

Elizabeth J. Durango-Cohen

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ACADEMIC APPOINTMENTS

ILLINOIS INSTITUTE OF TECHNOLOGY, CHICAGO, IL June 2005 – Present
STUART SCHOOL OF BUSINESS
Assistant Professor of Operations Management

WASHINGTON UNIVERSITY IN ST. LOUIS, ST. LOUIS, MO September 2002 – June 2004
JOHN M. OLIN SCHOOL OF BUSINESS
Assistant Professor of Operations and Manufacturing Management (OMM)

EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY, CA
Ph.D. Industrial Engineering and Operations Research, 2002
Dissertation: *Analysis of Supply Contracts in Capacity-Constrained Environments*
Minors: Management of Technology and Statistics

UNIVERSITY OF CALIFORNIA, BERKELEY, CA
Certificate in Management of Technology, Walter A. Haas School of Business, 1996

UNIVERSITY OF CALIFORNIA, BERKELEY, CA
M.S. Industrial Engineering and Operations Research, 1995

SONOMA STATE UNIVERSITY, ROHNERT PARK, CA
B.S. Applied Mathematics; Computer Science Minor, 1994, Graduated *With Distinction*

HONORS AND AWARDS

- National Science Foundation (NSF) Grant, 2013 – 2016
Title: “Collaborative Research: Optimizing Direct-Marketing Strategies in Non-Profit Fundraising: An Integrated Framework for Segmentation, Estimation and Control.”
Position: Principal Investigator. Amount: \$350,000
- National Science Foundation (NSF) Grant, 2010 – 2013
Title: “Profit Control: A New Paradigm in Control System Design”
Position: Participating Faculty. Amount: \$256,470
- Dean’s Summer Research Grant Recipient, 2008
Title: “Optimizing Direct-Marketing Strategies for a Public Service Broadcasting Institution: An Adaptive Control Approach.” Amount: \$10,000
- Outstanding Graduate Student Instructor, U.C. Berkeley, 2001
- Achievement Rewards for College Scientists (ARCS) Fellowship Finalist, 2001
- Soroptimist International Fellowship Recipient, 1998

- INFORMS Doctoral Colloquium Participant, 1998
- U.C. Berkeley Mentored Research Award Recipient, 1997
- Ruth Asawa Award for Most Outstanding Senior, 1988

SCHOLARLY ACCOMPLISHMENTS

ARCHIVAL JOURNAL PUBLICATIONS

- J1. **Durango-Cohen, E.J.** and Wagman, L., “Strategic Obfuscation of Production Capacities,” **Naval Research Logistics**, 2014. Accepted for publication subject to minor revision.
- J2. **Durango-Cohen, E.J.** and Balasubramanian, S.K., “Effective Segmentation of University Alumni: Mining Contribution Data with Finite-Mixture Models,” **Research in Higher Education**, 2014. Accepted for publication subject to minor revision.
- J3. Durango-Cohen, P.L., **Durango-Cohen, E.J.**, and Torres, R., “A Bernoulli-Gaussian Mixture Model of Donation Likelihood and Monetary Value: An Application to Alumni Segmentation in a University Setting,” **Computers and Industrial Engineering**, 2013, Volume 66, Number 4, Pages 1085–1095.
- J4. **Durango-Cohen, E.J.**, Torres, R., and Durango-Cohen, P.L., “Donor Segmentation: When Summary Statistics Don't Tell the Whole Story,” **Journal of Interactive Marketing**, 2013, Volume 27, Number 4, Pages 172–184.
- J5. **Durango-Cohen, E. J.**, “Modeling Contribution Behavior in Fundraising: Segmentation Analysis for a Public Broadcasting Station,” **European Journal of Operational Research**, 2013, Volume 227, Issue 3, Pages 538–551.
- J6. Durango-Cohen, P.L., **Durango-Cohen, E.J.**, and Zhang, W., “A Clusterwise Linear Regression Model of Alumni Giving,” **International Journal of Education Economics and Development**, 2012, Volume 3, Number 4, Pages 330–347.
- J7. **Durango-Cohen, E.J.** and Yano, C.A., “Optimizing the Customer’s Forecast in a Forecast-Commitment Contract,” **Production and Operations Management**, 2011, Volume 20, Issue 5, Pages 681–698.
- J8. **Durango-Cohen, E.J.** and Yano, C.A., “Supplier Commitment and Production Decisions Under a Forecast-Commitment Contract,” **Management Science**, 2006, Volume 52, Issue 1, Pages 54–67.

OTHER ARCHIVAL PUBLICATIONS

- O1. Wong, W. K., **Durango-Cohen, E.J.**, and Chmielewski, D. J., “Inventory Control and LQG: Connections and Extensions,” **American Control Conference Proceedings**, 2010, Pages 4391–4396.

PAPERS SUBMITTED AND UNDER REVISION

- S1. **Durango-Cohen, E.J.**, Wagman, L., and Yano, C.A., “Outsourcing in Place: Selling the Retailer's Store-Brand Factory,” **Production and Operations Management**, 2010. Under Third Round of Review.
- S2. **Durango-Cohen, E.J.**, “Modeling Supplier Capacity Allocation Decisions: Understanding How to Align Short vs. Long Term Goals,” **International Journal of Production Research**, 2012. Being Revised for Second Round of Review.
- S3. **Durango-Cohen, E.J.** and Yano, C., “Structuring National Brand Price Contracts in the Presence of Store-Brand Competition,” **Manufacturing Service & Operations Management**, 2013. Under First Round of Review.
- S4. **Durango-Cohen, E.J.**, Durango-Cohen, P.L. and Zhang, W., “A Regression Model of Alumni Giving,” **Education Economics**, 2013. Under First Round of Review.

WORK IN PROGRESS

- W1. **Durango-Cohen, E.J.** and Durango-Cohen, P. “Optimizing Direct-marketing Strategies for Public Service Broadcasting Institution: An Adaptive Control Application,” 2012.
- W2. **Durango-Cohen, E.J.**, Durango-Cohen, P., and Wagman, L., “Optimal Probing of Myopic Consumers: The Case of Chicago Public Radio,” 2012.
- W3. Torres, R., **Durango-Cohen, E.J.**, and Durango-Cohen, P.L., “Capturing Serial Dependence in Contribution Behavior Using Correlated Bivariate Gaussian Mixture Models,” 2013.

REFEREED CONFERENCE PROCEEDINGS

- P1. **Durango-Cohen, E.J.** and Yano, C.A., “Outsourcing in Place: Selling the Retailer's Store-Brand Factory” **Manufacturing and Service Operations Management (MSOM) Conference Proceedings**, June 2010.
- P2. **Durango-Cohen, E.J.** and Durango-Cohen, P.L., “Optimizing Direct-marketing Strategies for Public Broadcasting Institutions: An Adaptive Control Application,” **Marketing Science Conference Proceedings**, June 2009.

- P3. **Durango-Cohen, E.J.** and Yano, C.A., “Forecast-Commitment Contract with Strategic Customers” **Manufacturing and Service Operations Management (MSOM) Conference Proceedings**, June 2009.
- P4. Yano, C.A. and **Durango-Cohen, E.J.**, “Optimizing the Customer’s Forecast in a Forecast-Commitment Contract” **Manufacturing and Service Operations Management (MSOM) Conference Proceedings**, June 2007.
- P5. **Durango-Cohen, E.J.** and Yano, C.A., “Channel Pricing Implications for a Supply Chains with Competing Store and National Brands,” **Manufacturing and Service Operations Management (MSOM) Conference Proceedings**, June 2006.

INVITED TALKS

- T1. Office of Strategic Partnerships, Lincoln Park Zoo (LPZ), April 2011. “Modeling Unobserved Heterogeneity in Direct-Marketing Fundraising.”
- T2. Office of Alumni Relations and Development (OARD), Northwestern University, February 2011. “Modeling Unobserved Heterogeneity in Direct-Marketing Fundraising.”
- T3. College of Computing and Digital Media, DePaul University, January 2011. “Modeling Unobserved Heterogeneity in Member Contribution Behavior in Public-Broadcasting Fundraising.”
- T4. Industrial Engineering and Management Sciences (IEMS) Department, Northwestern University, May 2010. “Modeling Unobserved Heterogeneity in Member Contribution Behavior in Public-Broadcasting Fundraising.”
- T5. Office of Strategic Communications, Chicago Public Media, July 2009. “Modeling Member Contribution Behavior in Public Broadcasting Fundraising.”
- T6. Department of Mechanical and Industrial Engineering, University of Illinois at Chicago, November 2009. “Modeling Unobserved Heterogeneity in Member Contribution Behavior in Public-Broadcasting Fundraising.”
- T7. Institute of Business & Interprofessional Studies, Illinois Institute of Technology, 2005. “Customer Forecasts in Forecast-Commitment Contracts.”
- T8. Krannert School Business, Purdue University, 2002. “Analysis of Supply Contracts in Capacity-Constrained Industries.”
- T9. Olin School of Business, Washington University in St. Louis, 2001. “Analysis of Supply Contracts in Capacity-Constrained Industries.”
- T10. College of Business Administration, “Marquette University, 2001. “Analysis of Supply Contracts in Capacity-Constrained Industries.”

- T11. School of Business Administration, University of Connecticut, 2001. "Analysis of Supply Contracts in Capacity-Constrained Industries."
- T12. Graduate School of Business, University of Cincinnati, 2001. "Analysis of Supply Contracts in Capacity-Constrained Industries."

CONFERENCE PRESENTATIONS

- C1. **Durango-Cohen, E.J.**, "Using Simulation Software to Drive Conceptual Understanding in OM Course." Annual **INFORMS** Conference, Phoenix AZ, Oct 14-17, 2012.
- C2. **Durango-Cohen, E.J.** and Wagman, L., "Optimal Capacity Choice with Imminent Entry." Annual **INFORMS** Conference, Charlotte NC, Nov 13-18, 2011.
- C3. **Durango-Cohen, E.J.** and Yano, C.A., "Selling the Retailer's Factory to a National Brand Manufacturer: Changes From Selling to the Enemy." Annual **INFORMS** Conference, Charlotte NC, Nov 13-18, 2011.
- C4. **Durango-Cohen, E.J.**, "Modeling Unobserved Heterogeneity in Membership Contribution Behavior in Public-Broadcasting Fundraising." **APRA-IL** Annual Meeting, Chicago IL, Nov 1, 2010.
- C5. **Durango-Cohen, E.J.** and Yano, C.A., "Outsourcing in Place: Selling the Retailer's Store-Brand Factory." **MSOM** Annual Meeting, Haifa, Israel, Jun 28-29, 2010.
- C6. **Durango-Cohen, E.J.**, "Modeling Member Contribution Behavior in Public Broadcasting Fundraising." **INFORMS** Annual Meeting, San Diego CA, Oct 11-14, 2009.
- C7. **Durango-Cohen, E.J.** and Yano, C.A., "Forecast-Commitment Contracts with Strategic Customers." **MSOM** Annual Meeting, Cambridge MA, Jun 28-30, 2009.
- C8. **Durango-Cohen, E.J.** and Durango-Cohen, P.L., "Optimizing Direct-marketing Strategies for a Public Broadcasting Institution: An Adaptive Control Application." **INFORMS** Marketing Science Annual Meeting, Ann Arbor MI, Jun 4-6, 2009.
- C9. **Durango-Cohen, E.J.** and Yano, C.A., "Vertical De-Integration in the Supply Chain: Selling the Retailer's Factory." **INFORMS** Annual Meeting, Seattle WA, Nov 4-7, 2007.
- C10. **Durango-Cohen, E.J.** and Yano, C.A., "Channel Pricing Implications for Supply Chains with Competing Store and National Brands." **MSOM** Annual Meeting, Atlanta GA, June 19-20, 2006.
- C11. **Durango-Cohen, E.J.** and Yano, C.A., "Supplier Pricing of National and Store Brands under Capacity Constraints." **INFORMS** Annual Meeting, San Francisco CA, Nov 12-15, 2005.

- C12. **Durango-Cohen, E.J.** and Yano, C.A., “Modeling Forecast-Commitment & Production-Ordering Decisions in Long-Term Customer Supplier Relationships.” **INFORMS** Annual Meeting, Miami FL, Nov 4-7, 2001.

TEACHING AND STUDENT GUIDANCE ACTIVITIES

COURSES TAUGHT

- **MSC 596–Quantitative Models in Operations Management**
Elective, Ph.D. in Management Science (MSC) Program

A special topics seminar that focuses on quantitative methods, techniques and theoretical models used in supply chain management research. The course discusses not only classical inventory management and supply chain management models, but also recent contributions to the field. Students are asked to examine the influence of micro-economic theory, particularly game theory, on analytical operations management research. Topics covered will include incentives, information sharing, competition and coordination in inventory and supply chain management. The course material revolves around classic and recent publications in well-known journals.

Overall Professor Ratings:

Spring 2008: 5.00/5.00

- **MSF 503–Financial Modeling**
Core, Master of Science in Finance (MSF) Program

Financial modeling in a spreadsheet environment is a pervasive feature of the modern workplace. In this course, students learn how to implement financial models, using spreadsheet modeling and basic programming, via Microsoft Excel/VBA. Financial models include project valuation, bond pricing and hedging, option pricing via binomial trees and portfolio optimization. The course covers basic numerical techniques that are essential to financial modeling, including Monte Carlo simulation, solving systems of equations and linear algebra.

Overall Professor Ratings:

Fall 2013: 4.92/5.00, 4.94/5.00 and 4.68/5.00

Fall 2012: 4.74/5.00, 4.80/5.00 and 4.59/5.00

Fall 2011: 4.85/5.00, 4.68/5.00 and 4.75/5.00

Fall 2010: 4.74/5.00, 4.26/5.00 and 4.82/5.00

Fall 2009: 4.71/5.00, 4.64/5.00 and 4.57/5.00

- **MBA 545–Operating System Design**
Elective, Master of Business Administration (MBA) Program

A survey of the concepts and techniques of design and management of enterprise operating systems. The course includes studies of different topologies for delivery of

products and services and underlying infrastructure, such as MRP and scheduling and control mechanisms. Performance measures of operating systems, such as flow time, service level, and asset utilization are studied to understand their impact on competitive advantage.

Overall Professor Ratings:

Fall 2008: 4.40/5.00

- **MAC 502/MBA 504/(formerly) MBA 562–Spreadsheet Modeling
Core, Master of Business Administration (MBA) and Master of Marketing Analytics
and Communication (MAC) Programs**

Spreadsheets are a popular model-building environment for managers. Add-ins and enhancements to Excel have made powerful decision-making tools available to the manager. This course covers how to use the spreadsheet to develop and utilize some of these decision-making aids. Visual Basic for Excel allows the nonprogrammer to create modules for functions, subroutines, and procedures. Topics include decision-making under uncertainty and decision trees, and probabilistic simulation using @RISK.

Overall Professor Ratings:

Fall 2013: 4.50/5.00 and 5.00/5.00

Fall 2012: 4.63/5.00 and 4.77/5.00

Spring 2012: 4.50/5.00

Spring 2011: 4.36/5.00

Spring 2010: 4.57/5.00

Spring 2009: 4.67/5.00

- **BUS 305 Operations Management
Core, Bachelor of Science in Business Administration (BUS) Program**

This course introduces students to concepts and techniques related to the design, planning, control, and improvement of both service and manufacturing operations. The course helps students become conversant in the language of operations management and provides them with the quantitative and qualitative tools needed to analyze basic operations issues. Topics covered include process analysis, waiting line management, project management, inventory and supply chain management.

Overall Professor Ratings:*

Spring 2012: 4.42/5.00

Fall 2011: 4.33/5.00

Spring 2011: 4.34/5.00

Fall 2010: 4.25/5.00

Spring 2010: 4.45/5.00

Fall 2009: 4.27/5.00

Spring 2009: 4.29/5.00

* Evaluations from earlier years (prior to 2009) were available on a secure website that was phased out with the introduction of a new university banner system. While no longer available, evaluations from these years were qualitatively similar to the ones above.

STUDENT COMMITTEES

- Ramon Torres, Ph.D. Civil and Environmental Engineering (2013), Northwestern University. External committee member. Co-advisor.
- Weizeng Zhang, Ph.D. Civil and Environmental Engineering (started 2009), Northwestern University. External committee member.
- Uxue Ayala, MS. Industrial Engineering, Universidad de Navarra, Spain (2008). Supervised Masters' thesis project.

SERVICE ACTIVITIES

STUART SCHOOL SERVICE

- AACSB Assurance of Learning–MAC Program, 2012-Present
- Undergraduate Program and Curriculum Committee, 2009-Present
- Academic Honesty Policy Committee, 2012
- College Week Live Undergraduate Recruitment, 2011
- Faculty Recruiting Committee, 2011
- AACSB Assurance of Learning–BSBA Program, 2010-Present
- Dean Reappointment-Review Committee, 2011
- MBA Curriculum Revision Committee, 2010-2011
- Florence Dunbar Essay Contest Judge, 2009-2010
- Women's Leadership Breakfast and Panel Participant, 2010
- MBA Recruitment Activities, 2008-2009
- Graduate Program and Curriculum Committee Meeting, 2007
- Faculty Search Committee, Chair, 2005-2006
- Faculty Search Committee, Member, 2006-2008
- Undergraduate Admissions Outreach, 2005-2006
- Curriculum Development Committee, 2005-2006

UNIVERSITY-WIDE COMMITTEES

- Leadership Academy Scholarship Committee, 2006-2009
- Undergraduate Admissions Outreach, 2005-2008
- Sophomore Retreat Participant, 2005-2006, 2008
- IIT Library Committee, 2006
- Campus Judicial Board (CJB), 2006, 2009
- IPRO Resolution Task Force, 2006

EDITORIAL SERVICE

- Editorial Board Member of Production and Operations Management (POM) Journal
- Ad-hoc referee for the following journals:
 - Management Science
 - Naval Research Logistics
 - IIE Transactions
 - Production and Operations Management (POM) Journal
 - Journal of the Operational Research Society (JORS)
 - International Journal of Production Research
 - TOP –Journal of the Spanish Society of Statistics and Operations Research

PROFESSIONAL SERVICE

- President, Institute for Operations Research and the Management Sciences (INFORMS) Junior Faculty Interest Group (JFIG), 2011-2012
- Cluster Chair, JFIG Sessions, 2012 INFORMS Annual Meeting, Phoenix, AZ
- Panelist, Student Affairs Committee, 2011 INFORMS Annual Meeting, Charlotte, NC
- Panelist, Women in ORMS (WORMS), INFORMS National Meeting, San Diego, 2009
- Secretary, INFORMS Junior Faculty Interest Group (JFIG), 2010-2011
- Treasurer, INFORMS, U.C. Berkeley Student Chapter, 1998-2000

PROFESSIONAL AFFILIATIONS

- Member, Institute for Operations Research and the Management Sciences (INFORMS), 2002-Present
- Member, INFORMS Women in OR/MS Forum (WORMS), 2002-Present
- Member, INFORMS Manufacturing and Service Operations Management Society (MSOM), 2002-Present