

Jan Albert Van Mieghem

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Married to Shannon Beth Cahill; father of Maximiliaan, Katharine, Marcus, and Karolien.

Citizenship: Belgium. Permanent US resident ("greencard"-holder).

EDUCATION

Ph.D., Graduate School of Business, Stanford University, California. 1995
M.S., Electrical Engineering, Stanford University, California. 1991
ir. (Summa cum Laude), Applied Sciences, Katholieke Universiteit Leuven, Belgium. 1984-1989

ACADEMIC EMPLOYMENT

Harold L. Stuart Distinguished Professor, Kellogg School of Management, Northwestern University 2001-
Chairman of the department of Managerial Economics and Decision Sciences (MEDS) 2006-
Degree courses taught: 1. *Operations Management* (MBA & executives)
2. *Operations Strategy* (MBA elective)
3. *Operations Economics* (Ph.D. class)
Professor, Kellogg School of Management, Northwestern University. 2000-
Associate Professor, Kellogg School of Management, Northwestern University. 1997-2000
Assistant Professor, Kellogg School of Management, Northwestern University. 1995- 1997
Teaching Assistant *Quantum and semiconductor Physics*, Stanford University. Part-time 9/1990-12/1990

» Visiting Professor at KU Leuven, Belgium (2005); Chulalongkorn University, Thailand (2005); York University, Canada (2004); WHU, Germany (since 1998).

INDUSTRY EMPLOYMENT

Associate, McKinsey & Company, Brussels, Belgium. summer 1995
Manufacturing Staff Analyst, Seagate Technology, Scotts Valley, California. summer 1994
Design Engineer, Canon Research Center, Palo Alto, California. 1991-1992
Strategic Planner of Color Printers, Agfa NV, Antwerp, Belgium. summer 1990

RESEARCH AGENDA

My research studies manufacturing, service and supply chain operations. Current focus is on (1) risk mitigation and operational hedging through flexibility and capacity portfolios and (2) operational incentives. I study:

1. Operations strategy (the "economics"): capacity investment; network design, flexible technology, risk mitigation and operational hedging; incentives, pricing, contracting, and coordination in supply chains.
2. Tactical operations (the "physics"): dynamic control and performance of processing networks.

BOOKS

1. *Managing Business Process Flows: Principles of Operations Management*. Prentice Hall, **1999**, second edition **2006**. With R. Anupindi, S. Chopra, S. Deshmukh and E. Zemel. This MBA operations textbook is used at various universities around the world.
2. *Operations Strategy: Principles and Practice*. Preprint available and used in my MBA elective in Winter 2007. Final book to be published by Dynamic Ideas in summer **2007**.

PEER-REVIEWED JOURNAL PUBLICATIONS

3. Brownian Models of Closed Queuing Networks: Explicit Solutions for Balanced 3-station Systems, *Annals of Applied Probability*, **4**(2) 448-477, **1994**. With E. Schwerer.
4. Straight Line Extraction using Iterative Total Least Squares Methods, *J. of Visual Communication and Image Representation*, **6**(1) 59-68, **1995**. With H. I. Avi-Itzhak and R. D. Melen. (An earlier version appeared in *SPIE Proceedings*, **1661**, 92-97, Feb. 1992.)
5. Multiple Subclass Pattern Recognition: A Maximin Correlation Approach, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **17**(4) 418-431, **1995**. With H. I. Avi-Itzhak and L. Rub.
6. Dynamic Scheduling with Convex Delay Costs: The Generalized $c \mu$ Rule, *Annals of Applied Probability*, **5**(3) 808-833, **1995**.
7. Multi-Factor Dynamic Investment under Uncertainty, *Journal of Economic Theory*, **75**(8) 345-387, **1997**. With J. C. Eberly.
8. Dynamic Control of Brownian Networks: State Space Collapse and Equivalent Workload Formulations, *Annals of Applied Probability*, **7**(3) 747-771, **1997**. With J.M. Harrison.
9. Investment Strategies for Flexible Resources, *Management Science*, **44**(8) 1071-1078, **1998**.
10. Multi-Resource Investment Strategies: Operational Hedging under Demand Uncertainty, *European Journal of Operational Research* **113**(1) 17-29, **1999**. With J. M. Harrison.
11. Coordinating Investment, Production and Subcontracting, *Management Science*, **45**(7) 954-971, **1999**.
12. Price versus Production Postponement: Capacity and Competition, *Management Science*, **45**(12) 1631-1649, **1999**. With M. Dada.
13. Which e-business is right for your supply chain? *Supply Chain Management Review*, 32-40, July/August, **2000**. With S. Chopra.
14. Price and Service Discrimination in Queuing Systems: Incentive-Compatibility of $Gc\mu$ Scheduling. *Management Science*, **46**(9)1249-1267, **2000**.
15. Price-coupled Scheduling for Differentiated Services: $Gc\mu$ vs. GPS. With P. Van Mieghem. *Int'l Journal of Communication Systems*, **15**(5)429-452, June **2002**.
16. Newsvendor Networks: Inventory Management and Capacity Investment with discretionary activities. With Nils Rudi. *Manufacturing & Service Operations Management*, **4**(4)313-335, Fall **2002**.
17. Due-Date Scheduling: Asymptotic Optimality of Generalized Longest Queue and Generalized Largest Delay Rules. *Operations Research*, **51**(1)113-122, Jan-Feb **2003**.
18. Capacity Management, Investment and Hedging: Review and Recent Directions. Invited paper by *Manufacturing & Service Operations Management*, **5**(4)269-302, Fall **2003**.
19. Note: Commonality Strategies: Value Drivers and Equivalence with Flexible Capacity and Inventory Substitution. *Management Science*, **50**(3)419-424, March **2004**.
20. Strategically Seeking Service: How Competition Can Generate Poisson Arrivals. With Marty Lariviere. *Manufacturing & Service Operations Management*, **6**(1)23-40, Winter **2004**.

21. Queueing Systems with Leadtime Constraints: A Fluid-Model Approach for Admission and Sequencing Control. With Costis Maglaras. *European Journal of Operational Research*, **167** p. 179-207, 2005.
22. Seagate-Quantum: Encroachment Strategies. With Glenn Schmidt. *Inform Transactions on Education*, **5**(2), January **2005**.
23. Risk Mitigation in Newsvendor Networks: Resource Diversification, Flexibility, Sharing, and Hedging. 3/25/2004; 1/11/2006; 8/19/2006; 9/19/2006. To appear in *Management Science*.

MANUSCRIPTS UNDER REVIEW

24. A Stochastic Model of Consumer Boycotts. (Formerly: Spontaneous Collective Action.) With D. Diermeier. 8/14/2000; 6/22/2001; 8/17/2005.
25. Turnout in voting models: evolutionary games and Markov processes. With Daniel Diermeier. 11/16/2000; 2/20/2002, *March 2005*.
26. Mix, Time, and Volume Flexibility: Valuation and Corporate Diversification. (Formerly: Valuing Flexibility as a Wait-and-Switch Option.) With Jiri Chod and Nils Rudi. 6/10/2004; 1/20/2006.
27. The Value of Dynamic Resource Pooling: Should a service network be integrated or Product-focused? With Barış Ata. 1/18/2005; 3/6/2007.
28. Multi-market Facility Network Design with Offshoring Applications. With Lauren Xiaoyuan Lu. 10/10/2005; 10/16/2006.
29. Incentives for Quality through Endogenous Routing. With Lauren Xiaoyuan Lu and Canan Savaskan. 7/14/2006; 1/5/2007.
30. Operational Flexibility and Financial Hedging: Compliments or Substitutes? With Jiri Chod and Nils Rudi. 9/23/2006.

TEACHING: CASE MATERIALS

1. A Worldwide Capacity Planning System: Architecture and Example. Teaching document. Stanford **1994**.
2. Computer System Design and Development at MasPar. Case on product development. Stanford **1994**.
3. Harley-Davidson Motor Company. Case on capacity expansion. Kellogg **1998**.
4. Seagate Technologies: Operational Hedging. Case on capacity hedging strategies. Kellogg **1998**.
5. NextPart.com. Case on Internet startup in operations, supplier and distribution management. Kellogg **2000**.
6. Seagate-Quantum: Encroachment Strategies. Case on product introduction. Kellogg-McDonough **2000**.
7. Pizza Pazza. Case on bottlenecks and responsiveness. Kellogg **2001**.
8. Palu Gear. Case on inventory management and centralization. Kellogg **2001**.
9. Peapod.com. Case on operational strategies in grocery industry. Kellogg **2001**.
10. Bose 301SE: coordinating sourcing via contracts. Case on contracting in the supply chain. Kellogg **2001**.
11. Hammoud Hosptial. Case on service operations. Kellogg **2003**.
12. The Swiss Watch Industry. Case on operations strategy. Kellogg **2004**.
13. Memphis Auto Auction. Case on quality incentives. Kellogg **2004**.

SERVICE TO THE PROFESSION

Editorial Positions: 1. Area-Editor of *Operations Research*, 1/1/2002-1/1/2006. (Associate editor since 1999)

2. Senior editor of *Manufacturing and Service Operations*, 2000-2002.
3. Associate editor of *Management Science*, 1997-2003.
- Invited Speaker: 2007: MIT, WHU.
2006: Duke, CMU, NYU, UT Austin, UT Dallas, Univ. of North Carolina,
2005: UCL (CORE), Insead (Memorial Lecture for Xavier de Groot), KU Leuven.
Earlier at various universities, including CMU, Columbia, Insead, Leuven, MIT, Michigan, Stanford, UCLA, Washington Univ., Wharton. At all recent INFORMS national meetings.
- Committees: Utah Operations Winter Conference organizing committee.
Lanchester Prize committee 2005 & 2006 (selects the recipient of the prestigious Lanchester prize).
- Membership: Member of *INFORMS*, *Stanford Integrated Manufacturing Association* and the *European Institute for Advanced Studies in Management (EIASM)*.

SERVICE TO THE UNIVERSITY

- Committees: Kellogg School of Management Executive Council (6 dept. chairs & 3 deans)
Kellogg personnel committee (2005-);
Chairman and member of ad-hoc personnel and curriculum review committees (since 2000);
Kellogg operations bi-annual workshop (since 2002);
International MSOM-Informs Conference at Northwestern University (2005);
MBA curriculum review committee (2004);
Instructional computing committee (2004);
Member of EMP curriculum review committee (2003);
Co-designer of Operations Economics track in MES Ph.D. program (2003).
Recruiting (since 1996).
- Seminars: MBA: Tech camp 1997; CIM week 1999 and 2000, MEDS seminar 2002, new faculty teaching workshop
Executive: *Ernst & Young; Kraft; ICL, Young President's Organization, Global Supply Chain, Factory Physics; Transportation Center, Health care program, Executive Development Program.*
- Faculty mentor: of assistant professors Li (2005), Ata (2003), Novak (1999) and Afeche (1997), and of visiting faculty Dada (1998).
- Student advisor: of Northwestern University and joint Kellogg-WHU students:

PhD Advisor: principal advisor of

1. Lauren Xiaoyuan Lu (MECS)

PhD Theses: co-advisor and/or dissertation committee member of

2. Umut Aytakin (IEMS 2005)
3. Biying Shou (IEMS 2004).
4. Gilles Reinhardt (MECS 1998), "Coal Movement By Railroad." Assistant Professor, De Paul University
5. Jennifer Ryan (IEMS 1997), "Analysis of Inventory Models with Limited Demand Information." Assistant Professor, Purdue University.

Master Theses: supervisor of WHU EMBA students:

1. Process Flow Analysis and Optimization for a Medium Size Manufacturer of Power Transformers - An Operations Management Study. By Dr.-Ing. Mario Schenk, Aug 2006.

2. How to measure the efficiency in your two-tiered marketing channel. Study case: Hewlett-Packard EMEA Supplies Business. By Danijel Puco, Aug 2006.
3. Operational Efficiency in Asset Management. By Peter Richter, 2005.
4. Lear Corp.: supplying interior products to GM's Opel Leanfield. By Hubert Fisher, Dec. 2003.
5. Hammoud Hospital: Applying operations management analysis to improve the performance of the operating rooms. By Diana Hammoud, Sept 2003.
6. Amer Sports Europe: Re-designing the European Distribution Logistics for a Multi-Brand Consumer Goods Company. By Thomas Henkel, Dec 2002.
7. Managing customer-centric value networks. By Christoph Lieth, June 2002.
8. Bombardier Transportation Italy: Internal Material Supply in the Italian Railways Industry. By Karsten Drath, Dec 2001.
9. Analysis of Procurement using an acquisition card. By Jesus Lopez Marin, Dec 2001.
10. e-Supply Chain Management - The Impact of E-Commerce on Traditional Supply Chain Management. By Michael Wiedemann, Dec 2000.

Independent Studies/Integration Projects: supervisor of

1. Integration of two ITW Food Equipment Group businesses. By Erik Conroy, Brandon L. Edlefsen, Shuchi Gupta, Pankaj Jaggi, Alex Riemer. March 2007.
2. Acquisition and Plant Integration at ITW Shakeproof. By Luis X. Aleman, Rachel A. Brecher, Carla C. Esteva, Matthew C Lippert, Lynn Valcarcel. March 2006.
3. Global Capacity Planning at Abbott International. By Jason Braun, Leo Castro, Lewis Lin, Scott Pitcock, Ulrich Seidel. April 2004.
4. Eastman Resins. By Chris Pratt, Katerina Athanasopoulos, Tomo Hosoda, Juhan Kim, Emily Sun. May 2003.
5. Sun Microsystems: supplier management. By Michael Goldstein, Doug Leadon, Jack Lee. April 2002.
6. Eaton Corporation: Product Profitability Assessment. By Robb Hoenick, Southard Jones, Hideaki Omura, Trey Pruitt. May 2001.

AWARDS, FELLOWSHIPS AND ADDITIONAL INFORMATION

Teaching Awards:

Best Teacher in the Kellogg-WHU Executive MBA program. Awarded by the 8th class, 2006.
Second-best Teacher in the Kellogg-WHU Executive MBA program. Awarded by the 5th class, 2003.
Chair's Core Course Teaching Award, Kellogg, Northwestern University, 2004-2005; 2001-2002; 1998-1999.
Sidney J. Levy Teaching Award, Kellogg, Northwestern University, 1997.

Professional Awards:

Operations Research Area Editor Service Recognition, 1/2002-12/2005.
Informis case competition finalist for Seagate-Quantum: Encroachment Strategies. With Glen Schmidt. 2004.
Operations Research Meritorious Service Award, 1997.

Fellowships/Grants:

Future Professors in Manufacturing Fellowship, Stanford University, 1992-1995.
Jaedicke Merit Scholar Award, Graduate School of Business, Stanford University, 1992.
Fellow of The Belgian American Educational Foundation, Brussels, Belgium and New Haven, Connecticut.
Fellow of The Francqui Foundation, Brussels, Belgium.

Additional Info:

Languages: Dutch, English, French and some German.

Founder and composer of the classical ensemble *The Carulli Trio* and of the rock group *Tullamore Dew* .