CURRICULUM VITAE

Guillermo Gallego

Department of Industrial Engineering and Operations Research
Columbia University
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December, 2014

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.
Minors: Economics and Psychology

Professional Experience

2012–present	Liu Family Professor. Dept. of Ind. Eng. & Oper. Res.
2002–2008	Department Chairman Ind. Eng. & Oper. Res.
2000-present	Professor. Dept. of Ind. Eng. & Oper. Res. Columbia University
1999–2003	Visiting Scientist. IBM Watson Research Center, NY.
1999–2001	Co-director, MS in Financial Engineering program.
1996–1997	Visiting Associate Professor. Graduate School of Business. Stanford University
1995–2000	Tenured Associate Professor, Dept. of Ind. Eng. & Oper. Res. Columbia 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

Honors and Awards

- Keynote Speaker INFORMS Annual meeting 2013.
- MSOM Fellows class of 2013.
- Informs Fellow class of 2012.
- Informs Revenue Management and Pricing Practice Prize, Berlin (2012)
- AGIFORS technical paper award, Barcelona (2012)

- Informs Revenue Management and Pricing Historical Prize, with G. van Ryzin (2011)
- AGIFORS Best technical paper award, Montreal (2008)
- AGIFORS Best paper award, Tahiti (2008)
- AGIFORS Best paper award, Korea (2007)
- IBM Faculty Award (2006-2007)
- Informs Revenue Management and Pricing Section Award (2005)
- AGIFORS Best innovation award, Brazil (2005)
- AGIFORS Best paper award, South Africa (2005)
- IBM Faculty award (2005-2006)
- AGIFORS Best paper award, New Zealand (2004)
- NSF Research Initiation Award (2000)
- AT&T Scholarship
- Alpha Pi Mu
- Omega Rho

Consulting

- Amadeus
- Bell Labs
- Cannondale Corporation
- Columbia Video Network
- Walt Disney World
- Hewlett Packard
- IBM
- Ireland Development Agency
- Isagen
- Lucent Technologies
- Northwest Airlines
- National Research Council
- Oak Investment Partners
- Pitney Bowes
- Razorgator
- Sabre Holdings
- SAS
- United Airlines
- University of Michigan
- Vialux

Professional Activities

2013-2014	Edelman prize committee
2012-2014	Revenue Management and Pricing award committee
2007- 2009	von Neumann prize committee
2006	Co-organizer of "Management Science Unleashed" conference at IBM.
2005-2013	Senior Editor *POMS*
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 *M&SOM*
1998-2002	Editorial Board Member *M&SOM*
1997-2001	Departmental Editor *IIE-Transactions*
1994-2002	Associate Editor *Management Science*
1994-2006	Associate Editor *Naval Research Logistics*
1994-2000	Associate Editor *Operations Research*
1992-1997	Associate Editor *IIE-Transactions*

Administrative Work:

Columbia Video Network review committee 2013
Committee on Admissions and Financial Aid 2012-present
Chairman IEOR Department 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

Professional Society Memberships

The Institute for Operations Research and the Management Sciences
Manufacturing and Operations Management Society
The Production and Operations Management Society
Pricing and Revenue Management Section
The Airline Group of the International Federation of Operational Research Societies
Society of Hispanic Professional 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 researh 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 (2005-2006, 2006-2007) $80,000

Sabre (2008-2013) Gift to support research. $35,000

HP (2008-2013) Gift to support PhD students. $185,000 (approximate figure)

Trillium (2006-2014) Automatic Trading Strategies. $235,000

Sabre (2013-2015) Gift to support research. $20,000 per year

HP (2013-2014) Support of graduate student. $40,000

Invited Talks

Carnegie Mellon University
Cambridge University
COPI 08 conference, Paris France
Case Western University
Chinese University of Hong Kong
Cornell University
Duke University
EMST, Germany
Fudan University
Hong Kong University of Science and Technology
Insead France
Lehigh University
London Business School
London School of Economics
McGill University
National University of Singapore
North Carolina State University
Northwestern University
MIT
Purdue
Stanford University
SUTD
Rutgers 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

Publications:

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.

2. Gallego, G. 1990. Scheduling the Production of Several Items with Random Demands in a Single Facility. *Management Science.* **36**, 1579-1592.

3. Gallego, G. 1990. An Extension to the Class of Easy Economic Lot Scheduling Problems. *IIE Transactions.* **22**, 189-191.

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.

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.

6. Gallego, G. 1992. A Min-Max Distribution Free Procedure for the (Q,R) Inventory Model. *Operations Research Letters.* **11**, 55-60.

7. Gallego, G. and I. Moon. 1992. The Effect of Externalizing Setups in the Economic Lot Scheduling Problem. *Operations Research.* **40**, 614-619.

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.

9. Gallego, G., and R. Roundy. 1992. The Economic Lot Scheduling Problem with Finite Backorder Costs. *Naval Research Logistics.* **39**, 729-739.

10. Gallego, G. 1993. Reduced Production Rates in the Economic Lot Scheduling Problem. *International Journal of Production Research.* **31**, 1035-1046.

11. Gallego, G. and I. Moon. 1993. The Distribution Free Newsboy Problem: Review and Extensions. *Journal of the Operational Research Society.* **44**, 825-834.

12. Gallego, G., D. Yao, and I. Moon. 1994. Optimal Control of a Manufacturing Process that Involves Trial Runs. *Management Science.* **39**, 1499-1505.

13. Gallego, G., and D. Joneja. 1994. Economic Lot Scheduling Problem with Raw Material Considerations. *Operations Research.* **42**, 92-101.

14. Gallego, G. 1994. When is a Base Stock Policy Optimal in Recovering Cyclic Schedules? *Naval Research Logistics.* **41**, 317-333.

15. Gallego, G. and D. Simchi-Levi. 1994. Rejoinder to a Note on Bounds for Direct Shipping. *Management Science.* **40**, 1393.

16. Gallego, G. and G. van Ryzin. 1994. Optimal Dynamic Pricing of Inventories with Stochastic Demands over Finite Horizons. *Management Science.* **40**, 999-1020.

17. Moon, I. and G. Gallego. 1994. Distribution Free Procedures for Some Inventory Models. *Journal of the Operational Research Society.* **45**, 651-658.

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.

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.

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.

23. Gallego, G., M. Queyranne, and D. Simchi-Levi. 1996. Single Resource Multi-Item Inventory Systems. *Operations Research.* **44**, 580-595.

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.

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.

26. Gallego, G. 1998. New Bounds and Heuristics for (Q,R) Policies. *Management Science*, **44**, 219-233.

27. Gallego, G. and P. Zipkin. 1999. Qualitative Analysis of Multi-Stage Production-Transportation Systems: Stock Positioning and Performance Estimation. *MSOM*, **1**, 77-88.

28. Feng, Y. and G. Gallego. 2000. Perishable Asset Revenue Management with Markovian Time Dependent Demand Intensities. *Management Science*, **46**, 941-956.

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.

30. Gallego, G., J. K. Ryan, and D. Simchi-Levi. 2001. Minimax Analysis for Discrete Finite Horizon Inventory Models. *IIE Transactions*, **33**, 861-874.

31. Boyacı, T., and G. Gallego. 2001. Serial Production/Distribution Systems Under Service Constraints. *MSOM*, **3**, 43-50.

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.

33. Gallego, G., and Ö. Özer. 2001. Integrating Replenishment Decisions With Advance Demand Information. *Management Science* **47**, 1344-1360.

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.

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.

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.

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.

38. Gallego, G. and Ö. Özer. 2003. Optimal Replenishment Policies for Multi-Echelon Inventory Problems under Advance Demand Information. *MSOM*, **5**, 157-175.

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.

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.

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.

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.

43. G. Gallego and B. Toktay. 2004. All-or-Nothing Ordering under a Capacity Constraint. *Operations Research* **52:6**, 1001-1002.

44. Gallego, G. and R. Phillips 2004. Revenue Management of Flexible Products. *MSOM*, **6**, 1-17.

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.

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.

47. Gallego G, S. P. Sethi. 2005. K-convexity in R-n. *Journal of Optimization Theory and Applications* **127:1**, 71-88.

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.

49. Gallego G, Katircioglu K, Ramachandran B. 2006. Semiconductor inventory management with multiple grade parts and downgrading. *Production Planning & Control* **17:7**, 689-700.

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.

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.

53. Gallego, G., Katircioglu, K. and B. Ramachandran. 2007 Inventory management under highly uncertain demand. *Operations Research Letters*, **35: 3**, 281-289.

54. Gallego, G. Ö. Özer, and P. Zipkin. 2007. Bounds, Heuristics and Approximations for Distribution Systems. *Operations Research*, **55:3**, 503-517.

55. Gallego, G., R. Phillips, and Kou, S. 2008. Revenue Management of Callable Products. *Management Science*, **54**, 550-564.

56. Gallego, G., Sahin, O., and Phillips, R. 2008. Strategic Management of Distressed Inventory. *Production and Operations Management Society.* 4, 402-415.

57. Gallego, G., Krishnamoorthy S. and R. Phillips. 2009. Competitive Revenue Management with Forward and Spot Markets. *Journal of Revenue and Pricing Management.*

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.

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.

61. Gallego, G., S. Krishnamoorthy, Phillips, R. 2011. Competitive Revenue Management with Forward and Spot Markets. *Journal of Revenue and Pricing Management*, **10**, 132160.

62. Gallego, G. 2011. Revenue Management. Chapter in The Wiley Encyclopedia of Operations Research and Management Science. James J. Cochran, editor.

63. Katricioglu, K. and G. Gallego. 2011. A Practical Multi-Echelon Inventory Model with Semiconductor Manufacturing Application. Chapter in Planning Production and Inventories in the extended enterprise. International Series in Operations Research & Management Science, 2011, Volume 152, 133-151.

64. Gallego, G. and C. Stefanescu. 2012. Services Engineering: Design and Pricing of Service Features. Chapter in The Oxford Handbook of Pricing Management. Ozer, 0. and R. Phillips, editors. Oxford University Press.

65. Gallego, G. and M. Talebian. 2012. Demand Learning and Dynamic Pricing for Multi-Version Products. *Journal of Pricing and Revenue Management*, **11**, 303 - 318.

66. Blanchet, J, Gallego, G., and V. Goyal. 2013. A Markov chain approximation to choice modeling. *ACM Conference on Electronic Commerce*, 103-104.

67. Gallego, G., R. Ratliff, and S. Shebalov. 2013. A General Attraction Model and an Efficient Formulation for the Network Revenue Management Problem. *Operations Research*. To appear.

68. Blanchet, J., Gallego, G. and Goyal, V. 2013. A Markov Chain Approximation to Choice Modeling. *Operations Research*. To appear.

69. Gallego, G., Wang, R., Ward, J., Hu, Ming, Beltran, J., Kayis, E., and S. Jain. 2014. Flexible Duration Warranties with Dynamic Reliability Learning. *Production and Operations Management*, **23**, 4, 645?659.

70. Davis, J., G. Gallego, and H. Topaloglu. 2014. Assortment Optimization under Variants of the Nested Logit Model. *Operations Research*, **62**(2) 250 - 273.

71. Gallego, G. and R. Wang. 2014. Multiproduct Price Optimization and Competition Under the Nested Logit Model with Product-Differentiated Price Sensitivities. *Operations Research*, **62** (2), 450 - 461.

72. Gallego, G. and M. Hu. 2014. Dynamic Pricing of Perishable Assets under Competition. *Management Science*, **60** (5), 1241-1259.

73. Gallego, G. and Talebian, M. 2014. Commissions and Sales Targets Under Competition. *Management Science*, **60**, 2180 - 2197

74. Gallego, G., H. Topalopglu. 2014. Constrained Optimization for the Nested Logit Model. *Management Science*, **60**, 2583-2601

75. Gallego, G., Wang, R., Hu, Ming, Ward, J, and J. L. Beltran. 2014. No Claim? Your Gain: Design of Residual Value Extended Warranties Under Risk Aversion and Strategic Claim Behavior. *MSOM*, to appear.

Papers Submitted for Publication

- Davis, J., G. Gallego, and H. Topaloglu. 2013. Assortment Planning under the Multinomial Logit Model with Totally Unimodular Constraint Structures. Revised and resubmitted to *Operations Research*.

- Gallego, G., and M. Talebian. 2013. Supply Chain Coordination under Competition. Submitted to *Management Science*.

- Gallego, G., Hu, M., Wang, R., Beltran, J., Ward, J. and J. Shailendra. 2011. Coordination Mechanisms for Basic Products and Ancillary Services. Submitted to *Production and Operations Management*. Review and Resubmit.

- Gallego, G., Hu, M., Wang, R., Beltran, J., Ward, J. and J. Shailendra. 2010. Design and Pricing of Residual Value Warranties. Submitted to *MSOM*. Review and Resubmit.

- Balseiro, S., C. Gocmen, G. Gallego, and Phillips, R. 2011. Revenue Management of Consumer Options for Tournaments. Submitted to *Operations Research*.

Work in Progess

- Book on Pricing and Revenue Management: 9 chapters written. To be published by Stanford University Press.

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
	July 2009	Zaragoza Logistics Center, Spain	Professor
Tamer Boyacı	July 1998	McGill University	Professor
A. Özalp Özer	July 2000	Stanford University	Assistant Professor
	July 2009	UT Dallas	Professor
Haichu Hu	May 2001	Goldman Sachs	Vice President
Zheng Wang	May 2004	Citibank	Vice President
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
	July 2011	John Hopkins University	Associate Professor
Ming Hu	May 2008	University of Toronto	Assistant Professor
Lin Li	May 2008	Sabre	Research Scientist
Ruxian Wang	May 2011	HP Labs	

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