

Joseph M. Milner

Joseph L. Rotman School of Management
University of Toronto
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Education:

Massachusetts Institute of Technology, Cambridge, Massachusetts
Ph.D., Operations Research, June 1995
Dissertation title: Airline Participation in Dynamic Slot Allocation

Massachusetts Institute of Technology, Cambridge, Massachusetts
S.M., Operations Research, June 1991
Thesis title: The Assembly Sequence Selection Problem: An Application of Simulated Annealing

Cornell University, Ithaca, New York
School of Operations Research and Industrial Engineering
Bachelor of Science, May 1989

Research Interests:

Service Operations, Health Care Applications, Revenue Management in Supply and Service Chains.

Academic and Other Experience

Professor of Operations Management

Joseph L. Rotman School of Management July 2015 – Present
University of Toronto Toronto, ON

Associate Professor of Operations Management

Joseph L. Rotman School of Management July 2007 – July 2015
University of Toronto Toronto, ON

Assistant Professor of Operations Management

Joseph L. Rotman School of Management July 2002 – July 2007
University of Toronto Toronto, ON

Assistant Professor of Operations and Manufacturing Management

John M. Olin School of Business Fall 1995 – June 2002

Washington University in St. Louis

St. Louis, MO

Visiting Professor

HEC Paris

Fall 2008 – June 2009

Research Assistant

Sloan School of Management
Massachusetts Institute of Technology

Fall 1992 - June 1995
Cambridge, MA

Investigated optimization-based and market-based approaches of allocating arrival slots to airlines during periods of reduced capacity at airports.

Research Assistant

The Charles Stark Draper Laboratory

Fall 1989 - June 1991
Cambridge, MA

Applied simulated annealing to assembly sequence selection in efforts to minimize annual system costs of assembly lines.

Associate Program Analyst

U.S. Department of Justice

Summer 1990
Washington, DC

Researched criminal career models in efforts to develop valid estimators of criminal populations based on multiple capture data. Investigated biases present in the data and methods to account for them.

Technical Staff Member

The BDM Corporation

Summer 1988, Fall 1987
McLean, VA

Evaluated U.S. conventional weaponry capabilities using deterministic and stochastic simulations.

Honors:

Finalist, Best Paper in *Manufacturing & Service Operations Management*, 2012

Excellence in Teaching Award, 2005-2014

Reid Teaching Award for Undergraduate Teaching 1999, 2000, 2001

Center for Transportation Studies Fellow, Draper Fellow, Tau Beta Pi,

Grants:

Principal Investigator, NSERC Grant, 2002-2007, \$24, 000 per year.

Principal Investigator, NSERC Grant, 2009-2014, \$20, 000 per year.

Principal Investigator, NSERC Grant, 2015-2020, \$20, 000 per year.

Co-Principal Investigator, MSH-UHN AMO Innovation Fund, \$180,400.

Teaching Experience:

Operations Management	2003 – 2015
Operations Strategy	2009 – 2015
Service Operations Management	1998 – 2012
Operations and Manufacturing Management	1995 – 2001
Strategic Quality Management	1998 – 2001

Publications:

Inventory Management of Reusable Surgical Supplies
Adam Diamant, Joseph Milner, Fayez Quereshy, Bo Xu
Health Care Management Science, forthcoming.

Clinical Trials and New Drug Development: Optimal Investment Policies and Applications
Panos Kouvelis, Joseph Milner, Zhili Tian
Manufacturing & Supply Operations Management, forthcoming.

Inventory Rationing for Multiple Class Demand under Continuous Review
Qing Ding, Panos Kouvelis, and Joseph Milner
Production and Operations Management, 25 (8), 2016, 1344–1362.

Liking and Following and the Newsvendor: Operations and Marketing Policies under Social Influence
Ming Hu, Joseph Milner, and Jiahua Wu
Management Science 62 (3), 2015, 867-879.

Patient and operational factors affecting wait times in a bariatric surgery program in Toronto: a retrospective cohort study.
Adam Diamant, Michelle Cleghorn, Joseph Milner, Sanjeev Sockalingam, Allan Okrainec, Timothy D Jackson, Fayez Quereshy, *CMAJ Open*, 3 (3), 2015, E331.

Analysis of Patient Attrition in a Publicly Funded Bariatric Surgery Program
Adam Diamant, Joseph Milner, Michelle Cleghorn, Sanjeev Sockalingam, Allan Okrainec, Timothy D Jackson, Fayez Quereshy.
Journal of the American College of Surgeons, 219 (5) 2014. 1047-1055.

Double-Sided Batch Queues with Abandonment: Modeling Crossing Networks
Philipp Afeche, Adam Diamant, Joseph Milner. *Operations Research*, 62 (5) 2014, 1179–1201.

Revenue Management Through End-of-Period Discounts in the Presence of Customer Learning

Joseph Milner and Anton Ovchinnikov

Production and Operations Management, 21 (1) 2012, 69-84.

Quantitative Analysis of Operating Room Inventory Management Practices at a Tertiary Cancer Center

Fayez Quereshy and Joseph Milner

J Oncol Pract 8, 2012, 68-69.

Now Playing: DVD Purchasing for a Multilocation Rental Firm

Opher Baron, Iman Hajizadeh and Joseph Milner

Manufacturing & Services Operations Management, 13 (2) 2011, 209-226.

Facility Location: A Robust Optimization Approach

Opher Baron, Joseph Milner and Hussein Naseraldin

Production and Operations Management, 20 (5) 2011, 772-785.

Staffing to maximize profit for call centers with alternate service level agreement

Opher Baron and Joseph Milner

Operations Research, 57 (3) 2009, 685-700.

Spreadsheet Model Helps to Assign Medical Residents at the University of Vermont's College of Medicine

Anton Ovchinnikov and Joseph Milner

Interfaces, 38 (4) 2008, 311-323.

Service Level Agreements in Call Centers: Perils and Prescriptions

Joseph Milner and Tava Lennon Olsen

Management Science, 54 (2) 2008, 238-252.

Dynamic Pricing for Multiple Class Deterministic Demand Fulfillment

Qing Ding, Panos Kouvelis and Joseph Milner

IIE Transactions, 39 (11) 2007, 997-1013.

Inventory, Speculation and Sourcing Strategies in the Presence of Online Exchanges

Joseph Milner and Panos Kouvelis

Manufacturing & Services Operations Management, 9 (3) 2007, 312-331.

Dynamic Pricing through Discounts for Optimizing Multiple Class Demand Fulfillment

Qing Ding, Panos Kouvelis and Joseph Milner

Operations Research, 54 (1) 2006, 169-183.

Order Quantity and Timing Flexibility in Supply Chains: The Role of Demand Characteristics

Joseph Milner and Panos Kouvelis

Management Science, 51 (6) 2005, 970-985.

Supply Chain Capacity and Outsourcing Decisions: The Dynamic Interplay of Demand and Supply Uncertainty

Panos Kouvelis and Joseph Milner

IIE Transactions, 34 (8) 2002, 717-728.

On the Complementary Value of Accurate Demand Information and Production and Supplier Flexibility

Joseph Milner and Panos Kouvelis

Manufacturing & Service Operations Management, 4 (2) 2002, 99-113.

Flexible Supply Contracts for Short Life-Cycle Goods: The Buyer's Perspective

Joseph Milner and Meir Rosenblatt

Naval Research Logistics, 49 (1) 2002, 25-45.

Contingent Labor Contracting under Demand and Supply Uncertainty

Joseph Milner and Edieal Pinker

Management Science, 47 (8) 2001, 1046-1062.

Concepts for Decentralized Air Traffic Flow Management

Milton Adams, Stephan Kolitz, Joseph Milner and Amedeo R. Odoni

Air Traffic Control Quarterly, 4 (4) 1997, 281-306.

Submitted Papers:

Dynamic Patient Scheduling in a Multi-Appointment Health Care Program

Adam Diamant, Joseph Milner, Fayeze Quereshy

Production and Operations Management, under review.

Selling Service Subscriptions: Capacity Pricing and Allocation for Heterogeneous Demand

Philipp Afèche, Opher Baron, Joseph Milner, Ricky Roet-Green

Operations Research, under revision.

Working Papers:

Customized Care Pathways and Routing Policies: Simulation of a Bariatric Surgery Program

Adam Diamant, Joseph Milner, Supreet Sunil, Fayeze Quereshy

Multiple Product Salesforce Assignment

Opher Baron, Kai Luo, Joseph Milner

Variable Pricing in a Capacity Constrained Just-In-Time Supply Chain
Opher Baron, Joseph Milner and Dehui Tong.

Multiple-Item Dynamic Pricing under a Common Pricing Constraint
Binbin Liu and Joseph Milner

Airline Response to Arrival Slot Allocations for Banks of Flights
Joseph M. Milner

Allocation of Airport Arrival Capacity to Banks of Flights
Joseph Milner

Estimating the Criminal Population and Offense Rates
Joseph M. Milner
Technical Report, National Institute of Justice, September 1990.

Conference Proceedings:

Dynamic Patient Scheduling for Multi-Assessment Health Care Programs
with A. Diamant and F. Queresby
Manufacturing and Service Operations Management Conference Proceedings,
June, 2015

When Newsvendor Meets Social Buyers,
Ming Hu, Joseph Milner, Jiahua Wu
Manufacturing and Service Operations Management Conference Proceedings,
July 2013

Double-Sided Batch-Arrival Queues with Abandonment: Modeling and
Performance of Dark Pools
Philipp Afeche, Adam Diamant, Joseph Milner
Manufacturing and Service Operations Management Conference Proceedings,
June 2012

Inventory Rationing for Multiple Class Demand under Continuous Review
Joseph Milner, Qing Ding, Panos Kouvelis
Manufacturing and Service Operations Management Conference Proceedings,
June 2010.

Now playing: DVD allocation for multiple retailer locations. Baron, O.,
Hajizadeh, I., Milner, J. (2009).

Manufacturing and Service Operations Management Conference Proceedings,
June 2009.

Staffing to Maximize Profit for Call Centers with Alternate Service Level
Agreements

O. Baron and J. Milner

Manufacturing and Service Operations Management Conference Proceedings
Georgia Tech, June 2006.

Multiple-Item Dynamic Pricing under a Common Pricing Constraint

Binbin Liu and Joseph Milner

Manufacturing and Service Operations Management Conference Proceedings
Georgia Tech, June 2006.

Dynamic Discounting for Deterministic Multiple Class Demand Fulfillment

Joseph Milner, Panos Kouvelis and Qing Ding

Manufacturing and Service Operations Management Conference Proceedings
Northwestern University, June 2005.

Service Level Agreements in Call Centers: Perils and Prescriptions

Joseph Milner and Tava Lennon Olsen

Manufacturing and Service Operations Management Conference Proceedings
Northwestern University
June 2005.

More Demand Information or More Supply Chain Flexibility: What Does
the Answer Depend On?

Joseph M. Milner and Panos Kouvelis

Manufacturing and Service Operations Management Conference Proceedings
University of Michigan,
June 26-27, 2000

Using Simulated Annealing to Select Least-Cost Assembly Sequences

Joseph Milner, Stephen C. Graves and Daniel E. Whitney

IEEE Conference on Robotics and Automation, May, 1994.

Editorial Positions:

Senior Editor, Production and Operations Management 2010-
Present

Associate Editor, Manufacturing & Service Operations
Management 2008-2009, 2013-2014

Area Editor, IIE Transactions 2006-Present

Decision Sciences 2008-2010
Associate Editor, Canadian Journal of Administrative Science, 2004
NSF Service Operations Engineering Review Panel, 2005
Wickham Skinner Early Career Research Award Panel
Referee: Operations Research
Management Science
Manufacturing and Service Operations Management
IIE Transactions
Naval Research Logistics
Canadian Journal of Forestry Research
Transportation Science
Omega Journal
International Transactions in Operations Research
International Journal of Operations and Quantitative
Management

Doctoral Students:

Adam Diamant “Stochastic Models in Operations Research with Applications to Financial Markets and Health Care Systems”, 2015
Jiahua Wu “Analysis of Sales Processes with Social Interaction”, 2014
Dehui Tong “Intertemporal Pricing in a Capacity Constrained Just-In-Time Supply Chain”, 2010
Iman Hajizadeh, “Problems in Supply Chain Location and Inventory under Uncertainty”, 2010
Binbin Liu, “The Retailers’ Problem: Pricing and Location”, 2008
Anton Ovchinnikov, “Three Contributions to the Theory and Practice of Operations Management”, 2007
Qing Ding “Essays in global supply chain and revenue management in the network economy”, 2005

Undergraduate Thesis Students:

Michael Lau, “Increasing Patient Safety in the Pre-analytical Phase of Laboratory Medicine at a Children’s Hospital”

Shezana Lakhu, "Hudson's Bay Company: Quantifying Opportunity Buys."

University Service:

Area Coordinator, Operations Management and Statistics, 2007-2008,
2009 - 2015

MBA Programs Committee, 2005, 2006

Presentations:

Dynamic Patient Scheduling for Multi-Assessment Health Care Programs

With A. Diamant.

INSEAD Singapore, April 15, 2016

Clinical Trials and New Drug Development: Optimal Investment Policies and Application, with P. Kouvelis and Z. Tian.

Singapore Management University, April 12, 2016.

Dynamic Patient Scheduling for Multi-Assessment Health Care Programs

With A. Diamant.

Yale University, March 3, 2016

Dynamic Patient Scheduling for Multi-Assessment Health Care Programs

with A. Diamant and F. Quereshy

INFORMS Healthcare Meeting, July 31, 2015

Dynamic Patient Scheduling for Multi-Assessment Health Care Programs

with A. Diamant and F. Quereshy

MSOM Annual Meeting, June 29, 2015

How to Charge and Prioritize Time-sensitive Customers with Heterogeneous

Demand Rates, with P. Afèche, O. Baron, R. Roet-Green. USC, April 9, 2015

How to Charge and Prioritize Time-sensitive Customers with Heterogeneous

Demand Rates, with P. Afèche, O. Baron, R. Roet-Green. McMaster University,

April 6, 2015

Inventory Management of Reusable Surgical Instruments, with A. Diamant and

F. Quereshy. INFORMS Annual Meeting, San Francisco, Nov. 10, 2014

How to Charge and Prioritize Time-sensitive Customers with Heterogeneous Demand Rates, with P. Afèche, O. Baron, R. Roet-Green. INFORMS Annual Meeting, San Francisco, Nov. 10, 2014

Dynamic Patient Scheduling For a Multi-Appointment Health Care Program, with A. Diamant and F. Quereshy. INFORMS Annual Meeting, San Francisco, Nov. 10, 2014

Clinical Trials and New Drug Development: Optimal Investment Policies and Application, with P. Kouvelis and Z. Tian. INFORMS Annual Meeting, Minneapolis, MN, October 8, 2013

When Newsvendor Meets Social Buyers, with M. Hu and J. Wu. MSOM Annual Meeting, INSEAD, Fontainebleau, France. July 30, 2013

Clinical Trials and New Drug Development: Optimal Investment Policies and Application, with P. Kouvelis and Z. Tian. Production and Operations Management Society Annual Conference, Denver, May 5, 2013.

Double-Sided Batch-Arrival Queues with Abandonment, with A. Diamant and P. Afeche. INFORMS Annual Meeting, Phoenix, October 17, 2012.

Thumbs Up or Down: Opinion Formulation and Influence in Sequential Voting with M. Hu and J. Wu. CORS 2012 Annual Conference, Niagara Falls, June 11-13, 2012.

Quantitative Analysis of Operating Room Inventory Management Practices at a Tertiary Cancer Center, with F. Quereshy and B. Xu, Cancer Center Business Summit, Chicago, IL, October 13-14, 2011.

Inventory Rationing for Multiple Class Demand under Continuous Review (with Qing Ding, Panos Kouvelis)
University of British Columbia, April 2011.

Inventory Rationing for Multiple Class Demand under Continuous Review (with Qing Ding, Panos Kouvelis)
Manufacturing and Service Operations Management, Israel, June 2010.

Staffing Capacity for a Call Centre with Uncertain Arrival Rates and Customer Call-Back (with Ch. van Delft). CORS/INFORMS International Meeting, Toronto, 2009

DVD allocation for a multiple-location rental firm. (with Hajizadeh, I.,

Baron, O.) INFORMS, Washington, DC, 2008

Intertemporal pricing for a capacity constrained just-in-time supply chain.
(with Baron, O., Tong, D.) INFORMS, Washington, DC, 2008

DVD allocation for a multiple-location rental firm. (with Hajizadeh, I.,
Baron, O.) CORS/INFORMS Toronto, ON, 2009

Intertemporal pricing for a capacity constrained just-in-time supply chain.
(with Baron, O., Tong, D.) CORS/INFORMS Toronto, ON, 2009

Facility Location: A Robust Optimization Approach. (with Baron, O. and
Naseraldin, H.) The Fourth ORT Braude College Interdisciplinary
Research Conference, October 22-23, 2008, Nazareth Ilit, Israel.

Dynamic Allocation to Multiple-class Demand with Continuous Review
INFORMS Annual Meeting, 2007, Seattle, November, 2007.

Staffing to Maximize Profit for Call Centers with Alternate Service Level Agreements
INFORMS Annual Meeting, 2006, Pittsburgh, November, 2006.

Inventory Rationing for Multiple Class Demand under Continuous Review
INFORMS Annual Meeting, 2006, Pittsburgh, November , 2006.

Staffing to Maximize Profit for Call Centers with Alternate Service Level Agreements
Manufacturing and Service Operations Management Conference, Georgia Tech,
Atlanta, June, 2006.

Dynamic Pricing for Multiple Class Deterministic Demand Fulfillment
CORS/Optimization Days, Montreal, May 2006.

Staffing to Maximize Profit for Call Centers with Alternate Service Level Agreements,
Case Western Reserve University, February 9, 2006.

Call Center Staffing to Exceed Service Expectations
INFORMS Annual Meeting, San Francisco, November, 2005.

Service Level Agreements in Call Centers: Perils and Prescriptions
INFORMS Annual Meeting, San Francisco, November, 2005.

The Effects of Learning Behaviors on the Optimal Response to Consumer Wait-or-Buy
INFORMS Annual Meeting, San Francisco, November, 2005.

Dynamic Common Pricing for Multiple Products
INFORMS Annual Meeting, November, 2005.

Dynamic Discounting for Deterministic Multiple Class Demand Fulfillment
Joseph Milner, Panos Kouvelis and Qing Ding
Manufacturing and Service Operations Management Conference
Northwestern University, June 2005.

Call Center Staffing to Exceed Service Expectations
Opher Baron, Joseph Milner,
INFORMS Applied Probability Conference, June 2005 .

Dynamic Discounting for Deterministic Multiple Class Demand Fulfillment
Joseph Milner, Panos Kouvelis, Qing Ding
International Colloquium for the 25th Anniversary of GERAD
HEC Montreal, May 2005.

Inventory and Sourcing Strategies: Speculative Markets and Supply Contracts
Joseph Milner and Panos Kouvelis
CORS International Conference on Operations Research
Halifax, NS, May 2005.

Strategic Response to Wait or Buy
Anton Ovchinnikov, Joseph Milner
INFORMS Annual Meeting, Denver, October 2004 .

Dynamic Pricing through Customer Discounts for Optimizing Multi-Class
Customers Demand Fulfillment, Presentation Manufacturing and Service
Operations Management Conference, University of Southern California,
June 2003.

Inventory Sourcing Strategies for Non-Commodity Goods: The Role and Extent
of Use of Speculative Markets and Supply Contracts
INFORMS Annual Meeting, San Jose, November 19, 2002

Inventory Sourcing Strategies for Non-Commodity Goods: The Role and Extent
of Use of Speculative Markets and Supply Contracts
Multi-Echelon Conference, June 16, 2002 Cornell University.

Inventory Sourcing Strategies for Non-Commodity Goods: The Role and Extent
of Use of Speculative Markets and Supply Contracts, Georgetown University,
April 14, 2002.

More Demand Information or More Supply Chain Flexibility: What Does the
Answer Depend On
Manufacturing and Service Operations Management Conference, University of
Michigan, June 27, 2000.

On the Complementary Value of Accurate Demand Information and Production
and Supplier Flexibility
University of Chicago, May 11, 2000

Supply Chain Capacity Expansion and Vertical Integration
Operations Summer Camp,
Massachusetts Institute of Technology, Cambridge, June 28, 1999

The Supplier's Perspective on Supply Contracts
INFORMS Tel Aviv,
Tel Aviv University, Israel, June 28 to July 1, 1998.

Optimal Staffing Strategies: Use of Temporary Workers, Contract Workers and
Internal Pools of Contingent Labor
INFORMS Annual Meeting, Montreal, Canada
April 26-29, 1998

Two Period Supply Contracts: Order Adjustment and Penalties
INFORMS Annual Meeting, Dallas, Texas, October 26 - 29, 1997

Evolutionary Concepts for Decentralized Air traffic Flow Management
M. Adams, S. Kolitz, J. Milner and A. Odoni
8th IFAC/IFIP/IFORS Symposium on Transportation Systems, June 16-18, 1997,
Chania, Greece.

Airline Response to Dynamic Slot Allocation
INFORMS Annual Conference
New Orleans, LA, October 29 - November 1, 1995

Using Simulated Annealing to Select Least-Cost Assembly Sequences
IEEE Conference on Robotics and Automation, May, 1994.

Airport Ground Holding: A Comprehensive Approach
INFORMS Annual Meeting, Phoenix, AZ
November 1993