

CURRICULUM VITAE

Guillermo Gallego

Department of Industrial Engineering and Operations Research
Columbia University
Schapiro Room 820
New York, NY 10027
(212) 854-2935
e-mail: *gmg2@columbia.edu*

2010

Education

- Ph.D. **Cornell University**, Ithaca, NY. January 1988.
Operations Research and Industrial Engineering.
Minors: Economics and Statistics.
Advisor: R. Roundy
- M.S. **Cornell University**, Ithaca, NY. January 1987.
Operations Research and Industrial Engineering.
- B.A. **University of California**, San Diego, CA. January 1980.
Mathematics, with honors.

Professional Experience

- 2000-present Professor. Dept. of Ind. Eng. & Oper. Res. Columbia University
- 2002-2008 Department Chairman
- 1999-2003 Visiting Scientist. IBM Watson Research Center, NY.
- 1999-2001 Co-director, MS in Financial Engineering program.
- 1995-2000 Tenured Associate Professor, Dept. of Ind. Eng. & Oper. Res. Columbia University
- 1996 - 1997 Visiting Associate Professor. Graduate School of Business. Stanford University
- 1994 - 1995 Associate Professor. Dept. of Ind. Eng. & Oper. Res. Columbia University
- 1988 - 1993 Assistant Professor. Dept. of Ind. Eng. & Oper. Res. Columbia University

Consulting

- Bell Labs
- Cannondale Corporation
- Columbia Video Network
- Hewlett Packard
- Ireland Development Agency
- Lucent Technologies
- Northwest Airlines

- National Research Council
- Oak Investment Partners
- IBM
- Isagen
- Pitney Bowes
- Razorgator
- Sabre Holdings
- United Airlines
- University of Michigan
- Vialux

Professional Activities

2007- 2009	von Neumann prize committee
2006	Co-organizer of "Management Science Unleashed" conference at IBM.
2005-present	Senior Editor <i>POMS</i>
2004-2007	Founder and co-organizer of INFORMS Revenue Management and Pricing Section Conference
2002-2008	Chairperson, IEOR Department, Columbia University
2002-2006	Senior Editor <i>M&SOM</i>
1998-2002	Editorial Board Member <i>M&SOM</i>
1997-2001	Departmental Editor <i>IIE-Transactions</i>
1994-2002	Associate Editor <i>Management Science</i>
1994-2006	Associate Editor <i>Naval Research Logistics</i>
1994-2000	Associate Editor <i>Operations Research</i>
1992-1997	Associate Editor <i>IIE-Transactions</i>

Referee

Management Science
 Operations Research
 Mathematical Programming
 Mathematics of Operations Research
 M&SOM
 Naval Research Logistics
 Operations Research Letters
 European Journal of Operations Research
 Annals of Operations Research
 IIE-Transactions

Honors and Awards

- AGIFORS Best technical paper award, Montreal (2008)
- AGIFORS Best paper award, Tahiti (2008)
- AGIFORS Best paper award, Korea (2007)
- Informs Revenue Management Prize (2006)

- AGIFORS Best innovation award, Brazil (2005)
- AGIFORS Best paper award, South Africa (2005)
- IBM Faculty award (2005)
- AGIFORS Best paper award, New Zeland (2004)
- NSF Research Initiation Award
- Alpha Pi Mu
- Omega Rho

Invited Talks

Carnegie Mellon University
 Cambridge University
 COPI 08 conference, Paris France
 Case Western
 Chinese University of Hong Kong
 Cornell University
 Duke
 EMST, Germany
 Fudan University
 Insead France
 Lehigh University
 London Business School
 McGill University
 National University of Singapore
 North Carolina State University
 Northwestern University
 MIT
 Purdue
 Stanford University
 Tecnologico de Monterrey, campus Toluca
 Universidad Autonoma de Baja California, Mexico
 University of Augsburg, Germany
 University of British Columbia
 University of California Irvine
 University of California Los Angeles
 University of Illinois
 University of Michigan
 University of Texas at Austin
 University of Texas A&M
 University of Texas at Dallas
 University of Toronto
 University of Southern California
 University of Washington

Professional Society Memberships

The Institute for Operations Research and the Management Sciences
Manufacturing and Operations Management Society
The Production and Operations Management Society
The Airline Group of the International Federation of Operational Research Societies
American Institute of Industrial Engineers

Research Grants

National Science Foundation (1991-1993) DDM-91-09636 “Coordinating the Production of Components and Assemblies when Demands and Yields are Random” \$60,000.

National Science Foundation (1993-1995) SBR-94-0939 “Dynamic Pricing and Allocation Models for Revenue Management in the Airline and Retail Industries” \$90,000. (Garrett van Ryzin, co-Principal Investigator.)

National Science Foundation (1994-1997) SBR-94-10146 “Joint Pricing Allocation and Estimation Models for Revenue Management in the Airline and Retail Industries” \$150,000. (Garrett van Ryzin, co-Principal Investigator.)

Federated Merchandising Grant #29092 (1994-1997) Industrial support for “Joint Pricing Allocation and Estimation Models for Revenue Management in the Airline and Retail Industries” \$150,000. (Garrett van Ryzin, co-Principal Investigator.)

National Science Foundation (1999-2001) DMI-9908235 “Studies in Stochastic Production Systems,” \$212,545

Funding of \$350,000 from Brio Technology to support research in Revenue Management (with Garrett van Ryzin).

National Science Foundation (2000-2001) DMI-0075627 “Contract Market Enterprise Modeling: Factoring, Pricing, and Forecasting,” \$200,000. (Robin Roundy, Peter Jackson, John Muckstadt, and Jim Rapold co-Principal Investigators.)

National Science Foundation (2002-2003) DMI-02-18104 “Strategic Pricing and Inventory Management of Constrained Capacity with Repeated Transactions,” \$361,727. (GOALI proposal with Dr. Robert Phillips from Manugistics.)

National Science Foundation (2004-2006) NSF Educational Grant, \$100,000 (Cliff Stein, co-principal investigator.)

Lucent Technologies (2004-2005) Supply Chain Optimization. \$24,000

IBM Faculty award (2006-2007) \$10,000

Sabre (2008) Gift to support research. \$5,000

Sabre (2009) Gift to support research. \$5,000

Sabre (2010) Gift to support research. \$5,000

HP (2008-2011) Gift to support PhD students. \$100,000 (approximate figure)

Trillium (2006-2011) Automatic Trading Strategies. \$235,000

Publications. Citation numbers from Google Scholar as of November 2010

1. Gallego, G., and D. Simchi-Levi. 1990. On the Effectiveness of Direct Shipping Strategy for One Warehouse Multi-Retailer R-Systems *Management Science*. **36**, 240-243. Cited 103 times.
2. Gallego, G. 1990. Scheduling the Production of Several Items with Random Demands in a Single Facility. *Management Science*. **36**, 1579-1592. Cited 65 times.
3. Gallego, G. 1990. An Extension to the Class of Easy Economic Lot Scheduling Problems. *IIE Transactions*. **22**, 189-191. Cited 23 times
4. Inman, R., P. Jones, and G. Gallego. 1991. Economic Lot Scheduling of Fully Loaded Processes with External Setups. *Naval Research Logistics*. **38**, 699-714. Cited 2 times.
5. Moon, I., G. Gallego, and D. Simchi-Levi. 1991. Controllable Production Rates in a Family Productions Context. *International Journal of Production Research*. **29**, 2459-2470. Cited 43 times.
6. Gallego, G. 1992. A Min-Max Distribution Free Procedure for the (Q,R) Inventory Model. *Operations Research Letters*. **11**, 55-60. Cited 51 times.
7. Gallego, G. and I. Moon. 1992. The Effect of Externalizing Setups in the Economic Lot Scheduling Problem. *Operations Research*. **40**, 614-619. Cited 35 times.
8. Gallego, G., D. Shaw, and D. Simchi-Levi. 1992. The Complexity of the Staggering Problem and other Classical Inventory Problems. *Operations Research Letters*. **12**, 47-52. Cited 11 times.
9. Gallego, G., and R. Roundy. 1992. The Economic Lot Scheduling Problem with Finite Backorder Costs. *Naval Research Logistics*. **39**, 729-739. Cited 20 times.
10. Gallego, G. 1993. Reduced Production Rates in the Economic Lot Scheduling Problem. *International Journal of Production Research*. **31**, 1035-1046. Cited 31 times.
11. Gallego, G. and I. Moon. 1993. The Distribution Free Newsboy Problem: Review and Extensions. *Journal of the Operational Research Society*. **44**, 825-834. Cited 241 times.
12. Gallego, G., D. Yao, and I. Moon. 1994. Optimal Control of a Manufacturing Process that Involves Trial Runs. *Management Science*. **39**, 1499-1505. Cited by 1.
13. Gallego, G., and D. Joneja. 1994. Economic Lot Scheduling Problem with Raw Material Considerations. *Operations Research*. **42**, 92-101. Cited 11 times.
14. Gallego, G. 1994. When is a Base Stock Policy Optimal in Recovering Cyclic Schedules? *Naval Research Logistics*. **41**, 317-333. Cited 15 times.
15. Gallego, G. and D. Simchi-Levi. 1994. Rejoinder to a Note on Bounds for Direct Shipping. *Management Science*. **40**, 1393. Cited 1 time.
16. Gallego, G. and G. van Ryzin. 1994. Optimal Dynamic Pricing of Inventories with Stochastic Demands over Finite Horizons. *Management Science*. **40**, 999-1020. Cited 574 times.

17. Moon, I. and G. Gallego. 1994. Distribution Free Procedures for Some Inventory Models. *Journal of the Operational Research Society*. **45**, 651-658. Cited 49 times.
18. Feng, Y. and G. Gallego. 1995. Optimal Starting Times for End of Season Sales and Optimal Stopping Times for Promotional Fares. *Management Science*. **41**, 1371-1391. Cited 150 times.
19. Gallego, G. and I. Moon. 1995. Strategic Investment to Reduce Setup Times in the Economic Lot Scheduling Problem. *Naval Research Logistics*. **42**, 773-790. Cited 20 times.
20. Gallego, G. and M. Queyranne. 1995. Inventory Coordination and Pricing Decisions: Analysis of a Simple Class of Heuristics. Chapter 6 in *Optimization in Industry 3, Mathematical Programming and Modeling Techniques in Practice*, Anna Sciomachen, Ed. Wiley.
21. Gallego, G. 1996. A New Demand Model for Yield Management. *Proceedings of the AGIFOR society*
22. Gallego, G. and I. Moon. 1996. How to Avoid Stockouts when Producing Several Items in a Single Facility? What to do if you Can't. *Computers Operations Research*. **23**, 1-12. Cited 4 times
23. Gallego, G., M. Queyranne, and D. Simchi-Levi. 1996. Single Resource Multi-Item Inventory Systems. *Operations Research*. **44**, 580-595. Cited 34 times.
24. Gallego, G. and G. van Ryzin. 1997. A Multi-Product Dynamic Pricing Model with Applications to Network Yield Management. *Operations Research*. **45**, 24-41. Cited 248 times.
25. Gallego, G., and D. Shaw. 1997. On The Complexity of the Economic Lot Scheduling Problem with General Cyclic Schedules. *IIE Transactions*. **29**, 109-113. Cited 31 times.
26. Gallego, G. 1998. New Bounds and Heuristics for (Q,R) Policies. *Management Science*, **44**, 219-233. Cited 49 times.
27. Gallego, G. and P. Zipkin. 1999. Qualitative Analysis of Multi-Stage Production-Transportation Systems: Stock Positioning and Performance Estimation. *MSOM*, **1**, 77-88. Cited 49 times.
28. Feng, Y. and G. Gallego. 2000. Perishable Asset Revenue Management with Markovian Time Dependent Demand Intensities. *Management Science*, **46**, 941-956. Cited 86 times.
29. Gallego, G. and A. Scheller-Wolf. 2000. Capacitated Inventory Problems with Fixed Order Costs: Some Optimal Policy Structure. *European Journal of Operations Research*, **126:3**, 603-613. Cited 25 times.
30. Gallego, G., J. K. Ryan, and D. Simchi-Levi. 2001. Minimax Analysis for Discrete Finite Horizon Inventory Models. *IIE Transactions*, **33**, 861-874. Cited 31 times.
31. Boyacı, T., and G. Gallego. 2001. Serial Production/Distribution Systems Under Service Constraints. *MSOM*, **3**, 43-50. Cited 33 times.
32. Boyacı, T., and G. Gallego. 2001. Minimizing Holding and Ordering Costs Subject to a Bound on Backorders is as Easy as Solving a Single Backorder Cost Model. *Operations Research Letters* **29**, 87-92. Cited 9 times.
33. Gallego, G., and Ö. Özer. 2001. Integrating Replenishment Decisions With Advance Demand Information. *Management Science* **47**, 1344-1360. Cited 104 times.
34. Gallego, G., and Ö. Özer. 2001. Optimal Use of Demand Information in Supply Chain Management. 2001. In: *Supply Chain Structures: Coordination, Information, and Optimization*, J.S. Song and D.D. Yao (eds.), Kluwer. Cited 14 times.

35. Boyacı, T., and G. Gallego. 2002. Coordination Pricing and Inventory Replenishment Policies for One Wholesaler and One or more Geographically Dispersed Retailers. *International Journal of Production Economics* **77**, 95-11. Cited 56 times.
36. Boyacı, T., and G. Gallego. 2002. Managing Waiting Times of Backordered Demands in Single-Stage (Q,r) Inventory Systems. *Naval Research Logistics*, **49**, 557-573. Cited 1 time.
37. Heching, A., Gallego, G. and G. van Ryzin. 2002. Markdown Pricing: An Empirical Analysis of Policies and Revenue Potential at One Apparel Retailer *Journal of Revenue and Pricing Management*, **1:2**, 139-160. Cited 15 times.
38. Gallego, G. and Ö. Özer. 2003. Optimal Replenishment Policies for Multi-Echelon Inventory Problems under Advance Demand Information. *MSOM*, **5**, 157-175. Cited 26 times.
39. Boyacı, T., G. Gallego, K.H. Shang, J.S. Song. 2003. Erratum to Bounds in Serial Production/ Distribution Systems under Service Constraints. *MSOM* **5**, 372-374. Cited 4 times.
40. Grey W, Katircioglu K, Bagchi S, Shi DL, Gallego G, Seybold D, Stefanis. 2003. An analytic approach for quantifying the value of e-business initiatives *IBM SYSTEMS JOURNAL* **42**, (3): 484-497. Cited 15 times.
41. Boyacı, T., and G. Gallego. 2004. Supply Chain Coordination in a Market with Customer Service Competition. *Production and Operations Management* **13**, (1): 3-22. Cited 59 times.
42. Gallego, G. and H. Hu. 2004. Optimal policies for production/inventory systems with finite capacity and Markov-modulated demand and supply processes, in Stochastic Models of Production-Inventory Systems, G. Liberopoulos et al. (eds.), *Annals of Operations Research*, 125/126. Cited 1 time.
43. G. Gallego and B. Toktay. 2004. All-or-Nothing Ordering under a Capacity Constraint. *Operations Research* **52:6**, 1001-1002. Cited 10 times.
44. Gallego, G. and R. Phillips 2004. Revenue Management of Flexible Products. *MSOM*, **6**, 1-17. Cited 51 times.
45. G. Gallego and Ö. Özer. 2005. A New Algorithm and a New Heuristic for Serial Supply Systems. *Operations Research Letters*, **33:4**, 349-362. Cited 17 times.
46. Q. Feng, G. Gallego, S. P. Sethi, H. Yan and H. Zhang. 2005. A Periodic-Review Inventory Model with Three Consecutive Delivery Modes and Forecast Updates. *Journal of Optimization Theory and Applications* **124:1**, 1573-2878. Cited 14 times.
47. Gallego G, S. P. Sethi. 2005. K-convexity in R-n. *Journal of Optimization Theory and Applications* **127:1**, 71-88. Cited 2 times.
48. Gallego, G., S. Krishnamoorthy, Phillips, R. 2006. Dynamic Revenue Management Games with Forward and Spot Markets. *Journal of Revenue and Pricing Management* **5**, 10-31. Cited 11 times.
49. Gallego G, Katircioglu K, Ramachandran B. 2006. Semiconductor inventory management with multiple grade parts and downgrading. *Production Planning & Control* **17:7**, 689-700. Cited 4 times.
50. Gallego G, Huh WT, Kang W, Phillips R. 2006. Linear convergence of Tatonnement in a Bertrand oligopoly. *Lecture Notes in Computational Science and its Applications* **3982**, 822-831.

51. Gallego, G., W. T. Hu, W. Kang, and Phillips, R. 2006. Price Competition with the Attraction Demand Model: Existence of Unique Equilibrium and Its Stability. *MSOM*, **8:4**, 359-375. Cited 12 times.
52. Gallego, G., Y. Jin, A. Muriel, G. Zhang and V.T. Yildiz 2007. Optimal ordering policies with convertible lead times. *European Journal of Operations Research* **176:2**, 892-910. Cited 11 times.
53. Gallego, G., Katircioglu, K. and B. Ramachandran. 2007 Inventory management under highly uncertain demand. *Operations Research Letters*, **35: 3**, 281-289. Cited 7 times.
54. Gallego, G., Ö. Özer, and P. Zipkin. 2007. Bounds, Heuristics and Approximations for Distribution Systems. *Operations Research*, **55:3**, 503-517. Cited by 18.
55. Gallego, G., R. Phillips, and Kou, S. 2008. Revenue Management of Callable Products. *Management Science*, **54**, 550-564. Cited by 21.
56. Gallego, G., Sahin, O., and Phillips, R. 2008. Strategic Management of Distressed Inventory. *Production and Operations Management Society*. 4, 402-415. Cited by 14.
57. Gallego, G., Krishnamoorthy S. and R. Phillips. 2009. Competitive Revenue Management with Forward and Spot Markets. *Journal of Revenue and Pricing Management*. Cited 4 times.
58. Gallego, G. Lin, L. and R. Ratliff. 2009. Choice-based EMSR methods for single-leg revenue management with demand dependencies. *Journal of Revenue and Pricing Management*, **8**, 207-240. Cited 3 times.
59. Chen S. Gallego, G., and Li. M. 2010. Optimal seat allocation for two-flight problems with a flexible demand segment. *European Journal of Operations Research* **3**, 897-908.
60. Gallego, G. and O. Sahin. 2010. Revenue Management with Partially Refundable Fares. *Operations Research*, **58**, 817 - 833. Cited 9 times.
61. Gallego, G. and Talebian, M. 2010. Demand Learning and Dynamic Pricing for Multi-Version Products. *Journal of Pricing and Revenue Management*.
62. Gallego, G. and C. Stefanescu. Service Engineering: The Future of Service Feature Design and Pricing. Chapter to appear in Oxford Handbook of Pricing Management.
63. Gallego, G. 2010. Revenue Management. Chapter to appear in The Encyclopedia of Operations Research.

Papers Submitted for Publication

- Gallego, G. and Talebian, M. 2011. Strategic Effect of All Units Quantity Discounts on Supply Chain Revenues. Submitted to *Management Science*.
- Gallego, G., R. Ratliff, and S. Shebalov. 2011. A General Attraction Model and an Efficient Formulation for the Network Revenue Management Problem. Submitted to *Operations Research*.
- Gallego, G. and Sahin, O. Duopoly Competition with Real Options. Submitted to *MSOM*.
- Gallego, G., Hu, M., Wang, R., Beltran, J., Ward, J. and J. Shailendra. 2010. Coordination Mechanisms for Basic Products and Ancillary Services. Submitted to *Production and Operations Management*.
- Gallego, G., Hu, M., Wang, R., Beltran, J., Ward, J. and J. Shailendra. 2010. Design and Pricing of Residual Value Warranties. Submitted to *MSOM*.

Working Papers

- Gallego, G., Iyengar, G., Phillips, R. Managing Flexible Products on a Network. Cited 53 times.
- Desai, V. and Gallego, G. The Impact of Quality Restrictions on Revenue Management under a Choice Model.
- Federgruen A., Gallego, G., and Katalan, Z. The Effect of Product Variety on Manufacturing Performance.
- Gallego, G. Huang, Y, Katririoglu, K, and Leung, Y. When to Share Demand Information in a Simple Supply Chain?
- Gallego, G. and P. Jolly. Minimizing the Cost of the Capital Structure in a Catastrophe Bond Issue.
- Gallego, G. and X. Chao. Optimal Inventory Policies under Stochastic Supply and Demand Processes.
- Gallego, G. and H. Hu. Inventory Systems with Discretionary Sales and Emergency Orders.
- Gallego, G. and H. Hu. Inventory Systems with Discretionary Sales and Emergency Orders: Infinite Horizon.
- Gallego, G., Rodado,A., and Toktay, B. Full-Load Ordering Inventory System.
- Gallego, G. and W. Zhang. Optimal Stationary Policies for Multiple Procurement Modes.

Doctoral Students

Name	PhD date	Current Affiliation	Position
Ilkyeong Moon	July 1991	Pusan University	Professor
Youyi Feng	July 1994	Chinese University of Hong Kong	Associate Professor
Tamer Boyacı	July 1998	McGill University	Associate Professor
A. Özalp Özer	July 2000	Stanford University	Assistant Professor
A. Özalp Özer	July 2009	UT Dallas	Associate Professor
Haichu Hu	May 2001	Goldman Sachs	
Zheng Wang	May 2004	Citibank	
Srinivas Krishnamoorthy	July 2005	Ivey School of Business	Assistant Professor
Haengju Lee	Jul 2005	Xerox	Analyst
Ge Zhang	July 2005	SFG&E	Analyst
Ozge Sahin	June 2006	University of Michigan	Assistant Professor
Ming Hu	May 2008	University of Toronto	Assistant Professor
Lin Li	May 2008	Sabre	Research Scientist

Courses taught at Columbia University

IEOR E3402	Production Planning and Inventory Control
IEOR E3404	Production Scheduling
IEOR 4000	Production Management
IEOR E4003	Industrial Economics
SIEOR E4150	Probability and Statistics
IEOR E4706	Financial Engineering I
IEOR E4700	Intro to Financial Engineering
IEOR E4601	Dynamic Pricing and Revenue Management
Mgmt. Sc.-IEOR W6406	Inventory Planning Models
Mgmt. Sc.-IEOR W6408	Inventory Theory
IEOR E6609	Dynamic Programming
B6015	Decision Models
B7015	Decision Models
IEOR E8100	Seminar Revenue Management

Administrative Work:

Chairman 2002-2008
PhD committee 2002-2008
CVN faculty representative, 1994-present
Co-director MS in Financial Engineering 1999-2001
Library committee 1994-2000
IEOR masters degree admissions, 1994-2002
IEOR masters degree program advisor, 1995-2002
AIIE Faculty Advisor 1989-1991 and 1993-1994
IEOR Sophomore Advisor, 1990-1996
Deming Center co-director 1990-2003