Curriculum Vitæ
Assaf Zeevi

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Columbia University
New York, NY 10027

About

Research and teaching interests lie at the intersection of Operations Research, Data Science, and Machine Learning.

Developing theory and algorithms for reinforcement learning, Bandit problems, stochastic optimization, statistical learning and stochastic networks.

Extensive experience working with tech companies and AI start ups implementing solutions in fintech, online retail, healthcare analytics, recommender systems, pricing analytics and online marketplaces.

Education

Ph.D. *Electrical Engineering* and *Statistics*, Stanford University (2001)

M.S. *Financial Mathematics*, Stanford University (2000)

M.S. *Statistics*, Technion - Israeli Institute of Technology (1997)

B.Sc. *Electrical Engineering*, Technion - Israeli Institute of Technology (1994)

History of Academic Appointments

July 2009 – present
        Kravis Professor of Business, Columbia University

July 2018– July 2019
        Visiting Professor, Tel Aviv University

July 2014– July 2016
        Visiting Professor, Technion, Israel Institute of Technology

July 2011– July 2014
        Vice Dean for Research, Columbia Business School

June 2008 – June 2009
Professor, Columbia University

June 2005 – August 2005
Visiting Associate Professor, Graduate School of Business, Stanford University

February 2005 – June 2008
Gantcher Associate Professor of Business, Columbia University

December 2004 – February 2005
Associate Professor, Graduate School of Business, Columbia University

July 2001 – December 2004
Assistant Professor, Graduate School of Business, Columbia University

Honors and Awards

▶ Inducted as INFORMS Fellow (2020)

▶ Frederick W. Lanchester Prize (2019)

▶ INFORMS Manufacturing & Service Operations Management Society Best Publication Award (2013)

▶ INFORMS Revenue Management and Pricing Society Best Publication Award (2008,2012)

▶ Google Research Award. 2009.

▶ Henry Kravis endowed professorship. 2009.

▶ IBM Faculty Award. 2008.

▶ CAREER Award from the National Science Foundation. 2005.

▶ Nathan Gantcher Associate Professorship. 2005.

▶ C.R.I. Visiting Scholar, the Caesarea-Rothschild Foundation, Haifa University. 2002, 2004.

▶ Dean's Award for Teaching Excellence, Columbia Business School. 2003.

Professional Experience

January 2021 – present *Kunato inc.*
Member of Scientific Advisory Board

July 2020 – present *Arialgo inc.*
Member of Scientific Advisory Board

June 2019 – present *Fintica AI inc.*
    Member of Advisory Board and Chief Scientific Advisor

January 2014 – present *Clew Medical inc.*
    Member of Scientific Advisory Board and previously Chief Scientist

January 2014 – 2019 *qbeats inc.*
    Member of Scientific Advisory Board

January 2012 – July 2014 *Predictable Dynamics* (a subsidiary of Ultimate Risk Solutions Inc)
    Member of Scientific Advisory Board

June 2007 – January 2015 *Nomis Solutions Inc.*, San Bruno,CA
    Member of Scientific Advisory Board

September 2006 – January 2007 *Jackson National Life Insurance*, Denver, CO
    Consultant: Actuarial analysis pension and variable annuity products

June 2000 – July 2001 *IBM Almaden Research Labs*, San Jose, CA
    Consultant: Data compression and storage, system and algorithms
    signal processing group

May 1998 – August 1999 *ImageZone Inc.*, Mountain View, CA
    Consultant: Development of statistical algorithms for video compression
and recognition.

September 1996 – June 2000 *Stanford University*, Stanford, CA
    Research and teaching assistant

Teaching Experience

▶ Doctoral courses:

  • Advanced Topics in Stochastic Modeling (Columbia University)- given 2001/2002
  • Foundations of Stochastic Modeling (Columbia University) - given yearly since 2002
  • Econometrics and Statistical Inference (Columbia University) - given since Fall 2012
    Average teaching evaluation: 4.9/5.0

▶ MBA core courses:

  • Managerial Statistics (Columbia University) - MBA core, given yearly 2001-2011 and 2014–2016
  – Managerial Statistics (Columbia University) - EMBA core, given 2017 – present
    Average teaching evaluations: 4.8/5.0

▶ MBA elective courses:

- Analytics Advantage (Columbia University) - MBA elective, given 2020 – present

► Executive education courses:

- Intro to Artificial Intelligence (Columbia University) - 2021 – present
- Healthcare Analytics (Columbia University) - 2019 – present
- Credit Risk Management (Columbia University joint with PRMIA) - given yearly 2007–2014
- Risk Management (Columbia University joint with Kookmin bank) - given yearly 2007–2014
- Carbon Markets (Columbia University) - given 2009.
- Advanced Statistical Methods for Managers (Columbia University ECLA program) - 2010, 2012.

Publications

I. Peer Reviewed Journal Publications and Book Chapters (Appeared/Forthcoming)

1. Y. Xu and A. Zeevi. " Towards Optimal Problem Dependent Generalization Error Bounds in Statistical Learning Theory." Forthcoming _Math. Oper. Res._, 2023.

2. D. Shin and A. Zeevi. "Product Quality and Information Sharing in the Presence of Reviews." Forthcoming _Manag. Sci._, 2023.

3. A. Casel, S. Mannor and A. Zeevi. "A General Framework for Bandit Problems Beyond Cumulative Objectives." Forthcoming _Math. Oper. Res._, 2022.

4. D. Shin, S. Vacaro and A. Zeevi. "Dynamic Pricing Strategies with Online Product Reviews." Forthcoming _Manag. Sci_, 2022.

5. S. Agarwal, V. Avaldhanula, V. Goyal and A. Zeevi. "Thompson sampling for the MNL Bandit." Forthcoming _Math. of Oper. Res._, 2023.

6. M. Broadie, D. Shin, A. Zeevi. "Tractable dynamic sampling strategies for quantile selection problems." _INFORMS Journal on Computing._, 2022.

7. A. Goldenshulger and A. Zeevi. "Optimal stopping a random sequence with unknown distribution." _Math. of Oper. Res._, 2022.

8. A. Goldenshulger, Y. Malinovsky and A. Zeevi. "A unified approach to sequential selection problems." _Probab. Sur._, **17**: 214-256, 2020.

9. S. Agarwal, V. Avaldhanula, V. Goyal and A. Zeevi. "MNL Bandit: A dynamic learning approach to assortment selection" _Oper. Res._, **67**: 1453-1485, 2019.

10. O. Besbes, Y. Gur and A. Zeevi. "Optimal exploration-exploitation in a multi armed Bandit problem with non-stationary rewards" _Stoch. Sys._, **9:**319–416, 2019.

11. M. Broadie, D. Shin and A. Zeevi. "Tractable dynamic sampling strategies for ordinal optimization." *Oper. Res.*, **66**: 1457-1759, 2018.

12. B. Keskin and A. Zeevi. "On incomplete learning and certainty-equivalence control." *Oper. Res.*, **66**: 893–1188, 2018.

13. B. Keskin and A. Zeevi. "Chasing demand: Learning and earning in a changing environment." *Math of OR.*, **42**: 277–307, 2017.

14. C. Maglaras, J. Yao, A. Zeevi. "Optimal pricing and service differentiation in a queueing system." *Manag. Sci.*, **64**: 1975-2471, 2017.

15. V. Avaldhanula, J. Bhandari, V. Goyal, and A. Zeevi. "On the tightness of an LP relaxation for rational optimization and Its applications." *Oper. Res. Lett*, **44**: 612–617, 2016.

16. O. Besbes, Y. Gur, and A. Zeevi "Optimization in Online Content Recommendation Services: Beyond Click-Through Rates." *Manufacturing & Service Operations Management* [lead article], **18**:15–33, 2016.

17. O. Besbes and A. Zeevi. "On the (surprising) sufficiency of linear models for dynamic pricing with demand learning." *Manag. Sci.*, **15**: 723–739, 2015.

18. O. Besbes, Y. Gur, and A Zeevi. "Non-stationary Stochastic Optimization." *Oper. Res.*, **63**:1227–1244, 2015.

19. M. Broadie, D. Cicek and A. Zeevi. "Multi-dimensional stochastic approximation: Adaptive algortihms and applications." *ACM Transactions on Modeling and Computer Simulation* , **24**:1020–1038, 2014.

20. N.K. Bora and A. Zeevi. "Dynamic pricing with an unknown linear demand model: Asymptotically optimal semi-myopic policies." *Oper. Res.*, **62:** 1142–1167, 2014.

21. D. Saure and A. Zeevi. "Optimal dynamic assortment planning with demand learning." *Manufacturing and & Service Operations Management*, **15**:387–404, 2013.

22. O. Besbes and A. Zeevi. "Blind network revenue management." *Operations Research*, **60**:1537–1550, 2013.

23. A. Goldenshulger and A. Zeevi. "A Linear response Bandit problem." *Stoch. Syst.*, **3**:230–261, 2013.

24. N.K. Bora, M. Harrison, A. Zeevi. "Bayesian dynamic pricing policies: Learning and earning under a binary prior distribution." *Manag. Sci.*, **58**:570–586, 2013.

25. D. Cicek, M. Broadie, and A. Zeevi. "General bounds and finite-time performance improvement for the Kiefer-Wolfowitz stochastic approximation algorithm." *Operations Research*, **59**:1211-1224, 2011.

26. O. Besbes and A. Zeevi. "On the minimax complexity of pricing in a changing environment." *Oper. Res.*, **59**:66-79, 2011.

27. G. Allon and A. Zeevi. "On the relationship among inventory, pricing and capacity decisions in make-to-stock systems with stochastic demand." *Production and Operations Management*, **20**:143-151, 2011.

28. A. Goldenshluger and A. Zeevi. "A note on performance limitations in Bandit problems with side information." *IEEE Trans. on Info. Th.*, **57**:1707 - 1713, 2011.

29. J. Skaf, S. Boyd, and A. Zeevi. "Shrinking horizon dynamic programming." *Inter. Jour. of Robust and Nonlinear Control*, **20**:1993-2002, 2010.

30. A. Bassamboo , R. Randhawa and A. Zeevi. "Capacity planning under parameter uncertainty: Safety staffing principles revisited." *Manag. Sci.*, **56**: 1668-1686, 2010.

31. O. Besbes, R. Phillips and A. Zeevi. "Testing the validity of a demand model: An operations perspective." *Manufacturing & Service Operations Management*, **12**: 162–183, 2010.

32. A. Goldenshluger and A. Zeevi. "Woodroofe's one armed bandit problem revisited." *Ann. of Appl. Probab.*, **19**:1603–1633, 2009.

33. O. Besbes and A. Zeevi. "Dynamic pricing without knowing the demand function: Risk bounds and near-optimal algorithms." *Oper. Res.*, **57**:1407–1420,2009.

34. A. Bassamboo and A. Zeevi. "On a data-driven method for staffing large telephone call centers." *Oper. Res.*, **57**:714–726, 2009.

35. A. Bassamboo, J.M. Harrison, and A. Zeevi. "Pointwise stationary fluid models for stochastic processing networks." *Manufacturing & Service Operations Management*, **11**:70–89, 2009.

36. P.W. Glynn and A. Zeevi. "Bounding stationary expectations of Markov processes." *IMS Collections: Markov Processes and Related Topics*, **4**:195–214, 2008.

37. A. Goldenshluger, A. Juditski, A. Tsybakov and A. Zeevi. "Change-point estimation from indirect observations: Adaptive algorithms." *Annals l'Institute Henri Poincare*, **44**:819–836, 2008.

38. A. Goldenshluger, A. Juditski, A. Tsybakov and A. Zeevi. "Change-point estimation from indirect observations: 1. Minimax Complexity." *Annals l'Institute Henri Poincare*, **44**:787–818 , 2008.

39. A. Bassmaboo, S. Juneja and A. Zeevi. "Portfolio credit risk with extremal dependence: Asymptotic analysis and efficient simulation." *Oper. Res.*, **56**:593-606, 2008.

40. A. Bassamboo, S. Juneja and A. Zeevi. "On the inefficiency of state-independent importance sampling in the presence of heavy tails." *Oper. Res. Lett.*, **35**:251-260, 2006.

41. A. Goldenshluger, A. Tsybakov and A. Zeevi. "Optimal change-point estimation from indirect observations." *Ann. of Statis.*, **34**:350-372, 2006.

42. A. Bassamboo, J.M. Harrison and A. Zeevi. "Design and control of a large call centers: Asymptotic analysis of an LP-based method." *Oper. Res.*, **54**:419-435, 2006.

43. A. Goldenshluger. and A. Zeevi. "Recovering the boundary of a convex set from blurred and noisy observations." *Ann. of Statis.*, **34**:1375–1394, 2006.

44. D. Gamarnik and A. Zeevi. "Validity of heavy-traffic steady-state approximations in generalized Jackson networks." *Ann. Apl. Probab.*, **16**:59–94, 2006.

45. A. Bassamboo, J.M Harrison and A. Zeevi. "Dynamic routing and admission control in high-volume service systems: Asymptotic analysis via multi-scale fluid-limits." *QUESTA*, **51**:249–285, 2006.

46. C. Maglaras and A. Zeevi. "Pricing and design of differentiated services: Approximate analysis and structural insights." *Oper. Res.*, **53**:242–262, 2005.

47. J.M. Harrison and A. Zeevi. "A method for staffing large call centers using stochastic fluid models." *Manufacturing & Service Operations Management*, **7**:20–36, 2005.

48. C. Maglaras and A. Zeevi. "Diffusion approximations for a multiclass Markovian service system with 'guaranteed' and 'best effort' service levels." *Math. of Oper. Res.*, **29**:786–813, 2004.

49. A. Goldenshluger and A. Zeevi. "The Hough-transform estimator." *Ann. of Statis.*, **32**:1908–1932, 2004.

50. A. Zeevi and P.W. Glynn. "Recurrence properties of autoregressive processes with super-heavy tailed innovations." *J. Appl. Probab.*, **41**:639–653, 2004.

51. J.M. Harrison and A. Zeevi. "Dynamic scheduling of a multiclass queue in the Halfin-Whitt heavy traffic regime." *Oper. Res.*, **51:**243–257, 2004.

52. A. Zeevi and P.W. Glynn. "Estimating tail decay for stationary sequences via extreme values." *Adv. Appl. Probab.*, **36**:198–226 , 2004.

53. R. Mashal, M. Naldi and A. Zeevi. "Comparing the dependence structure of equity and asset returns." *RISK*, **16**:82–87, 2003. Reprinted in *Credit Risk: Models and Management*, edited by D. Shimko, Risk Books, NY, 2004.

54. R. Mashal, M. Naldi and A. Zeevi. "Extreme events and multi-name credit derivatives." In *Credit Derivatives: The Definitive Handbook*, J. Gregory (Ed.), RISKwaters Publishers, NY, 2003.

55. C. Maglaras and A. Zeevi. "Pricing and capacity sizing for systems with shared resources: Approximate solutions and scaling relations." *Manag. Sci.*, **49**:1018–1038, 2003.

56. E. Waks, A. Zeevi, Y. Yamamoto. "Security of quantum key distribution with entangled photons." *Phy. Rev. A*, **65**:1165–1181, 2002.

57. A. Goldenshluger and A. Zeevi. "Non-Asymptotic bounds for autoregressive time series modeling." *Ann. of Statis.*, **29**: 417–444, 2001.

58. P.W. Glynn and A. Zeevi. "Estimating tail probabilities in queues via extremal statistics." In *Analysis of communication networks: call centres, traffic and performance*, D. MacDonald and S. R. E. Turner (Eds.), Fields Institute Communication Series, **28**, Amer. Math. Soc., Providence, pp. 135–158, 2000.

59. A. Zeevi and P.W. Glynn. "On the maximum workload of a queue fed by fractional Brownian motion." *Ann. of Appl. Probab.*, **10**:1074–1099, 2000.

60. A. Zeevi, R. Meir and V. Maiorov. "Error bounds for functional approximation and estimation using mixtures of experts." *IEEE Trans. on Info. Th.*, **44**:1010-1025, 1998.

61. A. Zeevi and R. Meir. "Density estimation through convex combinations: approximation and estimation bounds." *Neural Networks*, **10**:99-106, 1997.

III. Papers in Refereed Conference Proceedings

1. S. Agrawal, S. Yin and A. Zeevi. "Online Allocation and Learning in the Presence of Strategic Agents." *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2022.

2. A. Kalvit and A. Zeevi. "Dynamic learning in large matching markets." *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2022.

3. A. Kalvit and A. Zeevi. "A closer look at the worst case behavior of Bandit algorithms." *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2021. [*spotlight paper*]

4. S. Agrawal, S. Yin and A. Zeevi. "Learning to price under the Bass model for dynamic demand." *Proceedings of the ACM conference on Economics and Computation (EC)*, 2021

5. D. Russo, A. Zeevi and T. Zhang. "Learning to stop with surprisingly few samples." *Proceedings of the ACM conference on Computational Learning Theory (COLT)*, 2021

6. G. Iyengar, M. Oh, and A. Zeevi. "Sparsity-agnostic LASSO Bandits." *Proceedings of the International Conference on Machine Learning (ICML)*, 2021

7. Y. Xu and A. Zeevi. "Towards problem dependent optimal learning rates." *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2020 [*spotlight paper*]

8. A. Kalvit and A. Zeevi. "From finite to countable-armed Bandits." *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2020

9. J. Blum, C. Lilly, A. Lipsky, I. Pesach, O. Shaked, and A. Zeevi. "Focusing advanced clinicians on the more critically ill patients using Artificial Intelligence." *Proceedings of the Society of Critical Care (SCCM)*, 2020.

10. A. Casel, S. Mannor and A. Zeevi. "Risk sensitive regret: oracle policies and online learning." *Proceedings of the 15th ACM Conference on Computational Learning Theory (COLT)*, 2018.

11. S. Agrawal, V. Avadhanula, V. Goyal and A. Zeevi. "Thomspon sampling for the MNL-Bandit." *Proceedings of the 15th ACM Conference on Computational Learning Theory (COLT)*, 2017.

12. S. Agrawal, V. Avadhanula, V. Goyal and A. Zeevi. " An Optimal Exploration-Exploitation Approach to Assortment Selection." *Proceedings for the 16th ACM Conference on Economics and Computation (EC)*, 2016.

13. O. Anava, E. Hazan, S. Mannor and A. Zeevi. "Time series prediction with missing data." *Proceedings of the International Conference on Machine Learning (ICML)*, 2015.

14. O. Besbes, Y. Gur and A. Zeevi. "A non-stationary multi-armed bandit problem." *Proceedings of Neural Information Processing Systems (NIPS)*, 2014.

15. A. Radovanović and A. Zeevi. "Dynamic budget allocation mechanisms for reservation based on line advertising." *Proceedings of the 42nd Annual Allerton Conference on Communication, Control, and Computing*, 2010.

16. Rigolet, P. and A. Zeevi. "Nonparametric bandits with covariates." *Proceedings of the ACM conference on computational learning theory (COLT)*, 2010.

17. Broadie, M., Cicek, D. and A. Zeevi, 2009, "An adaptive multidimensional version of the Kiefer-Wolfowitz stochastic approximation algorithm." *Proceedings of the 2009 Winter Simulation Conference (WSC)*, M. D. Rossetti, R. R. Hill, B. Johansson, A. Dunkin, and R. G. Ingalls, eds., The Society for Computer Simulation.

18. Broadie, M., M. Han and A. Zeevi, 2007, "Implications of Heavy Tails on Simulation-Based Ordinal Optimization." *Proceedings of the 2007 Winter Simulation Conference (WSC)*, eds: S.G. Henderson, B. Biller, M.-H. Hsieh, J. Shortle, J.D. Tew, and R.R. Barton, The Society for Computer Simulation, 439-447.

19. A. Bassamboo, S. Juneja and A. Zeevi. "Performance of importance sampling simulation in the presence of heavy tails." *Proceedings of the Winter Simulation Conference* (WSC), 2005.

20. A. Bassamboo, S. Juneja and A. Zeevi. "Expected shortfall in credit portfolios with extremal dependence." *Proceedings of the Winter Simulation Conference* (WSC), 2005.

21. C. Maglaras and A. Zeevi. "Pricing and performance analysis for a system with differentiated services and customer choice." *Proceedings of the 41st Annual Allerton Conference on Communication, Control, and Computing*, Eds. R. Srikant and V. Veeravalli, 2003.

22. C. Maglaras and A. Zeevi. "Diffusion approximations for systems with shared resources offering 'guaranteed' and 'best effort' service." *Proceedings of the 40th Annual Allerton Conference on Communication, Control, and Computing*, Eds. R. Srikant and P.G. Voulgaris, 2002.

23. A. Zeevi. "On the accuracy of estimating tail probabilities in queues" *Proceedings of International Symposium on Information Theory* (ISIT) , IEEE press, Eds. Ezio Biglieri and S. Verdu, 2000.

24. A. Zeevi. and A. Goldenshluger. "Minimax bounds for autoregressive approximations of stationary time series", *Proceedings of the Information Theory Workshop on Detection, Estimation, Classification and Imaging*, March 1999.

25. A. Goldenshluger and A. Zeevi. "Non-asymptotic bounds for autoregressive approximations", *Proceedings of International Symposium on Information Theory* (ISIT) , IEEE press, Eds. S. Verdu and V. Poor, 1998.

26. A. Zeevi. "On the performance of vector quantizers empirically designed from dependent sources", *Proceedings of the data compression conference*, IEEE press, Eds. M. Cohn and J. Storer, 1998.

27. A. Zeevi, R. Meir and R.J. Adler. "Time series prediction using mixtures of experts", *Advances in Neural Information Processing Systems 9* (NIPS), Ed. M. Jordan, MIT press, 1997.

28. R. Meir and A. Zeevi. "Approximation and estimation bounds for density estimation by convex combination", in *Proceedings of the First International Conference on Mathematics of Neural Networks and Applications*, Kluwar academic press, 1996.

IV. Permanent Technical Reports

1. A. Federgruen and A. Zeevi. "Assessing variable annuities as a solution to America's retirement income challenge: A closer look at variable annuities with withdrawal guarantees." Working paper, Columbia University.

2. R. Mashal and A. Zeevi. "Beyond correlation: Extreme co-movements between financial assets." Working paper, October 2002. [Revised: October 2003.] Can be downloaded from SSRN.

3. A. Zeevi, R. Meir, and R.J. Adler. "Nonlinear models for time series using mixtures of autoregressive processes," Technical Report, Technion, 2000.

Research Grants

▶ Israel-US Binational Science Foundation, "Minimax Online Learning Policies for Stochastic Sequential Selection and Assignment," [with A. Goldenshluger] 10/2021 – 10/2025, $200,000.

▶ National Science Foundation, "IGERT: From Data to Solutions: A New Ph.D. Program in Transformational Data & Information Sciences Research and Innovation" [PI, Julia Hirschberg, Computer Science, Columbia University], 7/2012-6/2017, $3,000,000.

▶ National Science Foundation, "Promoting secondary spectrum markets via profitability-driven methods and algorithms," [w/ David Starobinski and Murat Alanyali, Boston University] 6/2010 - 6-2014, $1,143,649.

▶ Israel-US Binational Science Foundation, "Minimax procedures for sequential estimation and optimization," [with A. Goldenshluger] 10/2011 – 10/2015, $200,800.

▶ Google Research Award, "Models for Reservation-based Online Advertisement" 2009 – 2010, $30,000.

▶ IBM Faculty Award, "Optimal Design of Global Service Delivery Operations," 2008 – 2009, $20,000.

▶ Israel-US Binational Science Foundation, "Nonparametric Estimation and Adaptive Allocation Procedures," [with A. Goldenshluger] 10/2007 – 10/2011, $189,000.

▶ Columbia Center for Excellence in E-Business, "Designing Information Services: drivers and value of product differentiation," 7/2006-7/2007, $5000.

▶ National Science Foundation, "Design and Analysis of Differentiated Services," 6/2005-6/2010, $400,000.

▶ Center for International Business Education, "Portfolio diversification and the home bias puzzle," with Andrew Ang and Roy Mashal, 6/2003 – 9/2003, $8500.

Doctoral Students Advised

▶ Advised (in chronological order):

1. Roy Mashal, GSB, Columbia University (co-advised with Mark Broadie, GSB, Columbia University)
Thesis: *Credit Risk with Extremal Dependence*
Graduation date: December 2003
First position: Lehman Brothers Inc, quantitative research group, NY.

2. Gad Allon, Graduate School of Business, Columbia University (Principal adviser: Awi Federgruen, GSB, Columbia University)
Thesis: *Competition in Service Industries*
Graduation date: August 2005
First position: Assistant Professor, Kellogg Graduate School of Management, Northwestern University.

3. Achal Bassamboo, GSB, Stanford University (co-advised with J.Michael Harrison, GSB, Stanford University)
Thesis: *Pointwise Stationary Fluid Models for Design and Control of Stochastic Processing Systems*
Graduation date: September 2005
First position: Assistant Professor, Kellogg Graduate School of Management, Northwestern University.

4. Zhen Wu, IEOR, Columbia University
Thesis: *Essay in Portfolio Credit Risk*
Graduation date: May 2007
First position: Associate, Quantitative Research Group, CSFB, New York.

5. Omar Besbes, Graduate School of Business, Columbia University
Thesis: *Theory and Methods for Revenue Management Problems under Model Uncertainty.*
Graduation date: June 2007
First position: Assistant Professor, Wharton, University of Pennsylvania.

6. Itay Gurvich, Graduate School of Business, Columbia University (Principal advisor W. Whitt)
   Thesis: *Staffing and Routing in Call Centers.*
   Graduation date: June 2008
   First position: Assistant Professor, Kellogg School of Management, Northwestern University.

7. Deniz Cicek, Graduate School of Business, Columbia University (co-advised with M. Broadie)
   Graduation date:
   First position: Associate, Barclay's capital.

8. Denis Saure, Graduate School of Business, Columbia University
   Thesis: *Essay in Consumer Choice Driven Assortment Planning.*
   Graduation date: June 2011
   First position: Assistant Professor, Department of Industrial Engineering, University of Pittsburgh (currently in the University of Chile)

9. Keskin Bora, Graduate School of Business, Stanford University (co-advised with Mike Harrison)
   Graduation date: June 2012
   First position: Assistant Professor, Booth Graduate School of Business, Chicago University (currently at Duke University)

10. Yonatan Gur, Graduate School of Business, Columbia University (co-advised with Omar Besbes)
    Graduation date: June 2013
    First position: Assistant Professor, Graduate School of Business, Stanford University.

11. John Yao, Graduate School of Business, Columbia University (co-advised with Costis Maglaras)
    Graduation date: June 2015
    First position: Assistant Professor, University of California Santa Cruz (currently at University of Miami).

12. Oren anava, Department of Industrial Engineering and Management, Technion (co-advised with Shie Mannor)
    Graduation date: August 2016
    First position: Voleon (hedge fund).

13. Dongwook Shin, Graduate School of Business, Columbia University
    Graduation date: June 2017.
    First position: Assistant Professor, HKUST Business School.

14. Vashist Avadhanula, Graduate School of Business, Columbia University (co-advised with Shipra Agrawal and Vineet Goyal)
    Graduation date: June 2018
    First position: Facebook research group, Menlo Park, CA.

15. Sharon Huang, Graduate School of Business, Columbia University
    Expected graduation date: June 2022

16. Min Ho, IEOR and Data Science Institute, Columbia University (co-advised with Garud Iyengar)
    Expected graduation date: June 2022

17. Anand Kalvit, Graduate School of Business, Columbia University
    Expected graduation date: June 2023

18. Yunbei Xu, Graduate School of Business, Columbia University
    Expected graduation date: June 2023

19. Tony Zhang, Graduate School of Business, Columbia University (co-advised with Daniel Russo)
    Expected graduation date: June 2023

Columbia University Activities

- Provost Advisory Committee (2016– present)

- Promotions and Tenure Committee (2008 – 2011, 2017 – present)

- Vice Dean, Columbia Business School (2011-2014)

- Online education Provost Committee (2012– 2015)

- Benefits task force (university wide) (2010 – 2011)

- Intellectual Capital and Strategic Planning committee (2009)

- Faculty support committee (2009)

- SFAAC Committee (2007 – 2009)

- MBA Committee (2007 – 2009)

- Integrity code committee (2006 – 2007)

- Research computing committee (2002-2004 and 2006 – 2009)

- MBA Faculty Advisor (2005–2006)

- DRO faculty search committee (2003 – 2004, 2005 – 2009)

External Professional Activities and Service

▶ **Editorial boards:**
  ○ *Stochastic Systems*: [joint publication of INFORMS and IMS]
    ∗ Advisory Editor (2018 – present)
    ∗ Editor in Chief (2014 – 2017)
    ∗ Associate Editor (2009 –2013) present)
  ○ *Management Science*:
    ∗ Departmental Editor for Stochastic Models and Simulation (2009 – present)
    ∗ Associate Editor (2004 – 2006)
  ○ *Operations Research*: Associate Editor (2005 – present)

- *Mathematics of Operations Research*: Associate Editor (2005 – present)
- *Journal of Machine Learning Research*: Senior Editor (2020 – present)
- *Manufacturing & Service Operations Management*:
  - ∗ Member of the editorial board (2004 – 2005)
  - ∗ Associate Editor (2007 – 2009)

▶ **International Prize Committees:**

- *INFORMS/APS Erlang Prize*: 2011
- *INFORMS/APS Best Paper Award*: 2012
- *INFORMS Lanchester Prize*: 2017–2019 (chair)

Outside Activities

July 2020 – present *AriAlgo inc.*
  Member of Scientific Advisory Board

August 2019 – present *Fintica inc.*
  Member of Scientific Advisory Board

January 2014 – present *ClewMD inc.*
  Member of Scientific Advisory Board

January 2014 – present *qbeats inc.*
  Member of Scientific Advisory Board

June 2007 – 2018 *Nomis Solutions Inc.*, San Bruno,CA
  Member of Scientific Advisory Board

References

Available upon request