Huseyin Topaloglu

School of Operations Research and Information Engineering
Cornell Tech
2 West Loop Road, New York, NY 10044
Tel: 646-971-3825
E-mail: ht88@cornell.edu
Web: http://people.orie.cornell.edu/huseyin/
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Education

- Ph. D. in Operations Research and Financial Engineering, Princeton University, Princeton, NJ, 2001.
  Dissertation Title: "Dynamic Programming Approximations for Dynamic Resource Allocation Problems" (advised by Warren B. Powell).

- M. A. in Operations Research and Financial Engineering, Princeton University, Princeton, NJ, 1999.

- B. Sc. in Industrial Engineering, Bogazici University, Istanbul, Turkey, 1997.
  Thesis Title: "Behavioral Validation of System Dynamics Models" (advised by Yaman Barlas).

Research Interests

- Approximate dynamic programming and approximation algorithms with applications in transportation logistics, revenue management, pricing, inventory control and supply chain management.

Academic Experience

- Professor, Cornell Tech, New York, NY, 2015-present.

- Professor, School of Operations and Information Engineering, Cornell University, Ithaca, NY, 2002-present.

- Postdoctoral Research Fellow, Department of Operations Research and Financial Engineering, Princeton University, Princeton, NJ, 2001-2002.

Industry Experience

- Senior Principal Scientist, Amazon, New York, NY, 2020-present.

Publications

Refereed Journal Publications

1. P. Gao, Y. Ma, N. Chen, G. Gallego, A. Li, P. Rusmevichientong and H. Topaloglu, "Assortment optimization and pricing under the multinomial logit model with impatient customers: Sequential recommendation and selection," *Operations Research*, to appear.

2. M. Sumida, G. Gallego, P. Rusmevichientong, H. Topaloglu and J. M. Davis, "Revenue-utility tradeoff in assortment optimization under the multinomial logit model with totally unimodular constraints," *Management Science*, to appear, J. M. Davis won an honorable mention in 2014 Nicholson Student Paper Prize with an earlier version of this paper.

3. V. Lo and H. Topaloglu, "Omnichannel assortment optimization under the multinomial logit model with a features tree, " *Manufacturing & Service Operations Management*, to appear.

4. Y. Ma, P. Rusmevichientong, M. Sumida and H. Topaloglu, "An approximation algorithm for network revenue management under nonstationary arrivals," *Operations Research*, vol. 68, pp. 834–855, 2020.

5. H. Zhang, P. Rusmevichientong and H. Topaloglu, "Assortment optimization under the paired combinatorial logit model," *Operations Research*, vol. 68, pp. 741–761, 2020.

6. P. Rusmevichientong, M. Sumida and H. Topaloglu, "Dynamic assortment optimization for reusable products with random usage durations," *Management Science*, vol. 66, pp. 2820–2844, 2020.

7. N. Liu, Y. Ma and H. Topaloglu, "Assortment optimization under the multinomial logit model with sequential offerings," *INFORMS Journal on Computing*, vol. 32, pp. 835–853, 2020.

8. J. Feldman, A. Paul and H. Topaloglu, "Assortment optimization with small consideration sets," *Operations Research*, tech. note, vol. 67, pp. 1283–1299, 2019.

9. J. Gao, K. Iyer and H. Topaloglu, "When fixed price meets priority auctions: Competing firms with different pricing and service rules," *Stochastic Systems*, vol. 9, pp. 47–80, 2019.

10. J. Dong, A. S. Simsek and H. Topaloglu, "Pricing problems under the Markov chain choice model," *Production and Operations Management*, vol. 28, pp. 157–175, 2019.

11. M. Sumida and H. Topaloglu, "An approximation algorithm for capacity allocation over a single flight leg with fare-locking," *INFORMS Journal on Computing*, vol. 31, pp. 83–99. 2019.

12. V. Lo and H. Topaloglu, "Assortment optimization under the multinomial logit model with product synergies," *Operations Research Letters*, vol. 47, pp. 546–552. 2019.

13. H. Zhang, P. Rusmevichientong and H. Topaloglu, "Multi-product pricing under the generalized extreme value models with homogeneous price sensitivity parameters," *Operations Research*, tech. note, vol. 66, pp. 1559–1570, 2018.

14. A. S. Simsek and H. Topaloglu, "An expectation-maximization algorithm to estimate the parameters of the Markov chain choice model," *Operations Research*, tech. note, vol. 66, pp. 748–760, 2018.

15. J. Feldman and H. Topaloglu, "Assortment optimization under the multinomial logit model with nested consideration sets," *Operations Research*, tech. note, vol. 66, pp. 380–391, 2018.

16. J. Feldman and H. Topaloglu, "Revenue management under the Markov chain choice model," *Operations Research*, vol. 65, pp. 1322–1342, 2017.

17. J. Gao, K. Iyer and H. Topaloglu, "Price competition under linear demand and finite inventories: Contraction and approximate equilibria," *Operations Research Letters*, vol. 45, pp. 382–387, 2017.

18. J. M. Davis, H. Topaloglu and D. P. Williamson "Pricing problems under the nested logit model with a quality consistency constraint," *INFORMS Journal on Computing*, vol. 29, pp. 54–76. 2017.

19. N. Aydin, S. I. Birbil and H. Topaloglu, "Delayed purchase options in single-leg revenue management," *Transportation Science*, vol. 51, pp. 1031–1045, 2017.

20. J. Feldman and H. Topaloglu, "Bounding optimal expected revenues for assortment optimization under mixtures of multinomial logits," *Production and Operations Management*, vol. 24, pp. 1598–1620, 2015.

21. J. M. Davis, H. Topaloglu and D. P. Williamson, "Assortment optimization over time," *Operations Research Letters*, vol. 43, pp. 608–611, 2015.

22. G. Li, P. Rusmevichientong and H. Topaloglu, "The d-level nested logit model: Assortment and price optimization problems," *Operations Research*, vol. 63, pp. 325–342, 2015.

23. J. Feldman and H. Topaloglu, "Capacity constraints across nests in assortment optimization under the nested logit model," *Operations Research*, tech. note, vol. 63, pp. 812–822, 2015.

24. W. Z. Rayfield, P. Rusmevichientong and H. Topaloglu, "Approximation methods for pricing problems under the nested logit model with price bounds," *INFORMS Journal on Computing*, vol. 27, pp. 335–357, 2015.

25. G. Gallego and H. Topaloglu, "Constrained assortment optimization for the nested logit model," *Management Science*, vol. 60, pp. 2583–2601, 2014.

26. M. S. Maxwell, E. C. Ni, C. Tong, S. R. Hunter, S. G. Henderson and H. Topaloglu, "A bound on the performance of an optimal ambulance redeployment policy," *Operations Research*, vol. 62, pp. 1014–1027, 2014.

27. J. M. Davis, G. Gallego and H. Topaloglu, "Assortment optimization under variants of the nested logit model," *Operations Research*, vol. 62, pp. 250–273, 2014.

28. C. Ding, P. Rusmevichientong and H. Topaloglu, "Balancing revenues and repair costs under partial information about product reliability," *Production and Operations Management*, vol. 23, pp. 1899–1918, 2014.

29. P. Rusmevichientong, D. Shmoys, C. Tong and H. Topaloglu, "Assortment optimization under the multinomial logit model with random choice parameters," *Production and Operations Management*, vol. 23, pp. 2023–2039, 2014.

30. J. Feldman, N. Liu, H. Topaloglu and S. Ziya, "Appointment scheduling under patient preference and no-show behavior," *Operations Research*, vol. 62, pp. 794–811, 2014.

31. C. Tong and H. Topaloglu, "On the approximate linear programming approach for network revenue management problems," *INFORMS Journal on Computing*, vol. 26, pp. 121–134, 2014.

32. M. S. Maxwell, S. G. Henderson and H. Topaloglu, "Tuning approximate dynamic programming policies for ambulance redeployment via direct search," *Stochastic Systems*, vol. 3, pp. 322-361, 2013.

33. R. Kumar, M. E. Lewis and H. Topaloglu, "Dynamic service rate control for a single server queue with Markov modulated arrivals," *Naval Research Logistics*, vol. 60, pp. 661–677, 2013.

34. H. Topaloglu, "Joint stocking and product offer decisions under the multinomial logit model," *Production and Operations Management*, vol. 22, pp. 1182–1199, 2013.

35. P. Rusmevichientong and H. Topaloglu, "Robust assortment optimization in revenue management under the multinomial logit choice model," *Operations Research*, vol. 60, pp. 865–882, 2012.

36. H. Topaloglu, S. I. Birbil, J. B. G. Frenk and, N. Noyan, "Tractable open loop policies for joint overbooking and capacity control over a single flight leg with multiple fare classes," *Transportation Science*, vol. 46, pp. 460–481, 2012.

37. Y. Levin, M. Nediak and H. Topaloglu, "Cargo capacity management with allotments and spot market demand," *Operations Research*, vol. 60, pp. 351–365, 2012.

38. S. Kunnumkal, K. Talluri and H. Topaloglu, "A randomized linear programming method for network revenue management with product-specific no-shows," *Transportation Science*, vol. 46, pp. 90–108, 2012.

39. H. Topaloglu, "A duality based approach for network revenue management in airline alliances," *Journal of Revenue and Pricing Management*, vol. 11, pp. 500–517, 2012.

40. S. Kunnumkal and H. Topaloglu, "Linear programming based decomposition methods for inventory distribution systems," *European Journal of Operational Research*, vol. 211, pp. 282–297, 2011.

41. S. Kunnumkal and H. Topaloglu, "A randomized linear program for the network revenue management problem with customer choice behavior," *Journal of Revenue and Pricing Management*, vol. 10, pp. 455–470, 2011.

42. A. Erdelyi and H. Topaloglu, "Approximate dynamic programming for dynamic capacity allocation with multiple priority levels," *IIE Transactions*, vol. 43, pp. 129–142, 2011.

43. A. Erdelyi and H. Topaloglu, "Using decomposition methods to solve pricing problems in network revenue management," *Journal of Revenue and Pricing Management*, vol. 10, pp. 325–343, 2011.

44. S. Kunnumkal and H. Topaloglu, "A stochastic approximation algorithm to compute bid prices for joint capacity allocation and overbooking over an airline network," *Naval Research Logistics*, vol. 54, pp. 323–343, 2011.

45. S. Kunnumkal and H. Topaloglu, "A stochastic approximation algorithm for making pricing decisions in network revenue management problems," *Journal of Revenue and Pricing Management*, Special Issue on INFORMS Revenue Management and Pricing Section Conference, vol. 9, pp. 419–442, 2010.

46. S. Kunnumkal and H. Topaloglu, "A new dynamic programming decomposition method for the network revenue management problem with customer choice behavior," *Production and Operations Management*, vol. 19, pp. 575–590, 2010.

47. S. Kunnumkal and H. Topaloglu, "A stochastic approximation method with max-norm projections and its applications to the Q-Learning algorithm," *The ACM Transactions on Modeling and Computer Simulation*, vol. 20, pp 12:1–12:26, 2010.

48. A. Erdelyi and H. Topaloglu, "A dynamic programming decomposition method for making overbooking decisions over an airline network," *INFORMS Journal on Computing*, vol. 22, pp. 443–456, 2010.

49. S. Kunnumkal and H. Topaloglu, "Computing time-dependent bid-prices in network revenue management problems," *Transportation Science*, vol. 44, pp. 38–62, 2010.

50. M. S. Maxwell, M. Restrepo, S. G. Henderson and H. Topaloglu, "Approximate dynamic programming for ambulance redeployment," *INFORMS Journal on Computing*, vol. 22, pp. 266–281, 2010.

51. S. Kunnumkal and H. Topaloglu, "A stochastic approximation method for the single-leg revenue management problem with discrete demand distributions," *Mathematical Methods of Operations Research*, vol. 70, pp. 477–504, 2009.

52. H. Topaloglu, "Using Lagrangian relaxation to compute capacity-dependent bid prices in network revenue management," *Operations Research*, vol. 57, pp. 637–649, 2009.

53. H. Topaloglu, "A tighter variant of Jensen's lower bound for stochastic programs and separable approximations to recourse functions," *European Journal of Operational Research*, vol. 199, pp. 315–322, 2009.

54. M. Restrepo, S. G. Henderson and H. Topaloglu, "Erlang loss models for the static deployment of ambulances," *Health Care Management Science*, vol. 12, pp. 67–79, 2009.

55. A. Erdelyi and H. Topaloglu, "Computing protection level policies for dynamic capacity allocation problems by using stochastic approximation methods" *IIE Transactions*, vol. 41, pp. 498–510, 2009.

56. H. Topaloglu, "On the asymptotic optimality of the randomized linear program for network revenue management," *European Journal of Operational Research*, Special Issue on Pricing and Revenue Management, vol. 197, pp. 884–896, 2009.

57. A. Erdelyi and H. Topaloglu, "Separable approximations for joint capacity control and overbooking decisions in network revenue management," *Journal of Revenue and Pricing Management*, Special Issue on INFORMS Revenue Management and Pricing Section Conference, vol. 8, pp. 3–20, 2009.

58. S. Kunnumkal and H. Topaloglu, "A tractable revenue management model for capacity allocation and overbooking over an airline network," *Flexible Services and Manufacturing Journal*, vol. 20, pp. 125–147, 2008.

59. S. Kunnumkal and H. Topaloglu, "A duality-based relaxation and decomposition approach for inventory distribution systems," *Naval Research Logistics*, vol. 55, pp. 612–631, 2008.

60. S. Kunnumkal and H. Topaloglu, "A refined deterministic linear program for the network revenue management problem with customer choice behavior," *Naval Research Logistics*, vol. 55, pp. 563–580, 2008.

61. H. Topaloglu, "A stochastic approximation method to compute bid prices in network revenue management problems," *INFORMS Journal on Computing*, vol. 20, pp. 596–610, 2008.

62. S. Kunnumkal and H. Topaloglu, "Using stochastic approximation methods to compute optimal base-stock levels in inventory control problems," *Operations Research*, vol. 56, pp. 646-664, 2008.

63. S. Kunnumkal and H. Topaloglu, "Exploiting the structural properties of the underlying Markov decision problem in the Q-learning algorithm," *INFORMS Journal on Computing*, vol. 20, pp. 288–301, 2008.

64. S. Kunnumkal and H. Topaloglu, "Price discounts in exchange for reduced customer demand variability and applications to advance demand information acquisition," *International Journal of Production Economics*, vol. 111, pp. 543–561, 2008.

65. H. Topaloglu and W. B. Powell, "Incorporating pricing decisions into the stochastic dynamic fleet management problem," *Transportation Science*, vol. 41, pp. 281–301, 2007.

66. G. J. King and H. Topaloglu, "Incorporating the pricing decisions into dynamic fleet management models," *Journal of the Operational Research Society*, vol. 58, pp. 1065–1074, 2007.

67. H. Topaloglu and W. B. Powell, "Sensitivity analysis of a dynamic fleet management model using approximate dynamic programming," *Operations Research*, vol. 55, pp. 319–331, 2007.

68. H. Topaloglu and S. Kunnumkal, "Approximate dynamic programming methods for an inventory allocation problem under uncertainty," *Naval Research Logistics*, vol 53, pp. 822–841, 2006.

69. H. Topaloglu, "A parallelizable dynamic fleet management model with random travel times," *European Journal of Operational Research*, vol. 175, pp. 782–805, 2006.

70. H. Topaloglu and W. B. Powell, "Dynamic programming approximations for stochastic, time-staged integer multicommodity flow problems," *INFORMS Journal on Computing*, vol. 18, pp. 31–42, 2006.

71. H. Topaloglu, "An approximate dynamic programming approach for a product distribution problem," *IIE Transactions*, vol. 37, pp. 697–710, 2005.

72. H. Topaloglu and W. B. Powell, "A distributed decision making structure for dynamic resource allocation using nonlinear functional approximations," *Operations Research*, vol. 53, pp. 281–297, 2005.

73. W. B. Powell, A. Ruszczynski and H. Topaloglu, "Learning algorithms for separable approximations of discrete stochastic optimization problems," *Mathematics of Operations Research*, vol. 29, pp. 814–836, 2004.

74. H. Topaloglu and W. B. Powell, "An algorithm for approximating piecewise-linear functions from sample gradients," *Operations Research Letters*, vol. 31, pp. 66–76, 2003.

Working Papers

Manuscripts are available at
`http://people.orie.cornell.edu/huseyin/publications/publications.html`.

1. Y. Cao, P. Rusmevichientong and H. Topaloglu, "Revenue management under a mixture of multinomial logit and independent demand models."

2. P. Rusmevichientong, M. Sumida, H. Topaloglu and Y. Bai "Revenue management for boutique hotels: Resources with unit capacities and itineraries over intervals of resources."

3. O. El Housni, M. Sumida, P. Rusmevichientong, H. Topaloglu and S. Ziya, "Can testing ease social distancing measures? Future evolution of COVID-19 in NYC."

Book

1. G. Gallego and H. Topaloglu, "Revenue management and pricing analytics," Springer, New York, NY, 2019.

Book Chapters

1. H. Topaloglu, "Computation and Dynamic Programming," in *Wiley Encyclopedia of Operations Research and Management Science*, C. Smith, Ed., 2011.

2. S. Kunnumkal and H. Topaloglu, "Transportation Resource Management," in *Wiley Encyclopedia of Operations Research and Management Science*, A. Erera, Ed., 2011.

3. H. Topaloglu, "A parallelizable and approximate dynamic programming-based dynamic fleet management model with random travel times and multiple vehicle types," in *Dynamic Fleet Management: Concepts, Systems, Algorithms and Case Studies*, V. S. Zeimpekis, G. M. Giaglis, C. D. Tarantilis and I. Minis, Eds., 2007.

4. W. B. Powell and H. Topaloglu, "Approximate dynamic programming for large-scale resource allocation problems," in *TutORials in Operations Research*, M.P. Johnson, B. Norman and N. Secomandi, Eds., 2006.

5. W. B. Powell and H. Topaloglu, "Fleet management," in *Applications of Stochastic Programming, Mathematical Programming Society SIAM Series in Optimization*, S. Wallace and W. Ziemba, Eds., 2005.

6. W. B. Powell and H. Topaloglu, "Stochastic programming in transportation and logistics," in *Handbooks in Operations Research and Management Science*, Volume on *Stochastic Programming*, A. Ruszczynski and A. Shapiro, Eds., 2003.

Book Review

1. H. Topaloglu, "A review of: "Handbook of Learning and Approximate Dynamic Programming"", *IIE Transactions*, vol. 38, pp. 183–184, 2006.

Refereed Conference Proceedings

1. E. C. Ni, S. R. Hunter, S. G. Henderson and H. Topaloglu, "Exploring bounds on ambulance deployment performance," *Proceedings of 2012 Winter Simulation Conference*, pp. 45–56.

2. M. S. Maxwell, S. G. Henderson and H. Topaloglu, "Identifying effective policies in approximate dynamic programming: Beyond regression," *Proceedings of 2010 Winter Simulation Conference*, pp. 1079–1087.

3. S. Kunnumkal and H. Topaloglu, "Simulation-based methods for booking control in network revenue management," *Proceedings of 2010 Winter Simulation Conference*, pp. 1890-1897.

4. M. S. Maxwell, S. G. Henderson and H. Topaloglu, "Ambulance redeployment: An approximate dynamic programming approach," *Proceedings of 2009 Winter Simulation Conference*, pp. 1850–1860, 2009.

5. H. Topaloglu and S. Kunnumkal, "New methods to compute dynamic bid-prices in network revenue management," *Proceedings of 6-th Triennial Symposium on Transportation Analysis*, 2007.

6. H. Topaloglu and W. B. Powell, "Sensitivity analysis of a dynamic vehicle allocation policy using approximate dynamic programming and applications to fleet-sizing," *Proceedings of 5-th Triennial Symposium on Transportation Analysis*, 2004.

7. W. B. Powell and H. Topaloglu, "Dynamic programming approximations for dynamic resource allocation problems," *Proceedings of 4-th Triennial Symposium on Transportation Analysis*, 2001.

Professional and Research Recognition

1. Meritorious Service Award for contributions to *Operations Research*, 2013.

2. Meritorious Service Award for contributions to *Management Science*, 2013.

3. Best paper in Operations Engineering and Analysis in *IIE Transactions* for the paper "Approximate dynamic programming for dynamic capacity allocation with multiple priority levels," 2011.

4. INFORMS Revenue Management and Pricing Section Prize for the paper "Using Lagrangian relaxation to compute capacity-dependent bid prices in network revenue management," 2010.

5. COIN-OR Cup for the application of DFO and IPOPT to develop technologies for cargo capacity management and dynamic pricing in joint work with Y. Levin, T. Levin, J. McGill and M. Nediak, 2009.

Sponsored Research

1. "Collaborative Research: Performance Guarantees for Approximate Dynamic Programming Approaches to Pricing and Capacity Management," National Science Foundation, CMMI-1825406, co-principal investigator with Paat Rusmevichientong, $531,116, portion of Cornell University is $356,000, 2018-2021.

2. "City Logistics: Challenges and Opportunities in the Information Age," Schmidt Sciences, co-principal investigator with Nathan Kallus, $200,000, 2017-2019.

3. "Pricing Services and Products in the Presence of Parallel Delivery Mechanisms and Strategic Consumer Behavior," National Science Foundation, CMMI-1462592, co-principal investigator with Krishnamurthy Iyer, $299,586, 2015-2018.

4. "Collaborative Research: Integrating Complex Choice Behavior into Assortment, Inventory and Pricing Decisions," National Science Foundation, CMMI-1433398, co-principal investigator with Paat Rusmevichientong, $323,637, portion of Cornell University is $251,000, 2014-2017.

5. "A General Framework for Incorporating Choice Models into Operations Management Decisions," National Science Foundation, CMMI-0969113, co-principal investigator with Paat Rusmevichientong, $300,000, 2010-2013.

6. "Approximate Dynamic Programming for Perishable Asset Management with Applications in Dynamic Pricing, Capacity Allocation and Revenue Management," National Science Foundation, CMMI-0825004, $320,942, 2008-2011.

7. "Approximate Dynamic Programming, Simulation Optimization and Emergency Services," National Science Foundation, CMMI-0758441, co-principal investigator with Shane Henderson, $267,422, 2008-2011.

8. "Sensitivity Analysis of the Dynamic Fleet Management Problem, with Applications in Fleet Sizing, Pricing and Terminal Capacity Planning," National Science Foundation, DMI-0422133, $199,996, 2004-2007.

Invited Talks

Different versions of the talk may have been given at multiple occasions.

Seminars at Universities and Workshops and Plenary Talks

1. Shanghai University of Finance and Economics, Shanghai, China, "Approximation algorithms for dynamic assortment optimization," October 2020.

1. London Business School, London, UK, "Approximation algorithms for network revenue management," May 2020.

1. Amazon.com, Seattle, WA, "Approximation algorithms for dynamic assortment optimization," February 2020.

2. University of Illinois at Chicago, Chicago, IL, "Approximation algorithms for dynamic assortment optimization," December 2019.

3. Northwestern University, Evanston, IL, "Approximation algorithms for dynamic assortment optimization," December 2019.

4. Columbia University, New York, NY, "Approximation algorithms for network revenue management under non-stationary arrivals," October 2019.

5. Cornell University, Ithaca, NY, "Approximation algorithms for network revenue management," April 2019.

6. Naval Postgraduate School, Monterey, CA, "Dynamic assortment optimization," February 2019.

7. Google Research, New York, NY, "Approximation algorithms for network revenue management," January 2019.

8. Yahoo Research, New York, NY, "Approximation algorithms for network revenue management," November 2018.

9. IBM T. J. Watson Research Center, Yorktown Heights, NY, "Approximation algorithms for network revenue management," November 2018.

10. Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, MN, "Approximation algorithms for network revenue management," October 2018.

11. Duke University, Durham, NC, "Dynamic assortment optimization," December 2017.

12. Cornell University, Ithaca, NY, "Dynamic assortment optimization," November 2017.

13. University of Western Ontario, London, ON, "Dynamic assortment optimization," September 2017.

14. Georgetown University, Washington DC, "Pricing under the Markov chain choice model," March 2017.

15. George Washington University, Washington DC, "Pricing under the Markov chain choice model," February 2017.

16. University of Toronto, Toronto, ON, "Pricing under the Markov chain choice model," January 2017.

17. Columbia University, New York, NY, "Pricing under the Markov chain choice model," December 2016.

18. Queen's University, Kingston, ON, "Pricing under the Markov chain choice model," October 2016.

19. University of Illinois at Urbana-Champaign, Urbana, IL, "Pricing under the Markov chain choice model," September 2016.

20. University of Texas, Austin, TX, "Pricing and assortment optimization under the Markov chain choice model," November 2015.

21. Massachusetts Institute of Technology, Cambridge, MA, "Pricing and assortment optimization under the Markov chain choice model," October 2015.

22. London Business School, London, UK, "Pricing and assortment optimization under the Markov chain choice model," September 2015.

23. Amazon.com, Seattle, WA, "Revenue management under the variants of the multinomial logit model," June 2015.

24. Clemson University, Clemson, SC, "Revenue management under the Markov chain choice model," April 2015.

25. Georgia Tech, Atlanta, GA, "Revenue management under the Markov chain choice model," March 2015.

26. University of San Francisco, San Francisco, CA, "Revenue management under the multinomial logit model," March 2015.

27. University of California, Santa Cruz, CA, "Revenue management under the multinomial logit model," March 2015.

28. University of British Columbia, Vancouver, BC, "Revenue management under the Markov chain choice model," October 2014.

29. Stanford University, Stanford, CA, "Revenue management under the Markov chain choice model," October 2014.

30. Cornell University, Ithaca, NY, "Revenue management under the Markov chain choice model," September 2014.

31. University of Minnesota, Minneapolis, MN, "Revenue management under the Markov chain choice model," September 2014.

32. INFORMS Revenue Management and Pricing Section Conference, Istanbul, Turkey, "Assortment optimization under variants of the multinomial logit model," June 2014.

33. INFORMS Revenue Management and Pricing Section Conference, Tutorial for Ph.D. Students, Istanbul, Turkey, "Fundamental models and solution methods in revenue management," June 2014.

34. Revenue Management and Pricing Workshop Hosted by Universidad Torcuato Di Tella, Buenos Aires, Argentina, "Assortment optimization under variants of the multinomial logit model," May 2014.

35. University of Southern California, Los Angeles, CA, "Assortment optimization when customers choose according to the nested logit model," November 2013.

36. 13th International Conference on Stochastic Programming, Bergamo, Italy "Role of stochastic programming in revenue management," July 2013.

37. Tsinghua University, Beijing, China, "A unified look at decomposition methods for network revenue management problems," May 2013.

38. Duke University, Durham, NC, "Assortment optimization under variants of the nested logit model," November 2012.

39. SAS Institute, Cary, NC, "A unified look at decomposition methods for network revenue management problems," October 2012.

40. University of Colorado, Boulder, CO, "Assortment optimization under variants of the nested logit model," September 2012.

41. Cornell University, Ithaca, NY, "Assortment optimization under variants of the nested logit model," August 2012.

42. New York University, New York, NY, "Robust assortment optimization under multinomial logit model," April 2012.

43. Columbia University, New York, NY, "A unified look at decomposition methods for network revenue management problems," February 2012.

44. University of Maryland, College Park, MD, "Robust assortment optimization under multinomial logit model," December 2011.

45. Columbia University, New York, NY, "Robust assortment optimization under multinomial logit model," October 2011.

46. Cornell University, Ithaca, NY, "Robust assortment optimization under multinomial logit model," September 2011.

47. INFORMS Simulation Society Research Workshop, Montreal, Canada, "Revenue management: Applications, models and algorithms," July 2011.

48. Rutgers University, Newark, NJ, "Algorithms for large-scale network revenue management," April 2011.

49. University of Michigan, Ann Arbor, MI, "Assortment optimization with mixtures of logits," December 2010.

50. Northwestern University, Evanston, IL, "Assortment optimization with mixtures of logits," November 2010.

51. Cornell University, Ithaca, NY, "Assortment optimization with mixtures of logits," September 2010.

52. 12th International Conference on Stochastic Programming, Ph.D. Workshop Series, Halifax, Canada, "Solution methods for stochastic programs," August 2010.

53. Sabanci University, Istanbul, Turkey, "Approximate dynamic programming for revenue management," March 2010.

54. Koc University, Istanbul, Turkey, "Approximate dynamic programming and stochastic approximation for revenue management," March 2010.

55. Bogazici University, Istanbul, Turkey, "Approximate dynamic programming and stochastic approximation for revenue management," March 2010.

56. Tecnologico de Monterrey, Santiago de Queretaro, Mexico, "Practical tools for high-dimensional stochastic control problems arising in operations management," March 2009.

57. Tecnologico de Monterrey, Santiago de Queretaro, Mexico, "Revenue management in practice," March 2009.

58. Massachusetts Institute of Technology, Cambridge, MA, "Network revenue management with customer choice behavior," February 2009.

59. Cornell University, Ithaca, NY, "Network revenue management with customer choice behavior," December 2008.

60. McGill University, Montreal, QC, "Network revenue management with customer choice behavior," November 2008.

61. Indian School of Business, Hyderabad, India, "Network revenue management with customer choice behavior," July 2008.

62. Cornell University, Ithaca, NY, "Using approximate dynamic programming and stochastic approximation techniques to compute bid prices in network revenue management problems," November 2007.

63. Queen's University, Kingston, ON, "Using approximate dynamic programming and stochastic approximation techniques to compute bid prices in network revenue management problems," October 2007.

64. The State University of New York, Buffalo, NY, "Using approximate dynamic programming and stochastic approximation techniques to compute bid prices in network revenue management problems," September 2007.

65. University of Michigan, Ann Arbor, MI, "Using approximate dynamic programming and stochastic approximation techniques to compute bid prices in network revenue management problems," March 2007.

66. University of Chicago, Chicago, IL, "Incorporating pricing decisions into the dynamic fleet management problem," December 2005.

67. University of Arizona, Tucson, AZ, "Incorporating pricing decisions into the dynamic fleet management problem," September 2005.

68. University of Illinois at Urbana-Champaign, Urbana, IL, "Incorporating pricing decisions into the dynamic fleet management problem," January 2005.

69. Lehigh University, Bethlehem, PA, "Dynamic programming approximations for the dynamic fleet management problem," October 2002.

70. Koc University, Istanbul, Turkey, "Dynamic programming approximations for stochastic time-staged integer multicommodity problems arising in resource allocation settings," January 2001.

71. Bogazici University, Istanbul, Turkey, "Dynamic programming approximations for stochastic time-staged integer multicommodity problems arising in resource allocation settings," January 2001.

Talks at Conferences

1. 23rd International Symposium on Mathematical Programming, Bordeaux, France, "Approximate dynamic programming for dynamic assortment optimization," July 2018.

2. INFORMS Revenue Management and Pricing Section Conference, Toronto, Canada, "Dynamic assortment optimization for reusable products with random usage durations," June 2018.

3. INFORMS Annual Meeting, Houston, TX, "Single-leg revenue management with fare-locking," October 2017.

4. INFORMS Revenue Management and Pricing Section Conference, Amsterdam, Netherlands, "An approximation algorithm for capacity allocation over a single flight leg with fare-locking," June 2017.

5. IBM Northeast Regional Conference for Optimization and Optimal Control under Uncertainty, Yorktown Heights, NY, "Assortment optimization and pricing under the Markov chain choice model," December 2016.

6. INFORMS Annual Meeting, Nashville, TN, "Competitive pricing under the Markov chain choice model," November 2016.

7. INFORMS Revenue Management and Pricing Section Conference, New York, NY, "Competitive pricing under the Markov chain choice model," June 2016.

8. INFORMS Annual Meeting, Philadelphia, PA, "Revenue management under the Markov chain choice model," November 2015.

10. INFORMS Revenue Management and Pricing Section Conference, New York, NY, "Revenue management under the Markov chain chioce model," June 2015.

10. INFORMS Annual Meeting, San Francisco, CA, "Upper bounds on optimal expected revenue for assortment optimization under mixture of multinomial logits," November 2014.

11. AGIFORS Airline Revenue Management Conference, Buenos Aires, Argentina, "Revenue management under the Markov chain choice model," May 2014.

12. INFORMS Annual Meeting, Minneapolis, MN, "Pricing under the multi-level nested logit model," October 2013.

13. 26th European Conference on Operational Research, Rome, Italy, "Assortment optimization and pricing under the multi-level nested logit model," July 2013.

14. INFORMS Revenue Management and Pricing Section Conference, Atlanta, GA, "Assortment optimization and pricing under the multi-level nested logit model," June 2013.

15. Mostly OM Workshop, Beijing, China, "Assortment optimization under variants of the nested logit model," May 2013.

16. INFORMS Annual Meeting, Phoenix, AZ, "Joint stocking and product offer decisions under the multinomial logit model," October 2012.

17. INFORMS Revenue Management and Pricing Section Conference, Berlin, Germany, "Assortment optimization under variants of the nested logit choice model," June 2012.

18. IIE Annual Meeting, Orlando, FL, "Approximate dynamic programming for dynamic capacity allocation with multiple priorities," May 2012.

19. INFORMS Annual Meeting, Charlotte, NC, "Open-loop policies for overbooking over a single flight leg," November 2011.

20. INFORMS Annual Meeting, Charlotte, NC, "Assortment optimization with mixtures of logits," November 2011.

21. INFORMS Annual Meeting, Charlotte, NC, "Robust assortment optimization under the multinomial logit choice model," November 2011.

22. INFORMS Revenue Management and Pricing Section Conference, New York, NY, "Open loop policies for overbooking over a single flight leg," June 2011.

23. Winter Simulation Conference, Baltimore, MD, "Simulation-based methods for booking control in network revenue management," December 2010.

24. INFORMS Annual Meeting, Austin, TX, "Assortment optimization with mixtures of logits," November 2010.

25. 12th International Conference on Stochastic Programming, Halifax, Canada, "Combinatorial stochastic optimization problems for assortment planning," August 2010.

26. INFORMS Revenue Management and Pricing Section Conference, Ithaca, NY, "Assortment Optimization with Mixtures of Logits," June 2010.

27. INFORMS Annual Meeting, San Diego, CA, "Approximate dynamic programming for a dynamic job scheduling problem," October 2009.

28. INFORMS Annual Meeting, San Diego, CA, "Stochastic approximation for computing bid prices for overbooking over an airline network," October 2009.

29. INFORMS Applied Probability Society Conference, Ithaca, NY, "A stochastic approximation method to compute bid prices for overbooking decisions over an airline network," July 2009.

30. Information Intensive Services Workshop, University of Rochester, Rochester, NY, "A stochastic approximation method to compute bid prices for overbooking decisions over an airline network," May 2009.

31. INFORMS Annual Meeting, Washington, DC, "New decomposition methods for the network revenue management problem with customer choice behavior," October 2008.

32. INFORMS Annual Meeting, Washington, DC, "A refined linear program for network revenue management," October 2008.

33. INFORMS Annual Meeting, Washington, DC, "Cargo revenue management with allotments," October 2008.

34. INFORMS Annual Meeting, Washington, DC, "Capacity-dependent bid-prices in network revenue management," October 2008.

35. INFORMS Revenue Management and Pricing Section Conference, Montreal, Canada, "Stochastic approximation for single-leg revenue management," June 2008.

36. Information Intensive Services Workshop, University of Rochester, Rochester, NY, "Stochastic approximation for single-leg revenue management," May 2008.

37. INFORMS Annual Meeting, Seattle, WA, "Capacity-dependent bid-prices in network revenue management," November 2007.

38. INFORMS Annual Meeting, Seattle, WA, "Time-dependent bid-prices in network revenue management," November 2007.

39. INFORMS Annual Meeting, Seattle, WA, "Approximate dynamic programming for ambulance relocation," November 2007.

40. INFORMS Annual Meeting, Seattle, WA, "Using stochastic approximation methods to compute bid-prices in network revenue management problems," November 2007.

41. INFORMS Simulation Society Research Workshop, Fontainebleau, France, "New stochastic approximation and approximate dynamic programming methods for revenue management problems," July 2007.

42. INFORMS Revenue Management and Pricing Section Conference, Barcelona, Spain, "Capacity-dependent bid-prices in network revenue management," June 2007.

43. 6-th Triennial Symposium on Transportation Analysis, Phuket, Thailand, "Capacity-dependent bid-prices in network revenue management" June 2007.

44. Information Intensive Services Workshop, University of Rochester, Rochester, NY, "Capacity-dependent bid-prices in network revenue management," April 2007.

45. INFORMS Annual Meeting, Pittsburgh, PA, "Capacity-dependent bid-prices in network revenue management," November 2006.

46. INFORMS Annual Meeting, Pittsburgh, PA, "Incorporating pricing decisions into the dynamic fleet management problem," November 2006.

47. INFORMS Annual Meeting, Pittsburgh, PA, "Approximate dynamic programming for inventory allocation under uncertainty," November 2006.

48. INFORMS Annual Meeting, Pittsburgh, PA, "A parallelizable dynamic fleet management model with random travel times," November 2006.

49. INFORMS Annual Meeting, San Francisco, CA, "Incorporating pricing decisions into the dynamic fleet management problem," November 2005.

50. INFORMS Annual Meeting, San Francisco, CA, "A parallelizable dynamic fleet management model with random travel times," November 2005.

51. INFORMS Annual Meeting, San Francisco, CA, "Computational experimentation with two-stage stochastic programs," November 2005.

52. INFORMS Annual Meeting, Denver, CO, "A distributed decision-making structure for dynamic resource allocation," October 2004.

53. INFORMS Annual Meeting, Denver, CO, "Approximation strategies for resource allocation under uncertainty," October 2004.

54. 10th International Conference on Stochastic Programming, Tucson, AZ, "Separable approximation strategies for discrete resource allocation under uncertainty," October 2004.

55. 5-th Triennial Symposium on Transportation Analysis, Gosier, Guadeloupe, "Sensitivity analysis of a dynamic vehicle allocation policy using approximate dynamic programming and applications to fleet-sizing," June 2004

56. Canadian Operational Research Society Conference, Banff, Canada, 'Sensitivity analysis of a dynamic vehicle allocation policy using approximate dynamic programming and applications to fleet-sizing," May 2004.

57. INFORMS Annual Meeting, Atlanta, GA, "Dynamic programming approximation techniques for multi-stage resource allocation under uncertainty," October 2003.

58. INFORMS Annual Meeting, San Jose, CA, "Separable, piecewise-linear approximations for two-stage stochastic programs," November 2002.

Short Term University Visits

1. Kellogg School of Management, Northwestern University, Evanston, IL, May 14-18, 2012.

2. Bogazici University, Istanbul, Turkey, February 12-June 8, 2010.

3. Tecnologico de Monterrey, Santiago de Queretaro, Mexico, Academic Leaders Program, March 16-20, 2009.

4. Indian School of Business, Hyderabad, India, June 30-July 11, 2008.

Local Service

Committees

1. Program director for Master of Engineering in Operations Research and Information Engineering Program, Cornell Tech, 2015-2018, 2019-present.

2. Faculty search committee, Cornell Tech, 2018-present.

3. Educational policy committee, Cornell University, 2016-present.

4. Faculty search committee, School of Operations Research and Information Engineering, Cornell University, 2010-2017.

5. Faculty search committee, School of Civil and Environmental Engineering, Cornell University, 2013.

6. Judging committee member, Cornell Mathematical Contest in Modeling, 2013-2014.

7. Information technology committee, School of Operations Research and Information Engineering, Cornell University, 2010-2013.

8. Strategic planning committee, School of Operations Research and Information Engineering, Cornell University, 2010-2011.

9. Colloquia organizer, Systems Engineering Program, Cornell University, 2009-2010.

10. Faculty search committee, School of Operations Research and Information Engineering, Cornell University, 2008-2009.

11. Faculty search committee, School of Civil and Environmental Engineering, Cornell University, 2008-2009.

12. Teaching awards committee, College of Engineering, Cornell University, 2006-2007.

13. Ph.D. admissions committee, School of Operations Research and Information Engineering, Cornell University, 2004-2008.

14. Colloquia organizer, School of Operations Research and Industrial Engineering, Cornell University, 2003-2004.

15. Systems engineering outreach committee, Systems Engineering Program, Cornell University, 2002-2003.

Mentoring

1. Advisor for the Student Chapter of International Council on Systems Engineering, College of Engineering, Cornell University, 2004-2015.

2. Faculty mentor, The Cornell Commitment Program, Summer 2009.

3. Faculty mentor, Ecole Centrale Paris student M. Charles Gourio, Spring 2009.

4. Faculty mentor, Ecole Centrale Paris student M. Anass Nadem, Spring 2009.

5. Faculty mentor, Louis Stokes Alliance for Minority Participation Research Program with Nicholas Vargas Vila, Summer 2008.

6. Advisor for Aerospace Systems Technology and Rocket Operations Business Team, College of Engineering, Cornell University, 2002-2005.

National Service

Editorial

1. Associate editor for *INFORMS Journal on Computing*, 2019-Present.

2. Associate editor for *Stochastic Systems*, 2017-Present.

3. Associate editor for *Naval Research Logistics*, 2015-Present.

4. Associate editor for *Management Science*, 2014-Present.

5. Associate editor for *Mathematical Programming Computation*, 2008-Present.

6. Associate editor for *Operations Research*, 2007-Present.

7. Department editor for *Revenue Management Department* at *Production and Operations Management*, 2016-2019.

8. Associate editor for *Transportation Science*, 2009-2018.

9. Associate editor for *IIE Transactions*, 2009-2018.

10. Associate editor for *Surveys in Operations Research and Management Science*, 2013-2016.

11. Guest associate editor for *Management Science* for the special issue "Business Analytics," 2012.

12. Referee for *Annals of Operations Research, Computational Management Science, Computers and Operations Research, Discrete Event Dynamic Systems: Theory and Applications, European Journal of Operational Research, IEEE Transactions on Intelligent Transportation Systems, IIE Transactions, IMA Journal of Management Mathematics, INFORMS Journal on Computing, International Journal of Production Economics, Journal of the American Statistical Association, Journal of Revenue and Pricing Management, Management Science, Manufacturing & Service Operations Management, Mathematical Methods of Operations Research, Mathematics of Operations Research, Naval Research Logistics Quarterly, Networks, Networks and Spatial Economics, Omega: The International Journal of Management Science, Operations Research, Operations Research Letters, Optimization and Engineering, Optimization Letters, Probability in Engineering and Informational Sciences, Proceedings of the IEEE, Production and Operations Management, Service Science, Transportation Research B, Transportation Research E, Transportation Science.*

13. Reviewer for International Network Optimization Conference, 2009.

14. Reviewer for INFORMS Manufacturing and Service Operations Management Special Interest Group Conference, 2009, 2012.

15. Reviewer for INFORMS Applied Probability Society Conference, 2009.

External Reviewer

1. Reviewer for Israel Science Foundation, 2019.

2. Reviewer for United States-Israel Binational Science Foundation, 2019.

3. Reviewer for Master of Management in Artificial Intelligence Program at Queen's University, Kingston, ON, 2018.

4. Reviewer for National Science Foundation panel, 2007, 2008, 2009, 2010, 2011, 2013 and 2018.

5. Reviewer for Netherlands Organization for Scientific Research, 2014.

6. Reviewer for Hong Kong Innovation and Technology Commission, 2013.

7. Reviewer for Social Sciences and Humanities Research Council of Canada, 2011.

8. Vienna Science and Technology Fund, 2009.

9. National Medical Research Council of Singapore, 2009.

Positions in Professional Societies

1. Committee member for INFORMS Transportation Science and Logistics Society Best Paper Prize, 2019.

2. Member for INFORMS Revenue Management Section Dissertation Prize Committee, 2016.

3. Judge for IIE Transactions in Operations Engineering and Analytics Best Paper Award, 2016.

4. Chair for INFORMS Revenue Management Section Prize, 2014.

5. Co-chair for INFORMS George Nicholson Student Paper Competition, 2013.

6. Committee member for INFORMS George Nicholson Student Paper Competition, 2012.

7. Member for INFORMS Conference Program Management System Taskforce, 2012.

8. Vice chair for Stochastic Programming for INFORMS Optimization Society, 2010-2012.

9. Secretary and treasurer for INFORMS Revenue Management and Pricing Section, 2010-2011.

10. Chair for INFORMS Transportation Science and Logistics Society Dissertation Prize, 2011.

11. Council member for INFORMS Applied Probability Society, 2009-2011.

12. Committee member for INFORMS Transportation Science and Logistics Society Dissertation Prize, 2009-2010.

13. Judge for INFORMS Junior Faculty Interest Group Paper Competition, 2010.

14. Secretary and treasurer for INFORMS Transportation Science and Logistics Society, 2007-2009.

Conference Organization

1. Co-chair for Dynamic Programming, Markov Decision Processes and Simulation Cluster at 23rd International Symposium on Mathematical Programming, 2018.

2. Session organizer for Revenue Management Cluster at INFORMS Annual Meeting, 2016.

3. Program committee member for INFORMS Transportation Science and Logistics Workshop, 2016.

4. Session organizer for Revenue Management Cluster at INFORMS Annual Meeting, 2015.

5. Co-chair for Logistics, Traffic and Transportation Cluster at 22nd International Symposium on Mathematical Programming, 2015.

6. Session organizer for Revenue Management Cluster at INFORMS Annual Meeting, 2014.

7. Co-chair for Revenue Management Cluster at 20th Conference of the International Federation of Operational Research Societies, 2014.

8. Chair for Tutorials Cluster at INFORMS Annual Meeting, 2013.

9. Chair for Stochastic Programming Cluster at INFORMS Annual Meeting, 2012.

10. Session organizer for Revenue Management Cluster at INFORMS Annual Meeting, 2012.

11. Chair for Stochastic Programming Cluster at INFORMS Annual Meeting, 2011.

12. Co-chair for Revenue Management Cluster at Production and Operations Management Society Annual Conference, 2011.

13. Session organizer for Revenue Management Cluster at INFORMS Annual Meeting, 2010.

14. Organization committee member for INFORMS Revenue Management and Pricing Section Conference, 2010.

15. Co-chair for Applied Probability Cluster at INFORMS Annual Meeting, 2010.

16. Coordinator for Logistics and Supply Chain Management Track at Winter Simulation Conference, 2010.

17. Session organizer for Revenue Management Cluster at INFORMS Annual Meeting, 2009.

18. Co-chair for Online Decision Making Cluster at INFORMS Annual Meeting, 2008.

19. Session organizer for Applied Dynamic Optimization Cluster at INFORMS Annual Meeting, 2008.

20. Chair for Transportation Science and Logistics Cluster at INFORMS Annual Meeting, 2006.

21. Session organizer for Transportation Science and Logistics Cluster at INFORMS Annual Meeting, 2006.

22. Session organizer for Service Sector Operations Cluster at INFORMS Annual Meeting, 2005.

Professional Affiliations

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

Graduate Field Memberships

– Operations Research.

– Center for Applied Mathematics.

– Computational Science and Engineering.

– Systems Engineering.

Advising

Graduated Ph.D. Students

1. Yuhang Ma, "Assortment optimization and pricing problems under multi-stage multinomial logit models," first position at Uber, Pittsburgh, PA, 2019.

2. Venus Lo, "Capturing product complementarity in assortment optimization," first position at City University of Hong Kong, Hong Kong, 2019.

3. Jiayang Gao, "On dynamic pricing and assortment personalization in strategic settings," co-advised with Krishnamurthy Iyer, first position at Laurion Capital Management, New York, NY, 2017.

4. James Davis, "Customer choice models and assortment optimization," co-advised with David Williamson, first position at University of Illinois at Urbana-Champaign, Urbana-Champaign, IL, 2015.

5. Jacob Feldman, "New perspectives on incorporating customer choice into revenue management decisions," first position at Olin School of Business at Washington University, St. Louis, MO, 2015, Jacob Feldman won an honorable mention in 2017 INFORMS Revenue Management and Pricing Section Dissertation Prize with this dissertation.

5. Zachary Rayfield, "Pricing and assortment problems under correlated product evaluations," first position at Walt Disney Parks and Resorts, Lake Buena Vista, FL, 2014.

6. Chao Ding, "Multi-dimensional problems in single-resource revenue management," co-advised with Paat Rusmevichientong, first position at Google, Mountain View, CA, 2012.

7. Collin Sik Kin Chan, "Decomposition methods for managing service parts with coupled demands," co-advised with Peter Jackson, first position at Bank of America, New York, NY, 2012.

8. Matthew Maxwell, "Approximate Dynamic Programming Policies and Performance Bounds for Ambulance Redeployment," co-advised with Shane Henderson, first position at SAS Institute, Cary, NC, 2011.

9. Alexander Erdelyi, "Dynamic Programming Decomposition Methods for Capacity Allocation and Network Revenue Management Problems," first position at Austrian National Bank, Austria, 2009.

10. Mateo Restrepo, "Computational Methods for Static Allocation and Real-Time Redeployment of Ambulances," co-advised with Shane Henderson, first position at Merrill Lynch, New York, NY, 2008.

11. Sumit Kunnumkal, "Approximate Dynamic Programming and Stochastic Approximation Algorithms for Inventory Control and Revenue Management," first position at Indian School of Business, India, 2007.

Current Ph.D. Students

1. Yicheng Bai.

2. Mika Sumida.

Master of Engineering Project Advising

1. Matthew Brondum, Yann Hicke, Qinyu Wang and Yaqi Yang, "Assortment Planning for MJET Stores at MIGROS," 2014–2015.

2. Louis Bohorquez, Marie Catalano, Kevin Ko, Kaiyan Li, Tejas Raje, Jennifer Shih, Yue Wang, Li-Chieh Wu and Linghui Zhang, "Skin Care Product Customer Analysis for Proctor & Gamble," 2013-2014.

3. Charles Hernandez, Arpit Kumar, Kun Ling and Pu Yang, "Generation Expansion Planning Model for General Electric," 2012-2013.

4. Hai Huang, Charles Ko, Jae Yong Lee, Zhipeng Liu, Karishma Sanghvi and Tianxiang Xu, "Procter & Gamble: Sales Optimization in China," 2011-2012.

5. Christopher Kim, Arib Rahman, Lauren S. Robinson, Pourmehr Sarram and Kevin Wald, "Forecasting and Optimization for Airline Revenue Management," 2010-2011.

6. Anshuman Bhairavbhat, Kevin Jun Ho Ham, Talha Nur Omer and Shaan Qamar, "Farm Yield Optimization: Topsoil Distribution and Travel Paths," 2008-2009.

7. Matthew J. Findlay, Edwin Sam, Willson Mock and Janice Suh, "Coordinating Transportation and Supply Decisions for a Government Logistics Agency," 2007-2008.

8. Matthew L. Zarracina, "Pricing of Heavy Fuel Oil in Bayiji Refinery," Systems Engineering Program, 2007-2008.

9. Melih Iyigullu, Patrick J. Li and Angela W. Mak, "Forecasting Call Volumes in Call Centers," 2005-2006.

10. Geeta Bhadauria, Raoul Costa De Beauregard and Andrew S. Pollock, "A Sampling-Based Stochastic Programming Approach to Water Resources Management," 2004-2005.

11. Joon H. Huh, Zachary M. Miller and Thomas J. Pirlot, "Improvement of the Traffic Flow at the Tompkins County Recycling and Solid Waste Center," 2004-2005.

12. Deepti Sharma and Wai-Mei Wong, "Harmonization of Defense Logistics Agency's Inventory Policies," 2003-2004.

Courses Taught

1. e-Logistics (ORIE 5129)

   Spring 2020 (15 enrollment); Spring 2019 (18 enrollment).

2. Optimization Methods (ORIE 5380, CS 5727)

   Fall 2019 (74 enrollment); Fall 2018 (47 enrollment); Fall 2017 (88 enrollment); Fall 2016 (33 enrollment); Spring 2016 (4 enrollment).

3. Machine Learning for Finance (ORIE 5260)

   Spring 2017 (6 enrollment); Spring 2016 (4 enrollment).

4. Simulation Modeling and Analysis (ORIE 4580, ORIE 5580, ORIE 580)

   Fall 2014 (136 enrollment); Fall 2013 (161 enrollment); Fall 2012 (134 enrollment); Fall 2011 (123 enrollment); Fall 2009 (141 enrollment); Fall 2008 (152 enrollment); Fall 2005 (160 enrollment); Fall 2004 (172 enrollment).

5. Monte Carlo Simulation (ORIE 5581)

   Fall 2014 (51 enrollment); Fall 2013 (46 enrollment); Fall 2012 (36 enrollment); Fall 2011 (58 enrollment); Fall 2009 (44 enrollment); Fall 2008 (32 enrollment).

6. Systems Architecture, Behavior and Optimization (SYSEN 5200, SYSEN 5210, SYSEN 520, SYSEN 521)

   Spring 2015 (109 enrollment); Spring 2013 (133 enrollment); Spring 2012 (128 enrollment); Spring 2011 (109 enrollment); Spring 2009 (93 enrollment); Spring 2008 (55 enrollment, co-taught with Peter Jackson); Spring 2007 (81 enrollment); Spring 2006 (65 enrollment, co-taught with Peter Jackson).

7. Advanced Inventory and Production Planning (ORIE 6122, ORIE 626)

   Spring 2009 (5 enrollment, co-taught with Peter Jackson and Jack Muckstadt); Spring 2005 (4 enrollment); Spring 2004 (8 enrollment).

8. Discrete-Event Simulation (ORIE 581)

   Fall 2007 (166 enrollment).

9. Special Topics in Applied Operations Research: Revenue Management (ORIE 7191, ORIE 729)

   Spring 2014 (10 enrollment); Spring 2011 (11 enrollment); Spring 2007 (7 enrollment, co-taught with Paat Rusmevichientong).

10. Revenue Management (ORIE 453, IE 591 at Bogazici University)

    Spring 2010 (25 enrollment, taught at Bogazici University); Fall 2006 (29 enrollment, co-taught with Paat Rusmevichientong).

11. Engineering Seminar (ENGRG 1050)

    Fall 2013 (21 enrollment).

12. ORIE Project, Independent Study (ORIE 4999, 499)

    Fall 2012 (1 enrollment); Fall 2010 (4 enrollment); Spring 2008 (1 enrollment); Fall 2007 (1 enrollment); Spring 2006 (2 enrollment); Fall 2005 (1 enrollment); Fall 2004 (1 enrollment); Spring 2004 (1 enrollment).

13. Applied Systems Engineering (SYSEN 510)

    Fall 2003 (95 enrollment, co-taught with Albert George).

14. Production Planning and Scheduling Theory and Practice (ORIE 525)

    Spring 2003 (21 enrollment).

Teaching and Advising Recognition

1. Faculty Dedication Award voted by the Master of Engineering students, Cornell Tech, 2020.

2. Professor of the Year voted by the Master of Engineering students, Cornell Tech, 2017.

3. James and Mary Tien Excellence in Teaching, College of Engineering, Cornell University, 2015.

4. James M. and Marsha D. McCormick Award for Outstanding Advising, College of Engineering, Cornell University, 2014.

5. Professor of the Year voted by the undergraduate and Master of Engineering students, School of Operations Research and Information Engineering, Cornell University, 2014.

6. Professor of the Year voted by the undergraduate and Master of Engineering students, School of Operations Research and Information Engineering, Cornell University, 2013.

7. Sonny Yau '72 Excellence in Teaching, College of Engineering, Cornell University, 2012.

8. Outstanding Professor voted by the undergraduate students, School of Operations Research and Information Engineering, Cornell University, 2010.

9. Professor of the Year voted by the Master of Engineering students, School of Operations Research and Industrial Engineering, Cornell University, 2006.

10. Sonny Yau '72 Excellence in Teaching, College of Engineering, Cornell University, 2005.

11. Outstanding Professor voted by the undergraduate students, School of Operations Research and Industrial Engineering, Cornell University, 2005.

12. Professor of the Year voted by the Master of Engineering students, School of Operations Research and Industrial Engineering, Cornell University, 2005.

13. Excellence in Teaching, Undergraduate Engineering Council, Princeton University, 1999.

Industry Relationship

1. Homer Logistics.

2. Dibs Pricing.

3. Hitit Computer Services, Airline Solutions.

4. Marriott International.

5. Norfolk Southern Railroads.

6. Falcon Fractional Jet Ownership Network.

7. U.S. Airforce Mobility Command.