

Maxime C. Cohen

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My research lies at the intersection of data science and operations management. I am interested in applications such as retail, ride-sharing, airline, sustainability, cloud computing, online advertising, peer-to-peer lending, and social networks. I have collaborated on research and consulting projects with different companies including Google, Oracle Retail, IBM Research, Via (ride-sharing), Cargo, Staples as well as several startups.

Employment

- 2016 - **New York University, Stern School of Business**, New York, NY
Assistant Professor of Information, Operations and Management Sciences
Member of the Center for Business Analytics
- 2015 - 2016 **Google Research**, New York, NY
Postdoctoral Research Scientist
Worked on developing mathematical models for pricing optimization in several applications: cloud computing, future contracts for online advertising, and Internet domain names
- 2012
(Summer) **IBM T. J. Watson Research Center**, Yorktown Heights, NY
Research Intern - Business Analytics and Math Sciences
Worked on improving pricing strategies by incorporating social and influence data. Proposed and implemented a practical formulation that allows efficient computation of the optimal pricing strategies while considering network and influence effects
- 2012 & 2013
(Winter) **Oracle Corporation**, Burlington, MA
Research Scientist Intern - Retail Global Business Unit
Analyzed and designed different methodologies to solve dynamic pricing optimization and promotion planning for retail environments. Implementation with actual clients' data
- 2009 **Matrix ABC Capital Markets Ltd** (merged into GHF group), Israel
Trading of futures in the short-term interest rate European market (Euribor)
- 2007 - 2011 **Eurolaxo Ltd**, Israel
Co-founder and Partner - Field: Private real estate investment company

Education

- 2010 - 2015 **MIT**, Cambridge, MA
Ph.D. in Operations Research - Operations Management track
GPA: 5/5 - Thesis committee: Prof. Aharon Ben-Tal, Prof. Georgia Perakis (chair), and Prof. Retsef Levi
Thesis Title: Pricing for Retail, Social Networks and Green Technologies
- 2006 - 2009 **Technion**, Israel Institute of Technology, Haifa, Israel
M.S. in Electrical Engineering - GPA: 96/100 - Advisor: Prof. Nahum Shimkin
Thesis title: Network Time Synchronization using Decentralized Kalman Filtering
- 2002 - 2006 **Technion**, Haifa, Israel
B.Sc. in Aerospace Engineering, Summa Cum Laude - GPA: 93.5/100 (top 2%)
Completion of several courses in the EE department - **GPA:** 98.1/100
- 2002
(Summer) **Harvard University**, Cambridge, MA
High intermediate level intensive integrated skills English program

Published and Accepted Papers

1. M. C. Cohen, R. Lobel, G. Perakis, "The Impact of Demand Uncertainty on Consumer Subsidies for Green Technology Adoption," **Management Science** 62(5):1235-1258, 2016
2. M. C. Cohen, Z. Leung, K. Panchamgam, G. Perakis, A. Smith, "The Impact of Linear Optimization on Promotion Planning," **Operations Research** 65(2):446-468, 2017
3. J. Chemama, M. C. Cohen, R. Lobel, G. Perakis, "Consumer Subsidies with a Strategic Supplier: Commitment vs. Flexibility," Forthcoming in **Management Science**
4. L. Baardman, M. C. Cohen, K. Panchamgam, G. Perakis, D. Segev, "Scheduling Promotion Vehicles to Boost Profits," Forthcoming in **Management Science**
5. M. C. Cohen, "Big Data and Service Operations," **Production and Operations Management** 27(9):1709-1723, 2018
6. M. C. Cohen, R. Lobel, G. Perakis, "Dynamic Pricing Through Data Sampling," **Production and Operations Management** 27(6):1074-1088, 2018
7. M. C. Cohen, P. Keller, V. Mirrokni, M. Zadimoghaddam, "Overcommitment in Cloud Services - Bin packing with Chance Constraints," Forthcoming in **Management Science**
8. M. C. Cohen, P. Harsha, "Designing Price Incentives in a Network with Social Interactions," Forthcoming in **M&SOM**
9. M. C. Cohen, C. D. Guetta, K. Jiao, F. Provost, "Data-Driven Investment Strategies for Peer-to-Peer Lending," **Big Data** 6(3):191-213, 2018

Under Review and Working Papers

- M. C. Cohen, M. D. Fiszer, B. J. Kim, "Frustration-Based Promotions: Field Experiments in Ride-Sharing," Major Revision in **Management Science**
- M. C. Cohen, I. Lobel, R. Paes Leme, "Feature-Based Dynamic Pricing," Major Revision in **Management Science** (under 3rd round of review)
- M. C. Cohen, G. Perakis, R. Pindyck, "Pricing with Limited Knowledge of Demand," Major Revision in **M&SOM** (under 2nd round of review)
- M. C. Cohen, J. J. Kalas, G. Perakis, "Optimizing Promotions for Multiple Items in Supermarkets," Major Revision in **Management Science**
- M. C. Cohen, A. Desir, N. Korula, B. Sivan, "Allocation and Price Guarantees in an Uncertain Internet Advertising Market," submitted, 2018
- M. C. Cohen, R. Zhang, "Competition and Coopetition for Two-Sided Platforms," submitted, 2018
- M. C. Cohen, A. Jacquillat, J. C. Serpa, "A Field Experiment on Airline Lead-in Fares," submitted, 2018
- G. Allon, M. C. Cohen, W. P. Sinchaisri, "The Impact of Behavioral and Economic Drivers on Gig Economy Workers," soon to be submitted
- M. C. Cohen, K. Jiao, "The Impact of IPO on Peer-to-Peer Lending Platforms," soon to be submitted

M. C. Cohen, G. Perakis, C. Thraves, "Consumer Surplus Under Demand Uncertainty," submitted

M. C. Cohen, S. Gupta, J. J. Kalas, G. Perakis, "An Efficient Algorithm for Dynamic Pricing using a Graphical Representation," working paper

M. C. Cohen, G. Perakis, C. Thraves, "Competition and Externalities in Green Technology Adoption," working paper

M. C. Cohen, I. Lobel, R. Paes Leme, "Ellipsoids for Contextual Dynamic Pricing," SIGecom Exchanges, vol. 15, no. 2, pp. 40-44, 2017

M. C. Cohen, N. Shimkin, "Decentralized algorithms for sequential network time synchronization," Proc. NETCOOP 2010 – 4th Workshop on Network Control and Optimization, Dec. 2010, pp. 97-104

Book Chapter and Theses

M. C. Cohen, G. Perakis, "Promotion Optimization in Retail," book chapter submitted (revised September 2018)

M. C. Cohen, "Pricing for Retail, Social Networks and Green Technologies," Ph.D. Thesis, Massachusetts Institute of Technology, Sept. 2015

M. C. Cohen, "Network Time Synchronization Using Decentralized Kalman Filtering," M.S. Thesis, Technion, Oct. 2009

Case Studies

M. C. Cohen, C. D. Guetta, W. Xiao, "Supply Chain Coordination and Contracts in the Sharing Economy - a Case Study at Cargo," Columbia CaseWorks 180203, April 2018. Taught at NYU and Columbia

M. C. Cohen, G. Perakis, "Optimizing Promotions for Supermarkets Using Data Analytics," Taught at NYU and MIT and published at thecasecentre.org, March 2017

M. C. Cohen, W. Xiao, "Managing Champagne Inventory in a Liquor Store," Taught at NYU

Patents

US20150081393 A1 – "Product Promotion Optimization System"

Published in March 2015 (M. C. Cohen, Z. Leung, K. Panchamgam, G. Perakis)

US20150006267 A1 – "Designing Price Incentives in a Network with Social Interactions"

Published in January 2015 (M. C. Cohen, P. Harsha, M. Ettl)

US20130275183 A1 – "Time-Dependent Product Pricing Optimizer"

Published in October 2013 (M. C. Cohen, K. Panchamgam, A. Vakhutinsky)

US20170140414 A1 – "Computerized Promotion Price Scheduling Utilizing Multiple Product Demand Model" - Published in May 2017 (M. C. Cohen, J. J. Kalas, K. Panchamgam, G. Perakis)

Teaching Experience

- 2017 & 2018 (Spring) **NYU Stern**, New York, NY
Operations Management core course (undergraduate) - 131 students. Teaching evaluations: 6.6, 6.7, 6.5, 6.7 (out of 7)
- 2016 (Spring) **NYU Stern**, New York, NY
Lecturer for “**Applying Revenue Management: Optimization in Retail**” – Master of Science in Business Analytics program - 61 students
- 2013 & 2014 (Summer) **MIT**, Cambridge, MA
Instructor for “**Data, Models and Decisions: Pre-Term**” – MBA refresher - 93 students
- 2013 (Fall) **MIT**, Cambridge, MA
TA for “**Introduction to Healthcare Delivery in the U.S: Market & System Challenges**” – Elective MBA and PhD course
- 2012 (Fall) **MIT**, Cambridge, MA
TA for “**Introduction to Operations Management**” – Elective/core MBA course
- 2006 - 2009 **Technion**, Haifa, Israel
TA for Random Signals, Control Systems, and Non-Linear Control Systems

Students

Kevin Jiao - OM Ph.D. student at NYU
Baek Jung Kim - Marketing Ph.D. student at NYU (main advisors: M. Ishihara and V. Singh)
Park Sinchaisri - OID Ph.D. student at Wharton (main advisor: Gad Allon)
Carlos Fernandez - IS Ph.D. student at NYU (co-advisor: Anindya Ghose)
Weitao Lin - M.S. in Data Science at NYU (2018)
Yuqiong Li - M.S. in Data Science at NYU (2019)
Marcos Galante - Senior at NYU, Stern Honors Program (2018)
Thesis committee member for: Dmitry Mitrofanov (OM Ph.D. student at NYU)

Professional Service

Senior editor for Production and Operations Management (2017-present)
Guest associate editor for M&SOM Special Issue on Sharing Economy and Marketplaces (2018-2019)
Associate editor for NRL Special Issue on Service Operations (2018-2019)
Co-founder and co-organizer of NYC Operations Day (2018, 2019)
OM seminar coordinator at NYU Stern (2016-present)
OM faculty recruitment committee member at NYU Stern (2018-2019)
OM Ph.D. student recruitment committee member at NYU Stern (2016-2018)
Reviewer for Management Science, Operations Research, M&SOM, Production and Operations Management, NRL, Networks, M&SOM SIG, INFORMS Behavioral OM Best Paper Award
Reviewer for Hong Kong research grants council (2017-2018)
Reviewer for the Canadian Mitacs accelerate research program (2018)
Program committee for the INFORMS Revenue Management and Pricing Conference (2016)
Session chair (INFORMS 2016, 2017, 2018; POMS 2016, 2018)

Student coordinator for the MIT ORC Seminar series (Spring 2013), Officer at the INFORMS student chapter at MIT (2010-2011)

Honors and Awards

2018: Finalist in the M&SOM Student Paper Competition (student: Baek Jung Kim)
2018: Finalist in the INFORMS Case Competition
2018: Best Technical Presentation, AGIFORS Annual Symposium
2017: M&SOM Meritorious Service Award
2017: Honorable mention in the Best Cluster Paper Award - INFORMS Service Science
2016: INFORMS Revenue Management and Pricing Dissertation Award
2016: First Place in the Best Cluster Paper Award - INFORMS Service Science
2015: Finalist in the INFORMS Revenue Management and Pricing Practice Award
2015: First Place in the Best Student Paper POM Supply Chain
2015: 2015 NEDSI Conference Best Application of Theory Award
2014: First Place in the Best Student Paper - INFORMS Service Science
2014-2015: UPS PhD Fellowship (awarded to a single MIT Ph.D. student)
2013-2014: Martin's Fellowship for Sustainability
2011-2012: MIT Energy Initiative Fellowship
2006-2008: Technion Excellence scholarship and Lady Davis Fellowship
2007: Winner of the Technion Creativity in Science and Technology competition
2007: Best student project of the 47th Israel Annual Conference on Aerospace Sciences
2002-2006: Technion Presidential Honors in 5 out of 8 semesters & Dean Honors in 2 semesters

Seminars and Research Presentations

2018: NYU OM Seminar, NYU IS Seminar, OMEGA Baruch College Seminar, Via Growth and Data Science Meeting, Fashion Retail Conference, Technion IE&M Seminar, Marketplace Innovation Workshop, RMP Conference, M&SOM Service SIG and M&SOM Conference, MIT OM Seminar, McGill Retail Seminar, UT Austin McCombs (scheduled), Spotify Research and ML Seminar (scheduled), INFORMS Annual Meeting (scheduled), University of Rochester Simon (scheduled)

2017: University of Maryland, NYU OM Seminar, M&SOM Conference, ACM SIGMETRICS, INFORMS Annual Meeting

2016: Google Cloud Analytics Seminar, RMP Conference, NYU Stern IOMS Colloquium, POMS Conference, Google Algorithms Seminar, ACM Conference on Economics and Computation, INFORMS Annual Meeting

2015: Cornell Johnson, Cornell ORIE, Duke Fuqua, UNC Chapel Hill, UT Dallas, Chicago Booth, NYU Stern, Boston College, Harvard Business School, Michigan Ross, Berkeley Haas, Stanford GSB, Yale SOM, Columbia DRO, CMU Tepper, UCLA Anderson, INSEAD, Cornell Tech, Google NYC, McGill, RMP Conference, NEDSI, M&SOM Conference, ISMP, POMS Conference, INFORMS Annual Meeting

2014: Technion IE&M Seminar, UBC Sauder, Northwestern Kellogg, Cornell Big Data Workshop, M&SOM Conference, Oracle Retail Seminar, MIT Sloan OM Seminar, INFORMS Annual Meeting

2013: M&SOM Conference, INFORMS Annual Meeting

2012: ISMP, Optimization Seminar IBM Watson Research Center, M&SOM Conference, POMS Conference, INFORMS Annual Meeting

2011: MIT Sloan OM Seminar, IBM Student Workshop on Smarter Cities, MIT Energy Research Conference, POMS Conference, INFORMS Annual Meeting

Languages, Computer Skills, and Personal

Languages: French (native), English (fluent), Hebrew (fluent)

Programming languages: R, MATLAB, Python, Maple, C/C++, Gurobi/CPLEX/Julia

Extracurricular activities: hiking, travelling, and sports: squash, soccer, and tennis

Citizenship: France and U.S. permanent resident