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# Ciamac C. Moallemi

Graduate School of Business  
Columbia University  
3022 Broadway, Uris 416  
New York, NY 10027  
USA

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**W** <http://moallemi.gsb.columbia.edu>

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## Research Interests

Optimization and control of stochastic systems; applications in financial engineering and the design of financial markets.

## Academic Appointments

2007–present **Columbia University, Graduate School of Business** New York, NY  
*Decision, Risk, & Operations Division.*

2020–present *William von Mueffling Professor of Business.*

2015–2020 *Associate Professor of Business (with tenure).*

2013–2015 *Barbara and Meyer Feldberg Associate Professor of Business.*

2011–2012 *Associate Professor.*

2008–2011 *Assistant Professor.*

2007 *Instructor.*

## Academic Degrees

2003–2007 **Stanford University** Stanford, CA  
*Ph.D., Electrical Engineering, 2007*  
Advisor: Benjamin Van Roy  
Dissertation Title: *A Message-Passing Paradigm for Optimization*

1996–1997 **University of Cambridge (King's College)** Cambridge, UK  
*Certificate of Advanced Study in Mathematics, With Distinction, 1997*  
(Part III of the Mathematical Tripos)

1991–1996 **Massachusetts Institute of Technology** Cambridge, MA  
*S.B., Mathematics, 1996*  
*S.B., Electrical Engineering & Computer Science, 1996*

## Professional Experience

2014–present **Bourbaki LLC** New York, NY  
*Managing Member.* Developed quantitative trading strategies.

1999–2003 **NeoGenesis Pharmaceuticals, Inc** Cambridge, MA  
*Director, Scientific Computing.* Founded the informatics group at NeoGenesis, a technology start-up in the area of small molecule drug discovery. Co-designed and developed the NeoGenesis Quantized Surface Complementarity Diversity (QSCD) model, a computational framework for post-genomic drug discovery. Managed a group of developers and scientists responsible for development and implementation of mathematical algorithms for chemical library design, experimental data analysis, and bioinformatics. Engineered a computational cluster consisting of 100+ nodes and associated infrastructure. Acquired by Schering-Plough Corp.

1993–1999 **Delta Global Trading, LP** Boston, MA  
*Partner.* Managed a fixed-income relative value hedge fund with US\$200 million in assets under management. Developed mathematical and computational models for identifying and exploiting economic mispricings in sovereign debt markets. Used stochastic models to trade a relative value arbitrage portfolio consisting of fixed income securities and associated derivatives in G10 and emerging markets. Series 3 licensed. Responsible for all software development efforts. Supervised a group of 13 including quantitative traders, software developers, and support staff.

## Journal Papers <sup>1</sup>

- [1] C. Maglaras, C. C. Moallemi, and H. Zheng. Queueing dynamics and state space collapse in fragmented limit order book markets. *Operations Research*, forthcoming, May 2019.  
**Honorable Mention, INFORMS Financial Services Section Student Research Paper Competition, 2012**
- [2] C. C. Moallemi, M. Sağlam, and M. Sotiropoulos. Short-term trading skill: An analysis of investor heterogeneity and execution quality. *Journal of Financial Markets*, 42:1–28, January 2019.
- [3] N. Bhat, V. F. Farias, C. C. Moallemi, and D. Sinha. Near optimal A-B testing. *Management Science*, forthcoming, September 2018.
- [4] C. C. Moallemi and M. Sağlam. Dynamic portfolio choice with linear rebalancing rules. *Journal of Financial and Quantitative Analysis*, 52(3):1247–1278, June 2017.
- [5] P. Glasserman, C. C. Moallemi, and K. Yuan. Hidden illiquidity with multiple central counterparties. *Operations Research*, 64(5):1143–1158, September–October, 2016.
- [6] M. Broadie, Y. Du, and C. C. Moallemi. Risk estimation via regression. *Operations Research*, 63(5):1077–1097, September–October, 2015.
- [7] K. Iyer, R. Johari, and C. C. Moallemi. Information aggregation and allocative efficiency in smooth markets. *Management Science*, 60(10):2509–2524, July 2014.
- [8] C. Chen, G. Iyengar, and C. C. Moallemi. An axiomatic approach to systemic risk. *Management Science*, 56(6):1373–1388, June 2013.  
**Honorable Mention, INFORMS George Nicholson Student Paper Competition, 2011**
- [9] C. C. Moallemi and M. Sağlam. The cost of latency in high-frequency trading. *Operations Research*, 61(5):1070–1086, September–October, 2013.  
**1<sup>st</sup> Place, INFORMS Financial Services Section Student Research Paper Competition, 2011**  
**Selected for publication in the *Operations Research* Forum**
- [10] V. V. Desai, V. F. Farias, and C. C. Moallemi. Approximate dynamic programming via a smoothed linear program. *Operations Research*, 60(3):655–674, May–June, 2012.  
**1<sup>st</sup> Place, INFORMS Junior Faculty Paper Competition, 2011**
- [11] V. V. Desai, V. F. Farias, and C. C. Moallemi. Pathwise optimization for optimal stopping problems. *Management Science*, 58(12):2292–2308, December 2012.  
**Best Simulation Publication Award, INFORMS Simulation Society, 2014**
- [12] C. C. Moallemi, B. Park, and B. Van Roy. Strategic execution in the presence of an uninformed arbitrageur. *Journal of Financial Markets*, 15(4):361–391, January 2012.
- [13] M. Broadie, Y. Du, and C. C. Moallemi. Efficient risk estimation via nested sequential simulation. *Management Science*, 57(6):1172–1194, June 2011.
- [14] C. C. Moallemi and B. Van Roy. Resource allocation via message passing. *INFORMS Journal of Computing*, 23(2):205–219, Spring, 2011.
- [15] V. F. Farias, C. C. Moallemi, B. Van Roy, and T. Weissman. Universal reinforcement learning. *IEEE Transactions on Information Theory*, 56(5):2441–2454, May 2010.
- [16] C. C. Moallemi and B. Van Roy. Convergence of min-sum message passing for convex optimization. *IEEE Transactions on Information Theory*, 56(4):2041–2050, April 2010.
- [17] C. C. Moallemi and B. Van Roy. Convergence of min-sum message passing for quadratic optimization. *IEEE Transactions on Information Theory*, 55(5):2413–2423, May 2009.

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<sup>1</sup>The standard convention in my area is that authorship is in alphabetical order.

- [18] C. C. Moallemi and B. Van Roy. Consensus propagation. *IEEE Transactions on Information Theory*, 52(11):4753–4766, November 2006.
- [19] K. Mason, N. M. Patel, A. Ledell, C. C. Moallemi, and E. A. Wintner. Mapping protein pockets through their potential small-molecule binding volumes: QSCD applied to biological protein structures. *Journal of Computer-Aided Molecular Design*, 18(1):55–70, 2004.
- [20] J. M. Johnson, K. Mason, C. C. Moallemi, H. Xi, S. Somaroo, and E. Huang. Protein family annotation in a multiple alignment viewer. *Bioinformatics*, 19(4):544–545, 2003.
- [21] E. A. Wintner and C. C. Moallemi. Quantized Surface Complementarity Diversity (QSCD): A model based on small molecule-target complementarity. *Journal of Medicinal Chemistry*, 43(10):1993–2006, 2000.
- [22] C. C. Moallemi. Neural networks in the computer analysis of voided urine cells for bladder cancer. *IEEE Expert*, 6(6):8–12, December 1991.

## Working Papers

- [1] S. Min, C. Maglaras, and C. C. Moallemi. Thompson sampling with information relaxation penalties. Working paper. Initial version: February 2019. Revised: May 2020.
- [2] S. Min, C. Maglaras, and C. C. Moallemi. Cross-sectional variation of intraday liquidity, cross-impact, and their effect on portfolio execution. Working paper. Initial version: November 2018.
- [3] G. Huberman, J. Leshno, and C. C. Moallemi. An economic analysis of the Bitcoin payment system. Working paper. Initial version: August 2017. Revised: March 2019.
- [4] C. C. Moallemi and K. Yuan. A model for queue position valuation in a limit order book. Working paper. Initial version: December 2016. Revised: June 2017.
- [5] C. C. Moallemi and K. Yuan. Portfolio liquidity estimation and optimal execution. Working paper. Initial version: December 2016. Revised: August 2019.
- [6] C. Maglaras, C. C. Moallemi, and H. Zheng. Optimal execution in a limit order book and an associated microstructure market impact model. Working paper. Initial version: May 2015.
- [7] O. Besbes, J. M. Chaneon, and C. C. Moallemi. The exploration-exploitation tradeoff in the newsvendor problem. Working paper. Initial version: November 2014. Revised: June 2019.
- [8] K. Iyer, R. Johari, and C. C. Moallemi. Welfare analysis of dark pools. Working paper. Initial version: October 2014. Revised: June 2018.
- [9] C. Chen, G. Iyengar, and C. C. Moallemi. Asset price-based contagion models for systemic risk. Working paper. Initial version: October 2014.
- [10] P. Collin-Dufresne, K. Daniel, C. C. Moallemi, and M. Sağlam. Strategic asset allocation with predictable returns and transaction costs. Working paper. Initial version: August 2013. Revised: June 2015.
- [11] N. Bhat, V. F. Farias, and C. C. Moallemi. Non-parametric approximate dynamic programming via the kernel method. Working paper. Initial version: October 2012. Revised: January 2018.
- [12] C. C. Moallemi and D. Shah. On the flow-level dynamics of a packet-switched network. Working paper. Initial version: November 2009. Revised: October 2012.
- [13] C. C. Moallemi, S. Kumar, and B. Van Roy. Approximate and data-driven dynamic programming for queueing networks. Working paper. Initial version: December 2006. Revised: January 2013.

## Conference Papers

- [1] G. Huberman, J. Leshno, and C. C. Moallemi. An economist’s perspective on the Bitcoin payment system. In *American Economic Association Papers and Proceedings*, volume 109, pages 93–96, May 2019.
- [2] S. Min, C. Maglaras, and C. C. Moallemi. Thompson sampling with information relaxation penalties. In *Advances in Neural Information Processing Systems 32*, pages 3549–3558, 2019.
- [3] N. Bhat, V. F. Farias, and C. C. Moallemi. Non-parametric approximate dynamic programming via the kernel method. In *Advances in Neural Information Processing Systems 22*, pages 395–403, 2012.
- [4] M. Broadie, Y. Du, and C. C. Moallemi. Risk estimation via weighted regression. In *Proceedings of the 2011 Winter Simulation Conference*, pages 3854–3865, December 2011.

- [5] K. Iyer, R. Johari, and C. C. Moallemi. Information aggregation in smooth markets. In *EC '10: Proceedings of the 11th ACM Conference on Electronic Commerce*, pages 199–206, June 2010.
- [6] C. C. Moallemi and D. Shah. On the flow-level dynamics of a packet-switched network. In *SIGMETRICS '10: Proceedings of the ACM SIGMETRICS International Conference on Measurement and Modeling of Computer Systems*, pages 83–94, June 2010.
- [7] V. V. Desai, V. F. Farias, and C. C. Moallemi. A smoothed approximate linear program. In *Advances in Neural Information Processing Systems 22*, pages 459–467, 2009.
- [8] C. C. Moallemi and B. Van Roy. Convergence of the min-sum algorithm for convex optimization. In *Proceedings of the 45th Allerton Conference on Communication, Control and Computing*, pages 840–847, Monticello, IL, September 2007.
- [9] C. C. Moallemi and B. Van Roy. Consensus propagation. In *Advances in Neural Information Processing Systems 18*, pages 899–906. MIT Press, 2006.
- [10] V. F. Farias, C. C. Moallemi, and B. Prabhakar. Load balancing with migration penalties. In *Proceedings of the IEEE International Symposium on Information Theory*, pages 558–562, Adelaide, Australia, September 2005.
- [11] V. F. Farias, C. C. Moallemi, B. Van Roy, and T. Weissman. A universal scheme for learning. In *Proceedings of the IEEE International Symposium on Information Theory*, pages 1158–1162, Adelaide, Australia, September 2005.
- [12] C. C. Moallemi and B. Van Roy. Distributed optimization in adaptive networks. In *Advances in Neural Information Processing Systems 16*, pages 887–894. MIT Press, 2004.
- [13] C. C. Moallemi and B. Van Roy. Decentralized protocols for optimization of sensor networks. In *Proceedings of the 42nd Allerton Conference on Communication, Control and Computing*, Monticello, IL, September 2003.

## Book Chapters

- [1] V. V. Desai, V. F. Farias, and C. C. Moallemi. Bounds for Markov decision processes. In F. L. Lewis and D. Liu, editors, *Reinforcement Learning and Approximate Dynamic Programming for Feedback Control*, pages 452–473. IEEE Press, December 2012.

## Other Publications

- [1] R. Dewey and C. C. Moallemi. The unsolved mystery of the Medallion Fund's success. *Bloomberg Businessweek*, November 2019.
- [2] G. Huberman, J. Leshno, and C. C. Moallemi. The economics of the Bitcoin payment system. *Vox EU*, December 2017.
- [3] C. C. Moallemi. *A Message-Passing Paradigm for Optimization*. PhD thesis, Stanford University, September 2007.

## Honors and Awards

- Sponsored Research Gift, J.P. Morgan, 2019 (\$150,000)
- Dean's Award for Teaching Excellence in a Core Course, Columbia Business School, 2014
- Best Simulation Publication Award, INFORMS Simulation Society, 2014
- NSF Grant CMMI-1235023, 2012–2015 (\$229,782; co-PI: Garud Iyengar)  
Title: *Optimization Based Methods for Systemic Risk Management*
- Meritorious Service Award, *Operations Research*, 2011, 2012
- 1st Place, INFORMS Junior Faculty Paper Competition, 2011
- Benchmark Stanford Graduate Fellowship, 2003–2006
- Marshall Scholarship, 1996–1997
- 5th Place, Westinghouse Science Talent Search, 1991

## Professional Activities

- Member, INFORMS
- Member, Columbia Business School Program for Financial Studies

- Member, Columbia University Center for Financial Engineering
- Member, Columbia University Data Science Institute
- Member, Columbia University Center for Applied Probability
- Associate Editor, *Operations Research*, 2010–present
- Associate Editor, *Management Science*, 2012, 2015–present
- Guest Editor, Special Issue on FinTech, *Information Systems Research*, 2017–2018
- Associate Editor, *Operations Research Letters*, 2014–2015
- Council Member, INFORMS Applied Probability Society, 2011–2013
- Committee Member, INFORMS George Nicholson Student Paper Competition, 2013, 2014
- Technical Reviewer (Journals): *Management Science*, *Operations Research*, *Mathematics of Operations Research*, *Stochastic Systems*, *Quantitative Finance*, *SIAM Journal on Financial Mathematics*, *Mathematical Finance*, *Journal of Computational Finance*, *Journal of Financial Markets*, *Market Microstructure and Liquidity*, *Queueing Systems*, *European Journal of Operations Research*, *Computational Optimization and Applications*, *IIE Transactions*, *IEEE Trans. Information Theory*, *IEEE Trans. Signal Processing*, *IEEE Trans. Automatic Control*, *IEEE Trans. Wireless*, *Journal of Machine Learning Research*, *IEEE J. Selected Areas in Communications*, *Automatica*
- Technical Reviewer (Conferences): Winter Simulation Conference, IEEE ISIT, NIPS, IEEE Infocom, IEEE CDC, IJCAI, MSOM
- Technical Reviewer (Funding Agencies): National Science Foundation, Research Grants Council (Hong Kong)

## Doctoral Students Supervised

- Vijay V. Desai (Ph.D. 2011, Columbia IEOR)  
Thesis title: *Approximate Dynamic Programming for Large Scale Systems*  
First position: SAS Institute
- Yiping Du (Ph.D. 2011, Columbia IEOR, co-supervisor: Mark Broadie)  
Thesis title: *Efficient Methods for Estimating Risk Measures*  
First position: Barclays Capital
- Mehmet Sağlam (Ph.D. 2012, Columbia GSB)  
Thesis title: *Dynamic Trading Strategies in the Presence of Market Frictions*  
First position: Postdoctoral Associate, Bendheim Center for Finance, Princeton University
- Chen Chen (Ph.D. 2014, Columbia IEOR, co-supervisor: Garud Iyengar)  
Thesis title: *Theory of Systemic Risk*  
First position: Assistant Professor, ShanghaiTech University
- Juan Chaneton (Ph.D. 2015, Columbia GSB, co-supervisor: Omar Besbes)  
Thesis Title: *Decision Making with Coupled Learning: Applications in Inventory Management and Auctions*  
First Position: Celect
- Hua Zheng (Ph.D. 2015, Columbia GSB, co-supervisor: Costis Maglaras)  
Thesis Title: *Microstructure Analysis of Dynamic Markets: Limit Order Books and Dynamic Matching Markets*  
First Position: J.P. Morgan
- Nikhil Bhat (Ph.D. 2015, Columbia GSB)  
Thesis Title: *Tractable Algorithms for Sequential Decision Making Problems*  
First Position: Airbnb
- Kai Yuan (Ph.D. 2017, Columbia GSB)  
Thesis Title: *Essays on Liquidity Risk and Modern Market Microstructure*  
First Position: Two Sigma Investments
- Seungki Min (Ph.D. candidate, Columbia GSB, co-supervisor: Costis Maglaras)
- Muye Wang (Ph.D. candidate, Columbia GSB, co-supervisor: Costis Maglaras)

## Invited Presentations

2020/05 TGS Management Company  
 2020/02 CFM-Imperial College Quantitative Finance Seminar  
 2019/10 Dartmouth Tuck School of Business  
 2019/09 SAMSI Blockchain Workshop

2019/08 UBS/Santa Fe Institute Machine Learning, Complexity, and Market Behavior Symposium  
 2019/06 SIAM Conference on Financial Mathematics & Engineering  
 2019/04 Engineers Gate LP  
 2019/01 Utah Winter Operations Management Conference  
 2018/11 Moody's, Innovation Speaker's Series  
 2018/08 Goldman Sachs, Equities Execution  
 2018/07 SIAM Annual Meeting, Mini-symposium on Financial Technology  
 2018/04 Simons Institute, Foundations of Data Science Workshop  
 2018/03 Columbia University, Program for Financial Studies  
 2018/02 Cornell Tech, Financial Engineering in Manhattan  
 2017/12 University of Cincinnati Lindner College of Business  
 2017/11 Columbia University, Applied Mathematics Department  
 2017/11 Columbia University, Graduate School of Business, Finance & Economics Division  
 2017/06 Clinton Group  
 2017/03 Symposium on High Frequency Trading, Carnegie Mellon University and University of Pittsburgh, Keynote Talk  
 2016/11 Stevens Institute, High Frequency Finance and Data Analytics Conference  
 2016/04 Columbia University, Graduate School of Business, Decision, Risk, & Operations Division  
 2016/01 Citadel LLC  
 2015/10 Deutsche Bank Annual Quantitative Strategy Conference  
 2015/10 Columbia-JAFEE Conference on Financial Mathematics and Statistics  
 2015/09 Manhattan College School of Business  
 2015/06 IMS-FIPS Workshop on on Probability and Statistics in Finance  
 2015/06 Market Innovation Workshop, Columbia University Center for Pricing and Revenue Management  
 2015/05 Federal Reserve Bank of New York, Financial Institution Supervision Group  
 2015/05 Kepos Capital  
 2015/04 Cornell University, Financial Engineering in Manhattan / Global Association of Risk Professionals  
 2015/03 USC Marshall School of Business  
 2015/03 IPAM Workshop on Systemic Risk and Financial Networks  
 2014/12 Institut Louis Bachelier Conference on Market Microstructure  
 2014/11 SIAM Conference on Financial Mathematics, Plenary Talk  
 2014/11 SIAM Conference on Financial Mathematics, Mini-symposium on Systemic Risk  
 2014/09 Newton Institute Workshop on Monitoring Systemic Risk  
 2014/07 Banff International Research Station, New Directions in Financial Mathematics Workshop  
 2014/06 London Business School  
 2014/06 University College London  
 2014/05 SIAM Conference on Optimization, Mini-symposium on Advances in Stochastic Dynamic Programming  
 2014/05 MIT, Operations Research Center  
 2014/03 International Association of Financial Engineers, Thalesians Seminar Series  
 2014/02 AQR Capital Management  
 2013/10 Stevens Institute, Modeling High Frequency Data in Finance Conference  
 2013/10 INFORMS Annual Conference, Tutorial Speaker  
 2013/05 University of Chicago, High-Frequency Trading Conference  
 2013/04 Syracuse University, Whitman School of Management, Finance Group  
 2013/04 Cornell University, School of Operations Research & Information Engineering  
 2013/02 Stanford University, Management Science & Engineering Dept  
 2012/12 Barclays Capital, Portfolio and Risk Research Group  
 2012/11 New York University, Stern School of Business, Operations Management Department  
 2012/10 Stanford University, Management Science & Engineering Dept, New Directions Lecture Series  
 2012/07 Stevens Institute, Modeling High Frequency Data in Finance Conference  
 2012/07 SIAM Conference on Financial Mathematics, Mini-symposium on Limit Order Books  
 2012/05 IMS Workshop on Probability and Statistics in Finance  
 2012/05 Two Sigma Investments LLC

2012/03 Goldman Sachs, Equity Strategy Group  
2012/02 Pragma Trading Quantference  
2011/12 University of Utah, Eccles School of Business, Finance Group  
2011/10 Columbia University, High Frequency Trading and Market Microstructure Conference  
2011/09 JP Morgan, Quantitative Research Group  
2011/07 Stevens Institute, Modeling High Frequency Data in Finance Conference  
2011/03 Duke University, Fuqua School of Business, Decision Sciences Group  
2011/02 Carnegie Mellon University, Tepper School of Business, Operations Management Group  
2011/01 Tata Institute for Fundamental Research  
2010/12 National Bureau of Economic Research, Market Microstructure Group (discussant)  
2010/11 Rutgers University, Mathematical Finance and Probability Seminar  
2010/11 Stanford University, 2<sup>nd</sup> Stanford Conference in Quantitative Finance  
2010/11 University of Texas Austin, McCombs School of Business, Texas Quantitative Finance Festival  
2010/10 New York University, Stern School of Business, Operations Management Department  
2010/05 Knight Capital Group  
2010/04 New York University, Courant Institute of Mathematical Sciences  
2010/04 Columbia University, Statistics Department  
2010/03 Fields Institute, Workshop on Computational Methods in Finance  
2010/02 Cornell University, Financial Engineering in Manhattan  
2009/11 Columbia University, Center for Financial Engineering  
2009/11 SAC Capital Advisors  
2009/10 Northwestern University, Industrial Engineering & Management Sciences Department  
2009/06 US Commodity Futures Trading Commission  
2009/05 MIT, Sloan School of Management, Operations Management Department  
2009/04 FDIC, Center for Financial Research  
2009/03 University of Pennsylvania, Electrical & Systems Engineering Department  
2008/06 Cornell University, School of Operations Research & Information Engineering  
2008/05 ETH Zürich, Department of Information Technical & Electrical Engineering  
2008/04 Columbia University, Graduate School of Business, Finance & Economics Division  
2008/02 Columbia University, Statistics Department  
2007/03 UC Berkeley, Department of Electrical Engineering & Computer Science  
2007/03 Stanford University, Information Systems Laboratory  
2007/02 Northwestern University, Kellogg School of Management, MEDS Department  
2007/02 New York University, Stern School of Business, IOMS Department  
2007/01 Columbia University, Graduate School of Business, Decision, Risk, & Operations Division

## Teaching Experience

New York, NY

	<b>Columbia University, Graduate School of Business</b>
2019 Fall	<i>Lecturer</i> , Business Analytics (B6101–005, MBA Core)
2019 Fall	<i>Lecturer</i> , Business Analytics (B6101–006, MBA Core)
2019 Fall	<i>Lecturer</i> , Business Analytics (B6101–007, MBA Core)
2019 Fall	<i>Lecturer</i> , Business Analytics (B6101–008, MBA Core)
2018 Fall	<i>Lecturer</i> , Business Analytics (B6101–005, MBA Core)
2018 Fall	<i>Lecturer</i> , Business Analytics (B6101–006, MBA Core)
2018 Fall	<i>Lecturer</i> , Business Analytics (B6101–007, MBA Core)
2018 Fall	<i>Lecturer</i> , Business Analytics (B6101–008, MBA Core)
2017 Fall	<i>Lecturer</i> , Business Analytics (B6101–002, MBA Core)
2017 Fall	<i>Lecturer</i> , Business Analytics (B6101–004, MBA Core)
2017 Fall	<i>Lecturer</i> , Business Analytics (B6101–005, MBA Core)
2017 Fall	<i>Lecturer</i> , Business Analytics (B6101–008, MBA Core)
2016 Fall	<i>Lecturer</i> , Business Analytics (B6101–004, MBA Core)
2016 Fall	<i>Lecturer</i> , Business Analytics (B6101–005, MBA Core)
2016 Fall	<i>Lecturer</i> , Business Analytics (B6101–007, MBA Core)
2016 Fall	<i>Lecturer</i> , Business Analytics (B6101–008, MBA Core)
2015 Fall	<i>Lecturer</i> , Business Analytics (B6101–005, MBA Core)
2015 Fall	<i>Lecturer</i> , Business Analytics (B6101–006, MBA Core)
2015 Fall	<i>Lecturer</i> , Business Analytics (B6101–007, MBA Core)
2015 Fall	<i>Lecturer</i> , Business Analytics (B6101–008, MBA Core)
2014 Fall	<i>Lecturer</i> , Business Analytics (B6101–001, MBA Core)
2014 Fall	<i>Lecturer</i> , Business Analytics (B6101–002, MBA Core)
2014 Fall	<i>Lecturer</i> , Business Analytics (B6101–005, MBA Core)
2014 Fall	<i>Lecturer</i> , Business Analytics (B6101–007, MBA Core)
2014 Spring	<i>Lecturer</i> , Business Analytics (B6101–001, MBA Core)
2014 Spring	<i>Lecturer</i> , Business Analytics (B6101–002, MBA Core)
2014 Spring	<i>Lecturer</i> , Business Analytics (B6101–003, MBA Core)
2013 Fall	<i>Lecturer</i> , Foundations of Optimization (B9118–001, PhD Core)
2012 Fall	<i>Lecturer</i> , Foundations of Optimization (B9824–001, PhD Core)
2012 Spring	<i>Lecturer</i> , Quantitative Finance: Models & Computation (B8835–001, MBA Elective)
2012 Spring	<i>Lecturer</i> , Quantitative Finance: Models & Computation (B8835–002, MBA Elective)
2011 Fall	<i>Lecturer</i> , Foundations of Optimization (B9824–001, PhD Core)
2011 Spring	<i>Lecturer</i> , Security Pricing: Models & Computation (B8835–001, MBA Elective)
2011 Spring	<i>Lecturer</i> , Security Pricing: Models & Computation (B8835–002, MBA Elective)
2010 Fall	<i>Lecturer</i> , Foundations of Optimization (B9824–001, PhD Core)
2010 Spring	<i>Lecturer</i> , Security Pricing: Models & Computation (B8835–001, MBA Elective)
2010 Spring	<i>Lecturer</i> , Security Pricing: Models & Computation (B8835–002, MBA Elective)
2009 Fall	<i>Lecturer</i> , Foundations of Optimization (B9824–001, PhD Core)
2009 Spring	<i>Lecturer</i> , Security Pricing: Models & Computation (B8835–001, MBA Elective)
2009 Spring	<i>Lecturer</i> , Security Pricing: Models & Computation (B8835–002, MBA Elective)
2008 Fall	<i>Lecturer</i> , Foundations of Optimization (B9824–001, PhD Core)
2008 Summer	<i>Lecturer</i> , Decision Models (B6015–002, MBA Core)
2008 Summer	<i>Lecturer</i> , Decision Models (B6015–003, MBA Core)
2008 Spring	<i>Lecturer</i> , Security Pricing: Models & Computation (B8835–002, MBA Elective)



## Outside Activities (2015–present)

Columbia Business School requires its faculty members to disclose any activities that might present a real or apparent conflict of interest. The list below complies with this requirement.

2020–present	<b>EverQuote Inc</b> <i>Member, Advisory Board.</i>	Cambridge, MA
2014–present	<b>Bourbaki LLC</b> <i>Managing Member.</i>	New York, NY
2020	<b>TGS Management Company</b> <i>Invited Speaker.</i>	Irvine, CA
2019	<b>UBS Investment Bank</b> <i>Invited Speaker.</i>	New York, NY
2019	<b>Engineers Gate LP</b> <i>Invited Speaker.</i>	New York, NY

## Personal

- Male; Citizenship: USA; Year of Birth: 1975