin Copenhaver, Ana Cecilia Zenteno Langle, Keren S. Starobinski, Bethany Daily, Peter F. Dunn and Retsef Levi, 2021

"Risk-Based Testing of Aquatic Products by Individual Species in China: A Field Study", Bing Bai, Lu Chen, Retsef Levi, Xiaobei Li, Nicholas Renegar, Wenshuai Si, Stacy Springs, Changyan Zhou, 2021

"Stochastic Selection Problems with Testing" Chen Attias, Robert Krauthgamer, Retsef Levi and Yaron Shaposhnik, 2018

"Systemic Supply Chain Analysis of Toxic Pet Jerky Treats: A Novel Approach to Identify Potential Risk and Causative Contaminants" Lu Chen, Shannon Stewart, David Byun, Nicholas Renegar, Retsef Levi, Stacy Springs

"An Empirical Investigation of Risk Drivers for Economically Motivated Food Adulteration in China's Farming Supply Chains" Yasheng Huang, Retsef Levi, Stacy Springs, Shujing Wang and Yanchong (Karen) Zheng, 2017

"Base Stock Policies for Lost-Sales Models, State Space Aggregation and Limiting Transition Probabilities" Joachim Arts, Retsef Levi and Geert-Jan van Houtum, 2019

"Real-Time Outpatient Scheduling with Patient Choice" Kimia Ghobadi, Inga Lennes, Retsef Levi, Adam Marshall, Wendi Reib and Cecilia Zenteno, 2016

"Mathematical Programming Analysis of a Graph Visiting Problem" Retsef Levi, Tom Magnanti, Danny Segev and Eric Zarybnisky, 2011

"Regret optimization for stochastic inventory models with spread information" Retsef Levi, Georgia Perakis and Joline Uichanco, 2011

"Impacts of Shift Patterns on Patients' Length of Stay" Rhodes Berube, Peter Dunn, Kimia Ghobadi, Andrew Johnston, Retsef Levi and Walter O'Donnell, 2017

"Process-Driven Discussions in Team-Based Decision Making for Operational Risk Management"
Retsef Levi, Shujing Wang and Karen Zheng, 2015

"The Association Between Transfer Delays in ICU and Increased Hospital Length of Stay" Benjamin Christensen, Sara Dolcetti, Peter Dunn, Retsef Levi, David Scheinker and Uli Schmidth, 2014

"Data-Driven Optimization to Understand Healthcare Network Costs and Resource Allocation"
Marcus Braun, Fernanda Bravo, Vivek Farias and Retsef Levi, 2014

"A Service-Based Discrete Event Simulation Model for Capacity Planning and Design of Patient Flow Policies in Intensive Care Units" David Gamarnik, Retsef Levi, Mike McManus and Tom Wongsakom, 2013

"Base-Stock Policies for Lost-Sales Models: State Space Aggregation and Limiting Transition Probabilities" Joachim Arts, Retsef Levi and Geert-Jan van Houtum, 2013

"Sampling-Based Algorithms for Airline Revenue Management Problems" Tim Huh,
Tiam Hai Lee and Retsef Levi, 2009

"Dynamic Pricing with Learning – State-Space Collapse and Fully Polynomial Time Approximation Scheme" Vivek Farias, Retsef Levi, Jim Orlin and Georgia Perakis, 2008

"New Policies for Stochastic Inventory Control Models - Theoretical and Computational Results" Gavin Hurley, Peter Jackson, Retsef Levi, Robin Roundy and David Shmoys, 2006

Case Studies

"The Yedioth Group"
Retsef Levi, 2014

"Massachusetts General Hospital: Pre-Admission Testing Area (PATA)"
Kelsey McCarty, Jeremie Gallien, Retsef Levi, 2012

INVITED TALKS (last 8 years)

"Food Supply Chain Analytics and Sensing"
Tel-Aviv University, Israel, November 2022

"Predicting the Spread of SARS-CoV-2 Variants: An AI-Enabled Early Detection"
INFORMS, Indianapolis, October 2022

"Using Advanced Analytics to Understand and Manage Physician Burnout"
MIT Medical, June 2022

"Advanced Analytics guiding Food and Pharmaceutical Regulatory Policy and Operations"
FDA AI Group, March 2022

"Digital Supply Chain (In) Security – Predicting Data Breach Risk"
Privacy and Security Forum, March 2022

"Food Supply Chain Analytics: Management of Risks to Human Health"
Department of Industrial Engineering, Clemson University, February 2021

"Virtual (Home) Care: A system View"
Philips Virtual Event, November 2021

"Food Supply Chain Analytics and Sensing Informing Regulatory Policy"
4th Chin a Quality Conference, Hangzhou, Zhejiang province, China, September 2021

"Food Supply Chain Analytics and Sensing Initiative"
PepsiCo, August 2021

"Application of Advanced Analytics in Intelligent Manufacturing Operations",
MIT Bioman Spring 2021 Workshop

"Food Supply Chain Analytics Informing Management of Public Health Risks"
CIFSQ, November 2020; *The 5th Shenzhen Food Safety Forum*, November 2020; *WCP Seminar*, December 2020; *Department of Industrial Engineering, Clemson University,* February 2021; M*orrison School of Agribusiness, ASU,* March 2021; *ORSIS 2021,* Israel August 2021

"Food Supply Chain Analytics: Management of Risks to Human Health"
USC Marshall School of Business Seminar, September 2020*, Wharton School OIDD Seminar,* November 2020, *Zhejiang University*, October 2020

"Designing Intelligent Processes & Systems via Advanced Analytics"
MMPA Conference, November 2020, *Ichilov Hospital, Israel,* May 2021
"Health System Innovation through Data & Analytics"
Analytics for a Better World Seminar Series, September 2020

"Systemic Risk Management of Risky Food Supply Chains in China"
3rd Global Food Safety Governance Forum, October 2020

"Intelligent Maintenance Processes & Systems"
MIT Denso, November 2020

"**Mitigating Public Health Risks From Food Supply Chains**"
MIT Ideas Made To Matter Summer Series, August 2020

"Adverse Event Modeling of Biologics: Methodologies and Case Studies"
MIT Digital Bio-manufacturing Conference (Bio-processing Summit) August 2020

"Systemic Risk Management of Food Supply Chains"
MIT CTL Research Seminar, February 2020

"Evidence-Based Cyber-Risk Management through Risk Drivers and Risky States"
CSAIL Alliance Conference, MIT, 2019

"Managing Systemic Supply Chain Risks via Advanced Analytics"
BioMan Conference, MIT, 2019; US FDA, White Oak, 2019

"Health System Innovation through Data & Analytics"
Philips Lab, Cambridge, MA, 2019; Kellogg School of Management, Northwestern University, 2019; IEOR-DRO Seminar, Columbia University, 2019, Blue-Cross Blue-Shields CIO Forum, Boston, 2019; INFORMS Healthcare Conference (plenary), MIT, 2019, Boston University Medical School, 2019;

"Healthy Food Consumption: Empirical Analysis and Optimization Models of Government Interventions"
ORIE Department, Cornell University, 2019

"The Future of Human Health: Managing Chronic Conditions"
Here, Now, Next, MIT, 2018

"**Operationalizing Analytics: From Talking to Actions"**
BioMan Workshop, MIT, 2018

"Systematic Risk Management of Food Supply Chains: Supply Chain Analysis & Analytics"
ORIE Department, Cornell University, 2019; Boston University Business School, 2019; CFSIQ, Beijing China, 2019; SIST Conference Shenzhen China, 2019; China-India Insight Conference, MIT, 2019; ICIL Conference, Israel, 2018; London Business School, 2018; Walmart Event in Georgetown University, 2018

"Inbar Healthcare Management Program"
Health Systems Inbar, 2018

"Leveraging Analytics, AI & Technology to Create Transparency in Food Supply Chains"
MIT China Summit, 2018

"Predicting Surgical Patients' Discharges at Massachusetts General Hospital"
INFORMS, Houston, 2017

"Systemic Risk Management of Food Supply Chains: Predictive Risk Models & Food Testing Capabilities"
CFDA Executive Leadership Program, Washington, DC, 2018; Boston College, 2017; CIFSQ Conference, Beijing, China, 2017; GFSI China Day, Beijing, China, 2017

"Economically Motivated Adulteration Risks in Global Food Supply Chains"
FDLI Annual Conference, Washington DC, 2017

"Health System Innovation through Analytics and Operations Research"
Israel Talk, 2018; MITRE, Boston, 2018; Boston INFORMS Chapter, 2017; SMU Cox School of Business, Dallas

"New Approach to Safety & Risk Management in Health Systems"
INFORMS Guest Lecture, 2016; Stanford University, 2016

"Analytics in Health Systems"
MIT Digital Health Conference, 2016

"Exploration vs. Exploitation: Reducing Uncertainty in Operational Problems"
ISyE, Google NYC, 2016; New Directions in Management Science Seminar, MS&E, Stanford University, 2016; Georgia Tech, 2015; Operations Research Center, MIT, 2014

"A Systematic Approach to Addressing Intentional Adulteration of FDA-regulated Food and Drug Products and Ingredients Emanating from Global Supply Chains"
ORIE Department Alumni Event, Cornell University, 2016; NY Campus, Cornell University, 2016; MSE OR Seminar, Stanford University, 2016; Crossroads Conference, MIT, 2016; Sauder School Business, University of British Columbia, Canada, 2015; MIT LGO Governing Board, 2015; MIT LIDS Lunch Seminar, 2015; MIT Sloan Initiative for Health System Innovation, MIT, 2014; Yale School of Management, 2014

"Approximation Algorithms for Dynamic Assortment Optimization"
Weizmann Institute of Science, Rehovot, Israel, 2015

"Cost and Resource Allocation in Healthcare Networks"
MSOM, 2014

"Optimizing and Coordinating Healthcare Networks and Markets"
Plenary talk-2014 SIAM Optimization Conference, 2014; Smith School of Business, Maryland University, 2014; Graduate School of Business, Stanford University, 2014

"Assortment Optimization for Non-parametric Choice Models"
Marketing Group, MIT Sloan School of Management, 2016; Plenary talk, 2014 ORSIS Conference, Israel, 2014; Center of Applied Math, Cornell University, 2014

"Testing in Scheduling"
Scheduling Workshop, Dagstults, Germany, 2016; 2014 ORSIS, Israel; Weizmann Institute of Science, 2014;