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APPOINTMENT:

Assistant Professor of Industrial Engineering (2006-present)
University of Illinois at Chicago, Department of Mechanical and Industrial Engineering (MIE) (Chicago, IL)

EDUCATION:

Massachusetts Institute of Technology, Operations Research Center, Cambridge, MA (2001-2006)
Ph.D. in Operations Research (June 2006). GPA: 5.0/5.0.

Dissertation title: Dynamic Pricing and Inventory Control: Uncertainty and Competition.

Thesis Advisor: Dr. Georgia Perakis, Professor of Operations Research at the Sloan School of Management and Operations Research Center, MIT.

Ecole Centrale Paris, Châtenay-Malabry, France (1999-2001)

Diplôme d'ingénieur (equivalent to a Master of Science in Engineering), December 2002.

Common core in general engineering. Ranked in top 5%.

RESEARCH INTERESTS:

Mathematical modeling	Supply chain management
Game theory and equilibrium problems	Pricing and inventory management
Competition, coordination and efficiency	Contract design
Robust optimization	Operations research in health care and public policy

My broader research interests are in stochastic and deterministic optimization models and game theoretical models for decision-making problems with applications in pricing, supply chain and revenue management, as well as problems in health care, homeland security, public policy or transportation that could benefit from careful mathematical analysis.

TEACHING INTERESTS:

Introduction to operations research	Quantitative methods
Linear and nonlinear optimization	Supply chain management
Probability and stochastic systems	Operations management
Introduction to statistics	Revenue management and pricing
Game theory	Inventory management and production planning

JOURNAL PUBLICATIONS:

“Supply Chain Competition with Multiple Manufacturers and Retailers” (with V. DeMiguel), *Operations Research*, Vol. 59(1):156–172, 2011.

“Consignment Contracts with Retail Competition” (with N. Ratisoontorn¹), *European Journal of Operational Research*, Vol. 215(1):136–148, 2011.

“Hospital Stockpiling for Disaster Planning.” (with P.C. DeLaurentis and M. Lawley), *IIE Transactions*, Vol. 43(5):348–362, 2011.

“Influenza Infection Risk and Predominate Exposure Route: Uncertainty Analysis” (with R. Jones), *Risk Analysis*, Vol. 31(4), 2011.

“Dynamic Pricing and Inventory Control: Robust vs. Stochastic Uncertainty Models – A Computational Study” (with G. Perakis), *Annals of Operations Research*, Vol. 181(1):125–157, 2010.

“Dynamic Pricing and Inventory Control: Uncertainty and Competition” (with G. Perakis), *Operations Research*, Vol. 58(2):289–302, 2010.

“A Robust Optimization Approach to Project Scheduling and Resource Allocation” (with P. Joshi¹), *International Journal of Services Operations and Informatics*, Vol. 4(2):169–193, 2009.

“A Nonlinear Continuous Time Optimal Control Model of Dynamic Pricing and Inventory Control with no Backorders” (with G. Perakis), *Naval Research Logistics*, Vol. 54(7):767–795, 2007.

“A Robust Optimization Approach to Dynamic Pricing and Inventory Control with no Backorders” (with G. Perakis), *Mathematical Programming*, Vol. 107 (1-2):97–129, 2006.

JOURNAL PAPERS SUBMITTED FOR PUBLICATION AND WORKING PAPERS:

“Loss of Profit and Capacity Effects in a Two-Tier Capacitated Supply Chain.” (with G. Perakis). Under review. 2011.

“Vaccine Market and Public Policy Implications” (with H. Mamani and D. Dey). Under review *IIE Transactions* (third round). 2011.

“Implementation of a Real-time Bus Holding Strategy” (with Q. Chen¹ and J. Lin). Under review. 2011.

“Integrating Exposure and Epidemiological Models to Select Non-Pharmaceutical Interventions for Influenza” (with R. Jones). Under review. 2011.

“Coordinating Vaccine Markets: Operational Issues and Network Effects” (with D. Dey and H. Mamani). Under review. 2011.

“Supply Chain Intermediation When Retailers Lead” (with N. Bakshi and V. DeMiguel). In preparation. 2011.

¹Graduate student.

“Partial vertical integration in a supply chain with multiple retailers” (with Amy David²). In preparation. 2011.

“Consignment contracts with supplier competition: channel performance, uncertainty and disintermediation” (with Nantaporn Ratisoontorn²). In preparation. 2011.

CONFERENCE AND BOOK PUBLICATIONS:

“An Investigation in Real-Time Bus Holding Policy” (with Qin Chen and Jie Lin). Forthcoming in *Proceedings of the 15th Hong Kong Society for Transportation Studies International Conference (HKSTS)*, 2010.

“Hospital Stockpiling for Disaster Planning” (with P.C. DeLaurentis and M. Lawley). *Proceedings of the 2010 Industrial Engineering Research Conference (IERC)*, A. Johnson and J. Miller, eds., 2010.

“Hospital Stockpiling for Influenza Pandemics with Pre-Determined Response Levels” (with P.C. DeLaurentis and M. Lawley). *Proceedings of the IEEE International Conference on Service Operations, Logistics and Informatics (SOLI)*, 2009.

“A Game Theoretical Approach for Hospital Stockpile in Preparation for Pandemics” (with P.-C. DeLaurentis and M. Lawley). *Proceedings of the 2008 Industrial Engineering Research Conference (IERC)*, J. Fowler and S. Mason, eds., 2008.

Dynamic Pricing and Inventory Control - No Backorders under Uncertainty and Competition, Publishers VDM Verlag Dr. Müller e.K., 2007.

AWARDS AND DISTINCTIONS:

First author of an article from *IIE Transactions* selected to be highlighted in the *IE Magazine* of May 2011.

UIC STEM Education Research Grant (PI): \$5,000 (2010-2011)

UIC Faculty Scholarship Support award (PI): \$1,000 (2009), \$1,000 (2010), \$1,000 (2011)

UIC WISER (Women in Science and Engineering Research) award (PI): \$5,000 (2008), \$1,000 (2009), \$6,000 (2010)

Outstanding reviewer for the journal *IEEE Transactions on Automatic Control* (2007)

Georges Besse Foundation Fellowship (2001)

Jean Gaillard Memorial Fellowship (2001)

Hoschet Prize (2000-2001)

SEMINAR PRESENTATIONS:

“Public Policy Implications for a Vaccine Supply Chain: Operational Issues and Negative Network Effects.” *Illinois Institute of Technology, Stuart School of Business*, September 2011, Chicago, IL.

“Public Policy Implications for a Vaccine Supply Chain: Operational Issues and Negative Network Effects.” *Massachusetts Institute of Technology, Sloan School of Management, Operations Management Seminar Series*, April 2011, Cambridge, MA.

“Economics of Vaccine Coverage and Public Policy Implications.” *Northwestern University, Industrial Engineering and Management Sciences Seminar Series*, October 2010, Evanston, IL.

²Graduate student.

“Game Theoretical Models Applied to Supply Chain Management and Healthcare Management.” *University of California at Irvine, The Paul Merage School of Business Seminar*, April 2009, Irvine, CA.

“Dynamic Pricing and Inventory Control: Robust vs. Stochastic Uncertainty Models.” *University of Chicago, Graduate School of Business, Operations Management/Management Science Workshop*, November 2007, Chicago, IL.

“Dynamic Pricing and Inventory Control: Robust vs. Stochastic Uncertainty Models.” *Purdue University, Biomedical Engineering Seminar*, September 2007, West Lafayette, IN.

“Dynamic Pricing and Inventory Control: Robust vs. Stochastic Uncertainty Models.” *Northwestern University, Kellogg/McCormick Joint Operations Seminar Series*, April 2007, Evanston, IL.

“Dynamic Pricing and Inventory Control with no Backorders; Uncertainty and Competition.” *University of Illinois at Chicago, Department of Mechanical and Industrial Engineering Research Seminar*, February 2006, Chicago IL.

“Dynamic Pricing and Inventory Control with no Backorders; Uncertainty and Competition.” *University of Washington in St. Louis, Olin School of Business. The Boeing Center for Technology and Information Management Research Seminar*, February 2006, St. Louis MO.

“Dynamic Pricing and Inventory Control with no Backorders; Uncertainty and Competition.” *University of Texas at Dallas, School of Management. Information Systems and Operations Management Research Seminar*, January 2006, Dallas TX.

“A Robust Nonlinear Fluid Model of Dynamic Pricing and Inventory Control with no Backorder.” *IBM Research T.J. Watson Labs*, July 2004, Hawthorne NY.

CONFERENCE PRESENTATIONS:

“Supply Chain Intermediation When Retailers Lead.” *POMS Annual Conference*, April 2012, Chicago, IL.

“Consignment Contracts with Retail Competition.” *POMS Annual Conference*, April 2012, Chicago, IL.

“Public Policy Implications for a Vaccine Supply Chain: Operational Issues and Negative Network Effects.” *INFORMS Annual Meeting*, November 2011, Charlotte, NC.

“Supply Chain Intermediation: A Three-Tier Competition Model.” *INFORMS Annual Meeting*, November 2011, Charlotte, NC.

“Consignment Contracts with Retail Competition.” *INFORMS Annual Meeting*, November 2011, Charlotte, NC.

“Vaccine Market: Operational Issues and Externality Effect.” *INFORMS Annual Meeting*, November 2011, Charlotte, NC.

“Vaccine Market: Operational Issues and Externality Effect.” *INFORMS Healthcare*, June 2011, Montreal, Canada.

“An Investigation in Real-Time Bus Holding Policy.” *15th Hong Kong Society for Transportation Studies International Conference*, December 2010, Hong-Kong.

“Economics of Vaccine Coverage and Public Policy Implications.” *INFORMS Annual Meeting*, November 2010, Austin, TX.

“Integrating Exposure and Epidemiological Models to Select Non-Pharmaceutical Interventions for Influenza.” Poster presented at the *2010 Joint Conference of International Society of Exposure Science & International Society for Environmental Epidemiology*, August 2010, Seoul, Korea.

“Hospital stockpiling for disaster preparedness.” *IIE Annual Conference*, June 2010, Cancún, Mexico.

“Efficiency and Coordination in a Supply Chain with Competing Manufacturers and Retailers.” *Behavioral and Quantitative Game Theory Conference*, May 2010, Newport Beach, CA.

“Efficiency and Coordination in a Supply Chain with Competing Manufacturers and Retailers.” *INFORMS Annual Meeting* (Session Chair), October 2009, San Diego, CA.

“Hospital Stockpiling for Influenza Pandemics with Pre-set Response Levels.” *INFORMS Annual Meeting*, October 2009, San Diego, CA.

“Inventory Stockpiling and Sharing for Disaster Preparedness.” *INFORMS Annual Meeting*, October 2009, San Diego, CA.

“Efficiency and Coordination in a Supply Chain with Competing Manufacturers and Retailers.” *20th International Symposium on Mathematical Programming*, August 2009, Chicago, IL.

“Hospital Stockpiling for Influenza Pandemics with Pre-Determined Response Levels.” *IEEE International Conference on Service Operations, Logistics and Informatics (SOLI)*, July 2009, Chicago, IL.

“Efficiency and Coordination in a Supply Chain with Competing Manufacturers and Retailers.” *Manufacturing and Service Operations Management (MSOM) Annual Conference*, June 2009, Cambridge, MA.

“Efficiency and Coordination in a Supply Chain with Competing Manufacturers and Retailers.” *Ninth Annual INFORMS Revenue Management and Pricing Section Conference*, June 2009, Evanston, IL.

“Efficiency and Coordination in a Supply Chain with Competing Manufacturers and Retailers.” *Optimization Applications in Engineering and Applied Sciences Conference* (Session Chair), March 2009, Urbana-Champaign, IL.

“A Game Theoretical Approach for Hospital Stockpile in Preparation for Pandemics.” *INFORMS Annual Meeting*, October 2008, Washington, DC.

“The Strategic Role of Capacity in a Joint Inventory Management and Pricing Game.” *INFORMS Annual Meeting* (Session Chair), October 2008, Washington, DC.

“A Game Theoretical Approach for Hospital Stockpile in Preparation for Pandemics.” *IIE Annual Conference*, May 2008, Vancouver, British Columbia, Canada.

“A Game Theoretical Approach for Hospital Stockpile in Preparation for Pandemics”. Poster presented at *Healthcare Engineering Symposium on the Interface of Health Services Research and Healthcare Engineering*, April 2008, Research Triangle Park, NC.

“The Strategic Role of Capacity in a Joint Inventory Management and Pricing Game.” *INFORMS Annual*

Meeting (Session Chair), November 2007, Seattle, WA.

“A Game Theoretical Approach for Hospital Stockpile in Preparation for Pandemics.” *INFORMS Annual Meeting*, November 2007, Seattle, WA.

“The Strategic Role of Capacity in a Joint Inventory Management and Pricing Game.” *INFORMS Midwest Regional Conference*, August 2007, Evanston, IL.

“Dynamic Pricing and Inventory Control under Uncertainty.” *Second International Conference on Continuous Optimization / Modeling and Optimization: Theory and Applications* (Sessions Chair), August 2007, Hamilton, Ontario, Canada.

“Dynamic Pricing and Inventory Control under Uncertainty.” *22nd European Conference on Operational Research, EURO XXII* (Session Chair), July 2007, Prague, Czech Republic.

“The Strategic Role of Capacity in a Joint Inventory Management and Pricing Game.” *Seventh Annual INFORMS Revenue Management and Pricing Section Conference*, June 2007, Barcelona, Spain.

“Dynamic Pricing and Inventory Control under Uncertainty.” *INFORMS Annual Meeting*, November 2006, Pittsburgh, PA.

“Dynamic Pricing and Inventory Control: Uncertainty and Competition through Robust Optimization and Quasi-Variational Inequalities.” *19th International Symposium on Mathematical Programming*, August 2006, Rio de Janeiro, Brazil.

“Dynamic Pricing and Inventory Control under Uncertainty.” *Sixth Annual INFORMS Revenue Management and Pricing Section Conference* (Session Chair), June 2006, New York, NY.

“Dynamic Pricing and Inventory Control with no Backorders; Uncertainty and Competition.” *INFORMS Annual Meeting*, November 2005, San Francisco CA.

“Dynamic Pricing and Inventory Control with no Backorders; Uncertainty and Competition.” *IFORS Triennial July 2005*, Honolulu HI.

“Dynamic Pricing and Inventory Control with no Backorders; Uncertainty and Competition.” *Fifth Annual INFORMS Revenue Management and Pricing Section Conference*, June 2005, Cambridge MA.

“A Robust Nonlinear Fluid Model of Dynamic Pricing and Inventory Control with no Backorder.” *INFORMS Annual Meeting*, October 2004, Denver CO.

“A Robust Nonlinear Fluid Model of Dynamic Pricing and Inventory Control with no Backorder.” *Fourth Annual INFORMS Revenue Management and Pricing Section Conference*, June 2004, Cambridge MA.

“A Nonlinear Fluid Model for Dynamic Pricing and Inventory Control.” *INFORMS Annual Meeting*, October 2003, Atlanta GA.

TEACHING EXPERIENCE:

Student advising: supervised 3 graduate students and 4 undergraduate students at UIC. Currently supervising 2 doctoral Industrial Engineering students: Nantaporn Ratisoontorn and Amy David and co-supervising 1 doctoral Civil and Material Engineering student: Qin Chen.

Operations Research I IE 471, UIC, Instructor (Fall 2008, Fall 2009, Fall 2010, Fall 2011)
Course for undergraduate and Masters students. Introduction to operations research, formulation of linear programming problems, simplex methods, duality theory, sensitivity analysis, network models, and integer linear programming formulations. Enrollment: 15–30.

Probability and Statistics for Engineers IE 342, UIC, Instructor (Fall 2006, Spring 2007, Summer 2010, Fall 2010, Spring 2012)
Course for undergraduate students with engineering majors. Probability, random variables, mathematical expectation, discrete and continuous distributions, estimation theory, and test of hypotheses. Enrollment: 40–65.

Financial Engineering IE 201, UIC, Instructor (Fall 2007, Spring 2008, Fall 2008, Spring 2009)
Introductory course for undergraduate students with engineering majors. Principles and techniques of economic analysis in engineering and management science. Time value of money, interest rates, present worth analysis, rate of return analysis. Enrollment: 100.

Nonlinear Optimization IE 576, UIC, Instructor (Fall 2009, Fall 2011)
Course for Masters and PhD students. Convex analysis, line search techniques, unconstrained and constrained optimization, optimality conditions, duality, convex and nonconvex optimization, interior point methods, and real-world applications. Enrollment: 14–17.

Probabilistic Systems Analysis and Applied Probability 6.041/6.431, MIT, Teaching assistant (Spring 2005)
Course for undergraduate and graduate students. Sample space and probability definitions, random variables, Bernoulli and Poisson processes, Markov Chains, limit theorems. Enrollment: 300.

Data, Models, and Decisions 15.060, MIT, Teaching assistant (Fall 2004)
Core curriculum course of the MBA program at the MIT Sloan School of Management. Introduces the fundamental techniques of using data to make informed management decisions. Basics of decision analysis, probability, statistics, regression, and optimization.

OTHER PROFESSIONAL EXPERIENCE:

Amaranth (Hedge fund), Greenwich, CT (Summer 2005).
Summer intern in the Risk Management group.

Goldman Sachs, New York, NY (Summer 2004).
Summer intern in the Interest Rate Products group within the Fixed Income, Currency and Commodities Strategy division.

BostonCoach, Everett, MA (Summer 2003).
Summer intern.

SERVICE AND PROFESSIONAL MEMBERSHIPS:

UIC Honors College **Fellow** (2010–present)

UIC Honors students **Faculty Advisor** (2010–present)

UIC MIE Department **Advisory Committee member** (2010–2011)

UIC MIE Department **Faculty Secretary** (2006–2008)

Served on the **thesis committee** of 6 Masters or PhD students (2006–present).

Active participant in **undergraduate recruiting** activities at UIC (2007–present).

Faculty Advisor, UIC Student Chapter of the Institute of Industrial Engineers (2009–present).

Affiliated Faculty Member of the Transportation Center at Northwestern University (2010–present).

Session chair and organizer at national and international conferences, including EURO XXII (2007), ICCOPT/MOPTA (2007), OptimA (2009), INFORMS (2007, 2008, 2009).

Judge of 2009 MSOM Student Paper Competition.

Reviewer for 2011 MSOM Conference paper submissions.

Panel Reviewer of research proposals submitted to the National Science Foundation: Computational Mathematics program (2010), Service Enterprise Systems program (2010, 2011).

Reviewer for a variety of journals, including *Management Science*, *Operations Research*, *Manufacturing and Service Operations Management*, *Mathematics of Operations Research*, *Transportation Science*, *Naval Research Logistics*, *IEEE Transactions on Automatic Control*, *IEEE Transactions on Automation Science and Engineering*, *Production and Operations Management*, *The European Journal of Operational Research*, *INFORMS Journal on Computing, Networks and Spatial Economics*, *Operations Research Letters*, *Journal of Revenue Management and Pricing*, *The Asia-Pacific Journal of Operational Research*, *Optimization Letters*, *Journal of Intelligent Manufacturing*, *International Journal of Systems Science*, *Wiley Encyclopedia of Operations Research and Management Science*, *Engineering Optimization*.

Member of the Institute for Operations Research and the Management Sciences (INFORMS).

Member of the INFORMS Women in OR/MS Forum.

Member of the INFORMS Junior Faculty Interest Group Forum.

Member of the Institute of Industrial Engineers (IIE).