Maxime C. Cohen

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My core expertise lies at the intersection of **data science** and **operations management**. I have worked on retail, ride-sharing, airline, sustainability, cloud computing, online advertising, peer-to-peer lending, and social networks. I have collaborated with different companies including Google, Waze, Oracle Retail, IBM Research, Via (ride-sharing), Spotify, Aldo Group, Cargo, Staples as well as several startups.

Education

2010 – 2015 **MIT,** Cambridge, MA
Ph.D. in Operations Research - Operations Management Track - GPA: 5/5
Thesis: Pricing for Retail, Social Networks, and Green Technologies

2006 – 2009 **Technion,** Haifa, Israel
M.S. in Electrical Engineering - GPA: 96/100
Thesis: Network Time Synchronization Using Decentralized Kalman Filtering

2002 – 2006 **Technion**, Haifa, Israel
B.S. in Aerospace Engineering**,** Summa Cum Laude - GPA: 93.5/100 (top 2%)
Courses in the EE Department - GPA: 98.1/100

Current Positions

2019 – **McGill University, BSRM and Desautels Faculty of Management,** Montreal, Canada
Associate Professor of Retail Management and Operations Management (with tenure)
- Bensadoun Faculty Scholar
- Co-Director of the McGill Retail Innovation Lab
- Associate Member, Electrical and Computer Engineering Department (by courtesy)
- Member of CIRRELT - Research Center on Enterprise Networks, Logistics and Transportation

2019 – **Aldo Group,** Montreal, Canada
Strategic Advisor in Pricing and Data Science

2018 – **Conflict Analytics Lab and MyOpenCourt.org,** Canada
Research in Data Science and AI

2018 – **Google/Waze,** Tel Aviv, Israel
- 2018 – 2019: Advisor at Google (via Adecco) - Pricing and Incentives Lead at Waze
- 2019 – present: Research Collaborator

2017 – **Turbodega, Cherre, ReBloc.io, Silverback.ai,** U.S., Canada, and Israel
Member of Advisory Board

2017 – **Sarona Ventures,** Tel Aviv, Israel
Advisor

Employment History

2016 – 2019 **New York University, Stern School of Business,** New York, NY
Assistant Professor of Technology, Operations, and Statistics

2015 – 2016 **Google AI, Research Team,** New York, NY
Postdoctoral Research Scientist

2012 (Summer) **IBM T. J. Watson Research Center,** Yorktown Heights, NY
Research Intern - Business Analytics and Math Sciences

2012 & 2013 (Winter)	**Oracle Corporation,** Burlington, MA Research Scientist Intern - Retail Global Business Unit
2009	**Matrix ABC Capital Markets Ltd** (merged into GHF group), Israel High-Frequency Trader
2007 – 2011	**Eurolaxo Ltd**, Israel Co-Founder and Partner - Real Estate Investment Company

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. L. Baardman, M. C. Cohen, K. Panchamgam, G. Perakis, D. Segev, "Scheduling Promotion Vehicles to Boost Profits," **Management Science** 65(1):50-70, 2019
4. J. Chemama, M. C. Cohen, R. Lobel, G. Perakis, "Consumer Subsidies with a Strategic Supplier: Commitment vs. Flexibility," **Management Science** 65(2):681-713, 2019
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," **Management Science** 65(7):3255-3271, 2019 and accepted to the 2017 ACM SIGMETRICS Conference
8. M. C. Cohen, P. Harsha, "Designing Price Incentives in a Network with Social Interactions," **Manufacturing & Service Operations Management** 22(2):292-309, 2020
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
10. M. C. Cohen, I. Lobel, R. Paes Leme, "Feature-Based Dynamic Pricing," Forthcoming in **Management Science** and accepted to the 2016 ACM Conference on Economics & Computation (EC)
11. M. C. Cohen, G. Perakis, R. Pindyck, "A Simple Rule for Pricing with Limited Knowledge of Demand," Forthcoming in **Management Science** and accepted to the 2016 ACM Conference on Economics & Computation (EC)
12. M. C. Cohen, J. J. Kalas, G. Perakis, "Promotion Optimization for Multiple Items in Supermarkets," Forthcoming in **Management Science**
13. M. C. Cohen, S. Gupta, J. J. Kalas, G. Perakis, "An Efficient Algorithm for Dynamic Pricing Using a Graphical Representation," Forthcoming in **Production and Operations Management**

Under Review and Working Papers

M. C. Cohen, M. D. Fiszer, B. J. Kim, "Frustration-Based Promotions: Field Experiments in Ride-Sharing," Minor Revision in **Management Science**

M. C. Cohen, K. Jiao, "The Impact of IPOs on Peer-to-Peer Lending Platforms," Major Revision in **Management Science**

M. C. Cohen, G. Perakis, C. Thraves, "Consumer Surplus Under Demand Uncertainty," Major Revision in **Production and Operations Management**

G. Allon, M. C. Cohen, W. P. Sinchaisri, "The Impact of Behavioral and Economic Drivers on Gig Economy Workers," Major Revision in **Manufacturing & Service Operations Management**

M. C. Cohen, M. D. Fiszer, A. Ratzon, R. Sasson, "Incentivizing Commuters to Carpool: A Large Field Experiment with Waze," submitted

M. C. Cohen, A. Ratzon, R. Sasson, "The Impact of High-Occupancy Vehicle Lanes on Commuters: Field Evidence," submitted

M. C. Cohen, A. N. Elmachtoub and X. Lei, "Pricing with Fairness," submitted

M. C. Cohen, C. Fernandez, A. Ghose, "Empirical Analysis of Referrals in Ride-Sharing," submitted

M. C. Cohen, R. Zhang, "Competition and Coopetition for Two-Sided Platforms," submitted

M. C. Cohen, A. Jacquillat, J. C. Serpa, "A Field Experiment on Airline Lead-in Fares," submitted

M. C. Cohen, K. Jiao, R. Zhang, "Data Aggregation and Demand Prediction," submitted

M. C. Cohen, A. Desir, N. Korula, B. Sivan, "Best of Both Worlds Ad Contracts: Guaranteed Allocation and Price with Programmatic Efficiency," submitted

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

Book Chapter, Practitioner, and Conference Publications

M. C. Cohen, G. Perakis, "Optimizing Promotions for Multiple Items in Supermarkets," Channel Strategies and Marketing Mix in a Connected World, (Eds.) Saibal Ray and Shuya Yin, Springer Series in Supply Chain Management 9, 2020

L. Baardman, M. C. Cohen, K. Panchamgam, G. Perakis, "Upgrading Promotions Using Business Analytics," Forthcoming in **Management and Business Review**

M. C. Cohen, S. Dahan, C. Rule "Conflict Analytics: When Data Science Meets Dispute Resolution," submitted

S. Zhu, M. C. Cohen, S. Ray, "Frictionless Retail: Present and Future," submitted

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, 2010, pp. 97-104

Theses

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

M. C. Cohen, "Network Time Synchronization Using Decentralized Kalman Filtering," M.S. Thesis, Technion, 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, 2018. Available via Harvard Business Publishing

M. C. Cohen, G. Perakis, "Optimizing Promotions for Supermarkets Using Data Analytics," Published at thecasecentre.org, 2017

M. C. Cohen, W. Xiao, "Managing Champagne Inventory in a Liquor Store" (available upon request)

M. C. Cohen, C. D. Guetta, M. Reed, "Modern Retail Analytics: Data Visualization Using Tableau," Featured as a content piece on the Tableau Instructor Resource Page, 2020

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

2020	**McGill University,** Montreal, Canada Operations Management undergraduate core course (2 sections of 65 students). Evaluations: 4.9, 4.6 (out of 5)
2020	**McGill University,** Montreal, Canada Revenue Management elective course for Master of Management in Analytics. Evaluation: 5/5
2020	**McGill University,** Montreal, Canada Service Analytics elective course for Master of Management in Analytics. Evaluation: 4.7/5
2017 – 2019	**NYU Stern,** New York, NY Operations Management undergraduate core course (2 sections of 70 students each year). Evaluations: 6.6, 6.7, 6.5, 6.7 (out of 7), 4.8, 4.8 (out of 5)
2019	**NYU Stern,** New York, NY Operations in the Sharing Economy (doctoral course). Evaluation: 5/5

2016 **NYU Stern,** New York, NY
Lecturer for "Applying Revenue Management: Optimization in Retail" – M.S. in Business Analytics program - 61 students

2013 & 2014 **MIT,** Cambridge, MA
Instructor for "Data, Models and Decisions: Pre-Term" – MBA refresher - 93 students

2012 – 2013 **MIT,** Cambridge, MA
TA for "Introduction to Operations Management" – Elective/core MBA course
TA for "Introduction to Healthcare Delivery" – Elective MBA and Ph.D. course

2006 – 2009 **Technion,** Haifa, Israel
TA for Random Signals, Control Systems, and Non-Linear Control Systems

Students

Baek Jung Kim (2019) - Marketing Ph.D. student at NYU (advisors: M. Ishihara and V. Singh). First position: Assistant Professor of Marketing, UBC Sauder School of Business
Kevin Jiao (2019) - OM Ph.D. student at NYU. First position: FINRA, Data Scientist
Dmitry Mitrofanov (2020) - OM Ph.D. student at NYU (advisor: Srikanth Jagabathula). First position: Assistant Professor of Operations Management, Boston College Carroll School of Management
Haotian Song - OM Ph.D. student at NYU (advisor: Wenqiang Xiao)
Park Sinchaisri - OID Ph.D. student at Wharton (advisor: Gad Allon)
Xiao Lei - IEOR Ph.D. student at Columbia University (advisor: Adam Elmachtoub)
Carlos Fernandez - IS Ph.D. student at NYU (advisor: Foster Provost)
Weitao Lin (2018) - M.S. in Data Science at NYU. First Position: RBC Capital Markets, Data Scientist
Marcos Galante (2018) - NYU UG Stern Honors. First Position: Goldman Sachs, Investment Banking
Junge Zhang (2020) - M.S. in Data Science at NYU
Matthieu Reed (2020) - McGill UG Integrated Management Student Fellow
Selena Zhu (2020) - McGill UG Integrated Management Student Fellow
Arthur Pentecoste (2020) - McGill MMA. First Position: BCG GAMMA, Data Scientist
Paul-Emile Gras (2020) - McGill MMA
Paul Clavier (2020) - McGill MMA

Professional Service

Associate editor for M&SOM Special Issue on Smart City Operations (2019-2020)
Senior editor for Production and Operations Management (2017-present)
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)
Advisor for Management and Business Review (2019-present)
Co-founder and co-organizer of NYC Operations Day (2018-2019)
INFORMS Revenue Management and Pricing cluster chair (2019)
Program committee for ACM conference on Economics and Computation (2019)
NYU Stern MSBA Capstone Faculty Adviser (2019-2020)
Co-organizer of McGill Annual Retail Summit (2019-2020)
BSRM hiring committee member at McGill University (2019)
OM faculty recruitment committee member at NYU Stern (2018-2019)
OM seminar coordinator at NYU Stern (2016-2019)

OM Ph.D. program committee member at NYU Stern (2016-2019)
Committee member of the New Frontiers in Research Fund (2019)
Reviewer: Management Science, Operations Research, Manufacturing & Service Operations Management, Production and Operations Management, The Review of Economics and Statistics, Naval Research Logistics, Management and Business Review, Networks, MSOM SIG (Service and iFORM), INFORMS Behavioral OM Best Paper Award
Reviewer for Hong Kong research grants council (2017-2020)
Reviewer for the Canadian Mitacs accelerate research program (2018-2019)
Program committee for the INFORMS Revenue Management and Pricing Conference (2016)
Session chair (INFORMS 2016-2020; POMS 2016, 2018)
Student coordinator for the MIT ORC Seminar series (Spring 2013), Officer at the INFORMS student chapter at MIT (2010-2011)

Awards

2020: POMS Wickham Skinner Early-Career Research Accomplishments Award
2020: Honorable Mention in the POMS Service Operations Emerging Scholar Award
2019: First Place in the Best OM Paper in Management Science Award
2019: Finalist in the INFORMS Data Mining Section Best Paper Competition
2019: Finalist in the INFORMS BOM Section Best Working Paper Competition
2019: Best Paper Award in Operations and Supply Chain Management, Academy of Management
2019: Honorable Mention in the ENRE Best Publication Award in Environment and Sustainability
2019: Finalist in the INFORMS Case Competition
2019: M&SOM Meritorious Service Award
2018: M&SOM Meritorious Service Award
2018: First Place in the Best Cluster Paper Award - INFORMS Service Science
2018: Finalist in the M&SOM Student Paper Competition (student: Baek Jung Kim)
2018: First Place 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
2016: Finalist for the 2016 Service Science Section Student Paper Competition
2015: Finalist in the INFORMS Revenue Management and Pricing Practice Award
2015: First Place in the Best Student Paper POM Supply Chain
2015: NEDSI Conference Best Application of Theory Award
2014: First Place in the Best Student Paper - INFORMS Service Science
2007: Winner of the Technion Creativity in Science and Technology competition
2007: Best student project of the 47th Israel Annual Conference on Aerospace Sciences

Grants

2020-2022: IVADO Fundamental Research Project Grant: Retail Innovation Lab: Data Science for Socially Responsible Food Choices - $221,000; Role: Co-PI (with S. Ray, J. Clark, A. Moon)
2020-2023: Fonds de Recherche du Québec – Société et Culture (FRQSC): Data-Driven Smart City Operations Management: A System Coupling Perspective - $145,061; Co-Investigator (with W. Qi, M. Gendreau, X. Liu)

2020-2021: Internal Social Sciences and Humanities Development Grant - $5,000
2019-2022: Bensadoun Faculty Scholar Award - $20,000 per year for 3 years
2019: Cherre's Gift for Research Excellence: Applying Data Science to Real Estate - $10,400, Role: PI
2019-2021: SSHRC New Frontiers Grant: AI-Tribunal for Small Claims: Building an Intelligent Dispute Resolution System - $244,562, Role: Co-applicant (with S. Dahan, X. Zhu, J. Serpa, Y. Levin, J. Touboul)
2014-2015: UPS Ph.D. 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

Seminars and Research Presentations

2020: Aldo Group Advanced Analytics, Polytechnique Montreal and GERAD, Air Canada RM Seminar, HEC Montreal and CIRRELT, IVADO Labs, McGill Alumni Webcast, University of Toronto OM Seminar (scheduled), Smart-City Operations and Analytics Conference (scheduled), INFORMS Annual Meeting (scheduled)

2019: Cornell Tech, Google Product Analytics, POMS Conference, Triennial Invitational Choice Symposium, INFORMS Annual Meeting, Microsoft Research Economics Seminar, Conflict Analytics Queens Law Seminar, Queen's University OM Seminar, DTL Quebec Retail Council of Canada, McGill Decision Neuroscience Seminar

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

2017: University of Maryland, NYU OM Seminar, MSOM 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, MSOM Conference, ISMP, POMS Conference, INFORMS Annual Meeting

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

2013: MSOM Conference, INFORMS Annual Meeting

2012: ISMP, Optimization Seminar IBM Watson Research Center, MSOM 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, Python, MATLAB, C/C++, Maple, Gurobi/CPLEX/Julia, Tableau

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