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Curriculum Vitae

Noah F. Gans

Department of Operations and Information Management
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EDUCATION

Columbia University Graduate School of Business, New York, New York

Ph.D. in Operations Research, May 1996.

Thesis, *Optimal Control of Flexible Production and Distribution Systems*.

Supervisor: G. J. van Ryzin.

M.Phil. in Operations Research, October 1995. Passed oral field examination *with honors*.

Yale School of Management, New Haven, Connecticut

Master of Public and Private Management (M.P.P.M.), May 1987.

Harvard College, Cambridge, Massachusetts

A.B., *cum laude*, June 1983. Concentration in Biology. Harvard College Scholar.

PROFESSIONAL EXPERIENCE

The Wharton School, University of Pennsylvania, Philadelphia, Pennsylvania

Operations and Information Management Department

- *Associate Professor* (summer 2003 - present)
- *Assistant Professor* (summer 1996 - summer 2003)
- *Lecturer* (summer 1995 - summer 1996)

INSEAD, Fontainebleau, France

- *Visiting Scholar*, 2004-2005.

Booz • Allen & Hamilton, New York, New York

Management Consulting Firm

- *Associate*, Operations Practice (spring 1989 - autumn 1990)
- *Associate*, Strategy Practice (autumn 1987 - spring 1989)

The World Bank, Washington, D.C.

International Financial Organization

- *Consultant*, Energy Division (summer 1986)

Digital Productions, Los Angeles, California

Computer-Generated Animation for Entertainment, Science, and Industry

- *Production Management* (spring 1985)
- *Technical Director* (summer 1983 - winter 1985)

PATENTS AND INVENTIONS

U.S. Patent No. 5,590,037 for “A Digital Computer System and Methods for Computing a Financial Projection and an Illustration of a Prefunding Program for an Employee Benefit Plan.” Covers financial analysis software that evaluates group life insurance contracts used by employers to fund retirees’ health care benefits.

PUBLICATIONS

Papers Published or to Appear in Refereed Journals

1. N. Gans and G. van Ryzin (1997), “Optimal Control of a Multi-Class, Flexible Queueing System,” *Operations Research* **45**, 677 – 693.
2. N. Gans and G. van Ryzin (1998), “Optimal Dynamic Scheduling of a General Class of Parallel-Processing Queueing Systems,” *Advances in Applied Probability* **30**, 1130 – 1156.
3. N. Gans and G. van Ryzin (1999), “Dynamic Vehicle Dispatching: Optimal Heavy Traffic Performance and Practical Insights,” *Operations Research* **47**, 675 – 692.
4. N. Gans (2002), “Customer Loyalty and Supplier Quality Competition,” *Management Science* **48**, 207 – 221.
5. N. Gans and Y-P. Zhou (2002), “Managing Learning and Turnover in Employee Staffing,” *Operations Research* **50**, 991 – 1006.
6. N. Gans and Y-P. Zhou (2003), “A Call-Routing Problem with Service-Level Constraints,” *Operations Research* **51**, 255 – 271.
7. N. Gans, G. Koole and A. Mandelbaum (2003), “Telephone Call Centers: Tutorial, Review, and Research Prospects,” *Manufacturing & Service Operations Management (M&SOM)* **5**, 79 – 141.
8. S. Savin, M. Cohen, N. Gans, and Z. Katalan (2005), “Capacity Management in Rental Businesses with Heterogeneous Customer Bases,” *Operations Research* **53**, 617 – 631.
9. L. Brown, N. Gans, A. Mandelbaum, A. Sakov, H. Shen, S. Zeltyn and L. Zhao (2005), “Statistical Analysis of a Telephone Call Center: A Queueing-Science Perspective,” *Journal of the American Statistical Association (JASA)* **100**, 36 – 50.
10. N. Gans, and Y-P. Zhou (2007), “Call-Routing Schemes for Call-Center Outsourcing,” *Manufacturing & Service Operations Management (M&SOM)* **9**, 33 – 50.
11. N. Gans and S. Savin (2007), “Pricing and Capacity Rationing in Rentals,” *Management Science* **53**, 390 – 407.
12. N. Gans, G. Knox, and R. Croson (2007), “Simple Models of Discrete Choice and Their Performance in Bandit Experiments,” *Manufacturing & Service Operations Management (M&SOM)* **9**, 383 – 408.
13. S. Chick and N. Gans (2009), “Economic Analysis of Simulation Selection Problems,” *Management Science* **55**, 421 – 437.

Papers Under Review at Refereed Journals

14. N. Bakshi and N. Gans, “Securing the Containerized Supply Chain: Analysis of Government Incentives for Private Investment,” under revision for 3rd round of review at *Management Science*.
15. N. Bakshi, S. Flynn, and N. Gans, “Estimating the Operational Impact of Container Inspections at Foreign Ports,” under revision for 2nd round of review at *Management Science*.

Working Papers

16. N. Gans, H. Shen, Y-P. Zhou, N. Korolev, A. McCord, and H. Ristock, “Parametric Stochastic Programming for Call-Center Workforce Scheduling,” OPIM Department Working Paper.
17. A. Arlotto, S. Chick, and N. Gans, “Hiring and Retention of Heterogeneous Workers,” OPIM Department Working Paper.
18. Gans, N., “Service Quality, Switching Costs, and Their Effect on Customer Retention,” OPIM Department Working Paper.
19. Gans, N. and Y. Zhou, “A Single-Server Queue with Markov-Modulated Service Times,” OPIM Department Working Paper.

Teaching Cases

20. N. Gans, Z. Katalan., and J. Young (2001), “Offshore Drilling Incorporated,” OPIM Department.
21. N. Agrawal, M. A. Cohen, and N. Gans (2008), “Revenue Management at Harrah’s Entertainment, Inc.,” OPIM Department.

This case was refereed and appears in *INFORMS Transactions on Education*.

Other Publications

22. S. E. Chick, and N. Gans (2006), “Simulation Selection Problems: Overview of an Economic Analysis.” In L.F. Perrone, F.P. Wieland, J. Liu, B.G. Lawson, D.M. Nicol, and R.M. Fujimoto, eds., *Proc. Winter Simulation Conference*, Institute of Electrical and Electronics Engineers, Inc.
23. S. E. Chick, and N. Gans (2008), “Update on Economic Approach to Simulation Selection Problems: Overview of an Economic Analysis,” In S.J. Mason, R.R. Hill, L. Moench, O. Rose, eds., *Proc. Winter Simulation Conference*, Institute of Electrical and Electronics Engineers, Inc.
24. N. Gans and R. Croson (2008), “Introduction to the Special Issue on Behavioral Operations,” *Manufacturing & Service Operations Management (M&SOM)* **10**, 563 – 565.

Current Projects

- Longitudinal Analysis of Agent Service Times in Call Centers, with Haipeng Shen.
- Workforce Management in Call Centers, with Haipeng Shen and Yong-Pin Zhou.
- Accounting for Development Costs in Simulation Selection Problems, with Steve Chick.

GRANTS AND AWARDS

Grants and Other Financial Support

- Principal Investigator, NSF CAREER Award SBR-9733739, 1998-2003, \$250,000.
 - Wharton Electronic Business Initiative, 2001-2002, \$5,000.
 - Co-Principal Investigator, Alfred P. Sloan Foundation Grant, 2003-2004, \$190,000.
 - Senior Personnel, NSF Engineering the Service Sector Award DMI-0223304, 2003-2004, \$150,000.
 - Fishman Davidson Center for Service and Operations Management, 2003-2004, \$10,000.
 - Fishman Davidson Center for Service and Operations Management, 2004-2005, \$15,000.
 - Co-Principal Investigator, NSF Service Enterprise Engineering Award, 2008–2010, \$500,000.
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- Fellow, Wharton Financial Institutions Center, 1996 - present.
 - Fellow, Wharton Risk Center, 2007 - present.

Professional Awards

- Participant, ORSA Doctoral Colloquium, Ann Arbor, Michigan, 1994.
- First Prize, INFORMS George E. Nicholson Student Paper Competition, 1995.
- Meritorious Service Award, *Operations Research*, 2001.
- Meritorious Service Award, *Manufacturing & Service Operations Management*, 2009.

Teaching Awards

- Miller-Scherrerd Award for Outstanding Teaching in the Wharton MBA Core, 2000, 2004.
- Wharton MBA Core Curriculum Cluster Teaching Award: 1997, 1998, 1999, 2000, 2001.

PROFESSIONAL LEADERSHIP

Editorial Positions

- Editor (with Rachel Croson), Special Issue on Behavioral OM, *M&SOM* 10(4), 2008.
- Associate Editor, *Operations Research*, 2000 – 2005.
- Associate Editor, *Management Science*, 2001 – 2005.
- Editorial Board, *Manufacturing & Service Operations Management* (M&SOM), 2000 – 2002.
- Senior Editor, *Manufacturing & Service Operations Management* (M&SOM), 2003 – 2005.

Participation on Prize Committees

- Panelist, INFORMS George E. Nicholson Student Paper Competition, 1998, 1999.
- Chair, INFORMS George E. Nicholson Student Paper Competition, 2000.
- Panelist, INFORMS M&SOM Student Paper Competition, 1997, 2003, 2005, 2008.
- Reviewer, INFORMS Junior Faculty Interest Group (JFIG) Competition, 2008, 2009.

Participation on Grant Committees

- Panelist, NSF, Operations Research and Production Systems, 1998.
- Referee, NSF, Decision Risk and Management Science, 1998.
- Referee, Technology Foundation STW, Dutch Funding Agency for University Research, 2004.
- Referee, NSERC Canada, 2005.
- Panelist, NSF, Service Enterprise Engineering, 2007.

Ad Hoc Referee Work for Journals

European Journal of Operational Research (EJOR), Management Science, Manufacturing & Service Operations Management (M&SOM), Mathematics of Operations Research (MOR), Operations Research, Operations Research Spectrum, Production and Operations Management (POM), Transportation Science

Conference Organization

- Co-Chair, INFORMS Doctoral Student Colloquium, Philadelphia, autumn 1999.
- Co-Organizer, WFIC Call Center Forum, Philadelphia, spring 2003.
- Organizer, WFIC Call Center Forum, Philadelphia, spring 2004.
- Co-Organizer, CRM Call Center Workshop, Montreal, summer 2004.
- Co-Organizer, POMS Service College Conference, New York, autumn 2004.
- Organizer, Wharton/WFIC Impact Conference on Contact Center Management, Philadelphia, spring 2008.

Other Profession Leadership

- Participant, NSF Workshop on Engineering the Service Sector, spring 2001.
- Participant, US Department of Homeland Security Workshop: Improving Port System Resiliency for the National Interest, spring 2009.

Professional Affiliations

- Member of the Institute of Operations Research and Management Science (INFORMS).

INVITED TALKS**1994–1995**

- OM Group, GSIA, Carnegie Mellon University
- OIT Group, Graduate School of Business, Stanford University
- OM Group, Graduate School of Business, University of Chicago
- OPIM Department, the Wharton School, University of Pennsylvania
- OM Group, Simon School, University of Rochester
- OM Group, Fuqua School, Duke University

1995–1996

- Systems Engineering Department, SEAS, University of Pennsylvania
- Mathematics Department, EPFL, Lausanne, Switzerland

1996–1997

- IOMS Department, Stern School of Business, New York University

1998–1999

- MEDS Department, Kellogg School, Northwestern University
- Management Science Division, Graduate School of Business
- Technology Management Area, INSEAD, Fontainebleau, France
- OM Summer Camp, Sloan School of Management, MIT

1999–2000

- I&MSE Department, Lehigh University
- OM Group, Fuqua School, Duke University
- OM Group, University of Michigan Business School
- OM Group, GSIA, Carnegie Mellon University
- IOMS Department, Stern School of Business, New York University
- OTM Unit, Anderson Graduate School of Management, UCLA

2000–2001

- Management Science Department, School of Business, University of Washington
- OITM Group, Haas School of Business, University of California at Berkeley

2001–2002

- OTIM Group, Kenan-Flagler School, University of North Carolina (fall 2001)
- OM Group, University of Chicago Graduate School of Business
- DSES Department, Rensselaer Polytechnic Institute, Troy, New York
- OTIM Group, Kenan-Flagler School, University of North Carolina (spring 2002)
- OM Group, Johnson School, Cornell University

2002–2003

- OITM Group, Haas School of Business, University of California at Berkeley
- Decision Risk & Operations and IEOR Joint Seminar, Columbia University
- ODT Group, University of California at Irvine
- IOM Department, Marshall School of Business, University of Southern California

2003–2004

- I&MSE Department, Lehigh University
- D&IT Area, Smith School of Business, University of Maryland
- IE/MS Department, School of Engineering, Northwestern University
- Yale School of Management

2004–2005

- Laboratoire Génie Industriel, École Centrale Paris
- Marketing Group, INSEAD
- Operations & Information Systems and IE Joint Seminar, Koç University
- Technology and Operations Management Group, INSEAD

2005–2006

- MEDS Department, Kellogg School, Northwestern University
- Operations Management Group, Rotman School, University of Toronto
- Sloan Foundation Industry Studies Conference
- Conference on Behavioral Research in Operations and Supply Chain Management, Smeal College of Business Penn State University.

2006–2007

- IOMS Department, Stern School of Business, New York University

- Utah Winter Operations Conference, Snowbird, Utah

2007–2008

- NSF Workshop Speaker, SOLI 2007, Philadelphia
- Operations Management Group, Fuqua School, Duke University
- Boeing Center, Olin School, Washington University in St. Louis

2008–2009

- Keynote Speaker, 2008 Kellogg School Operations Workshop
- DIMACS/DyDan/LPS Workshop on Port Security
- Operations Management Group, Booth School of Business, University of Chicago
- Operations Research Center, Massachusetts Institute of Technology
- Briefings on 100% Container Inspection at International Ports (supporting Stephen Flynn)
 - Council on Foreign Relations
 - Deputy Secretary's Office, US Department of Homeland Security
 - Second Line of Defense Program, US Department of Energy
 - Staff of US Senate Commerce, Science and Transportation Committee
 - Staff Counsel to US Senator Charles Schumer
 - Legislative Staff for U.S. Reps. Jane Harman, Edward Markey, and Jerrold Nadler
 - Deputy Assistant Secretary, US Department of the Treasury

TEACHING EXPERIENCE

Courses Taught

- IDC Wharton (Wharton Executive Education), fall 2008.
- Wharton Program for Gaming Executives (Wharton Executive Education), summer 2007.
- Dynamic Programming (Wharton Ph.D. Program), spring 2007, spring 2009.
- Queueing Theory (Wharton Ph.D. Program), spring 2006, spring 2008.
- Queueing Theory (INSEAD Ph.D. Program), spring 2005.
- Linear and Integer Optimization (INSEAD Ph.D. Program), fall 2004.
- Service Excellence (Wharton Executive Education), fall 2003.
- Service Operations (Penn Undergraduate, M.B.A, Master of Engineering), 2000-present.
- Management Science (Wharton M.B.A. Core), 1995-present.
- Introduction to Production and Operations Management (Wharton Undergraduate), 1996-1999.

Ph.D. Students Advised

- Yong-Pin Zhou, Ph.D. August 2000.
 Finalist, 1999 INFORMS George E. Nicholson Student Paper Competition.
 First position, School of Business Administration, University of Washington, Seattle.
 Current position, School of Business Administration, University of Washington, Seattle.
- Sergei Savin, co-advisor with M. Cohen and Z. Katalan, Ph.D. May 2001.
 Finalist, 2000 INFORMS M&SOM Student Paper Competition.
 First position: Graduate School of Business, Columbia University.
 Current position: Graduate School of Business, Columbia University.
- Nitin Bakshi, co-advisor with P. Kleindorfer, Ph.D. December 2008.

First Prize, 2008 POMS Supply Chain Management Student Paper Award.
First position: London Business School.

Dissertation Committee Participation

- Yunzeng Wang, OPIM Department, Wharton, Ph.D. May 1998.
- Wen Zhou, OPIM Department, Wharton, Ph.D. May 1999.
- Siddharth Mahajan, OPIM Department, Wharton, Ph.D. August 1999.
- Nils Rudi (Chair), OPIM Department, Wharton, Ph.D. September 2000.
- Hanfeng Gong, Statistics Department, Wharton, Ph.D. May 2002.
- Yusong Wang, Marketing Department, Wharton, Ph.D. August 2002.
- Murat Erkoç, I&MSE Department, Lehigh University, Ph.D. August 2002.
- Mei Xue, OPIM Department, Wharton, Ph.D. December 2002.
- Haipeng Shen, Statistics Department, Wharton, Ph.D. May 2003.
- Xuefeng Li, Statistics Department, Wharton, Ph.D. August 2003.
- Haitao Cui, Marketing Department, Wharton, Ph.D. August 2005.
- Jonathan Weinberg, Statistics Department, Wharton, Ph.D. May 2005.
- George Knox, Marketing Department, Wharton, Ph.D. August 2006.

Independent Studies Offered to Ph.D. Students

- Yong-Pin Zhou, OPIM Department, introduction to queueing theory, fall 1996.
- Siddharth Mahajan, OPIM Department, advanced topics in dynamic programming, fall 1997.
- Haipeng Shen, Statistics Department, introduction to queueing theory, fall 2000.

Supervision of M.B.A. Independent Study Projects

- Outsourcing mutual fund clearing and accounting operations to India, spring 2002.
- Brad Jiulianti and Joe Whitchurch, executive MBA students, independent study analyzing call center data, fall 2008.

Other Undergraduate and M.B.A. Student Supervision

- Robb Hsia, undergraduate SEAS student, advisor for engineering practicum, spring 1999.
- Jose Acosta, M.B.A. student, independent study in Management Science, spring 1999.
- John Young, M.B.A. student, independent study in Management Science, fall 2000.
- Erica Gold, undergraduate SEAS student, advisor for engineering practicum, spring 2001.

SERVICE

1996–1997

OPIM Department, Ph.D. Admissions Committee

1997–1998

OPIM Department, Ph.D. Admissions Committee

OPIM Department, Ph.D. Program Review Committee

Wharton M.B.A. Program, Speaker for Final Friday

1998–1999

OPIM Department, Faculty Seminar Series Coordinator

1999–2000

OPIM Department, Faculty Seminar Series Coordinator
International E.M.B.A. Program of University of São Paulo, Lecturer for Wharton Segment

2000–2001

Wharton M.B.A. Executive Committee
OPIM Department, M.B.A. advisor (with E. Clemons)
Wharton M.B.A. Students, Carnegie Mellon Operations Case Competition, Faculty Coordinator

2001–2002

Wharton M.B.A. Students, Carnegie Mellon Operations Case Competition, Faculty Coordinator

2002–2003

Wharton M.B.A. Students, Carnegie Mellon Operations Case Competition, Faculty Coordinator
Wharton M.B.A. Students, Operations Management Club, Faculty Advisor

2003–2004

OPIM Department, M.B.A. advisor (with E. Clemons)
OPIM Department, Faculty Renewal Committee for Krishnan Anand, Chair
Wharton Q-Review Committee, Management Department
Wharton M.B.A. Curriculum Committee
Wharton M.B.A. Students, Carnegie Mellon Operations Case Competition, Faculty Coordinator
Wharton M.B.A. Students, Operations Management Club, Faculty Advisor

2005–2006

Wharton M.B.A. Program, OPIM 621 Course Coordinator
Wharton Q-Review Committee, Statistics Department
Wharton M.B.A. Program, Core Curriculum Faculty Advisory Committee
OPIM Department, Recruiting Committee, Chair
OPIM Department, Faculty Renewal Committee for Kartik Hosanagar, Chair
OPIM Department, Faculty Mentoring Committee for Tom Lee

2006–2007

Wharton M.B.A. Program, OPIM 621 Course Coordinator
Wharton M.B.A. Curriculum Committee
Wharton M.B.A. Program, Core Curriculum Faculty Advisory Committee
OPIM Department, Tenure Review Committee for Serguei Netessine
OPIM Department, Faculty Mentoring Committee for Chris Lee
OPIM Department, Faculty Renewal Committee for Senthil Veeraraghavan
OPIM Department, Department Chair Search Committee

2007–2008

Wharton M.B.A. Program, OPIM 621 Course Coordinator
Wharton M.B.A. Executive Committee
Wharton M.B.A. Program, Faculty Liaison for Cohort H
Wharton-INSEAD Alliance Center for Global R&D, Committee Member
Wharton Faculty Committee to Review the Statistics Ph.D. Sequence
Wharton Board of Overseers Meeting, Presentation on Faculty Research
OPIM Department, Faculty Mentoring Committee for Chris Lee and Devin Pope

2008–2009

Wharton M.B.A. Program, OPIM 621 Course Coordinator
Wharton M.B.A. Executive Committee
Wharton M.B.A. Program, Faculty Liaison for Cohort H
Wharton M.B.A. Program, Pre-Term Student Introduction to the Core
Wharton M.B.A. Program, Welcome Weekend Mock Class
Wharton-INSEAD Alliance Center for Global R&D, Committee Member
OPIM Department, Department Chair Search Committee
OPIM Department, Chair of Reading Committee for Renewal of Chris Lee
Internal Letter for Wharton Tenure Candidate
OPIM Department, Reading Committee for Appointment of Sergei Savin
