Xin Guo

Coleman Fung Chair Professor
Department of Industrial Engineering and Operations Research
University of California
Berkeley, CA 94720-1777
xinguo@ieor.berkeley.edu
http://www.ieor.berkeley.edu/∼xinguo

Education	Rutgers, the State University of New Jersey.	Ph. D. (Math.) 1995–1999
	Graduate school of Academia Sinica. P. R. China.	M. S. (Math.) 1992–1995
	University of Science and Technology, P. R. China.	B. S. (Math.) 1987–1992

Research interests

Stochastic Controls and Games, Mean Field Games
Machine Learning, Theory and Applications
Medical Data Analysis
Supply Chain and Logistics System
Mathematical Finance and FinTech

Experience	UCBerkeley-UCSF Affilliated Faculty of Precision Health Program	2021–
	University of California, Berkeley, CA. Professor, Department of IEOR	2014–
	University of California, Berkeley, CA. Associate professor (with tenure), Department of IEOR	2008–2013
	University of California, Berkeley, CA. Assistant professor, Department of IEOR	2006–2007
	Cornell University, Ithaca, NY. Associate professor (with tenure), School of ORIE	2007–2008
	Cornell University, Ithaca, NY. Assistant professor, School of ORIE	2003–2006
	IBM T. J. Watson Research Center, Yorktown, NY. Research staff member, Mathematical sciences division	2000–2003
	IBM T. J. Watson Research Center, Yorktown, NY. Herman Goldstine postdoctoral fellow, Mathematical sciences division	1999–2000

Invited academic visits

Amazon Scholar.   2021–present

Department of Mathematics, U. of Technology, Sydney.   July 2014

Department of Statistics, Stanford U., CA, USA   Fall 2012

Department of Mathematics, Humboldt U. at Berlin, Germany.   July 2007

Department of Mathematics, King's College at London, UK.   May 2006

Department of Mathematics, U. Texas at Austin.   January 2006

Isaac Newton Institute of Mathematics, Cambridge, UK.   June–July 2005

Shanghai Stock Exchange, P. R. China.   June–July 2005

Lab. de Probabilits et Modles Alatoires, Paris VI. France   January 2004

SE&EM, Chinese University of Hong Kong.   April 2002

Department of Mathematics, City University of Hong Kong.   March 2002

Book X. Guo, T. L. Lai, H. Shek, and S. Wong. Quantitative Trading: Algorithms, Analytics, Data, Models, Optimization, Chapman and Hall, 2016. Second Edition 2018, Chinese Edition 2019, and Japanese Edition 2019.

Refereed Publications

64. H. T. Gu, X. Guo, T. Jacobs, P. Kaminsky, and X. Y. Li. "Transportation marketplace rate forecast using signature transform." KDD 2024.

63. X. Guo, J. Q. Han, M. Tajrobehkar, and W. P. Tang. "Perturbed gradient descent with occupation time." *Journal of Computational Mathematics and Data Science.* 2024.

62. H. T. Gu, X. Guo, X. L. Wei, R. Y. Xu. "Multi-agent reinforcement learning, a decentralized network approach." *MOR.* 2024.

61. H. Y. Cao, X. Guo, and M. Laurière, "Connecting GANs, MFGs, and OT." Arxiv 2002.04112. *SIAM Applied Math.* 2024.

60. X. Guo, A.R. Hu, and J.Z. Zhang. "MF-OMO: an optimization framework for mean-field games." *SICON*, 2023.

59. X. Guo and O. Mounjid. "GANs training, a game and stochastic control approach." *Mathematical Finance.* 2023

58. X. Guo, H. Pham, and X. L. Wei. "Itô's Lemma for flows of measures on semimartingales." Arxiv 2010.05288. *Stochastic Processes and their Applications.* 2023.

57. H. Y. Cao and X. Guo. "SDE approximations of GANs training and its long-run behavior." Arxiv 2006.02047. To appear in *Journal of Applied Probability*, 2023.

56. H. Y. Cao, X. Guo, and J. S. Lee. "Approximation of N-player stochastic games with singular controls by mean field games" *Numerical Algebra, Optimization and Control*, 2023.

55. X. Guo, A. R. Hu, and Y. F. Zhang. "Reinforcement learning for linear-convex models with jumps via stability analysis of feedback controls." ArXiv: 2104.09311. 61(2) *SICON*, 2023.

54. M. Basei, X. Guo, A. R. Hu, and Y. F. Zhang. "Logarithmic regret for episodic continuous-time linear-quadratic reinforcement learning over a finite-time." Arxiv 3247127. *JMLR*, 1-34, 22, 2022.

53. X. Guo, A. R. Hu, R. Y. Xu, and J. Z. Zhang. "A general framework for learning mean-field games." *Mathematics of Operations Research*, 2022.

52. H. T. Gu, X. Guo, X. L. Wei, R. Y. Xu. "Dynamic programming principle for mean field controls with learning." *Operations Research*, 2022. Arxiv: 1911.07314.

51. X. Guo, A. R. Hu, and J. Z. Zhang. "Theoretical guarantees of fictitious discount algorithms for episodic reinforcement learning and global convergence of policy gradient methods." *AAAI 2022*.

50. X. Guo, C. Lehalle, and R. Y. Xu. "Transaction cost analysis for corporate bonds." *Quantitative Finance,* 2022.

49. X. Guo, W. P. Tang, and R. Y. Xu. "A class of stochastic games and moving free boundary problems." *SIAM Journal on Control and Optimization*, 2022. Arxiv:1809.03459.

48. X. Guo, R. Y. Xu, and T. Zariphopoulou. "Entropy regularizations for mean field games with learning." *Mathematics of Operations Research*, 2021. ArXiv 2010.00145 and SSRN 3702956.

47. X. Guo, J. Hong, D. Lin, and N. Yang. "Relaxed Wasserstein with applications to GANs." *IEEE-ICASSP*, 2021. Arxiv:1705.07164.

46. H. T. Gu, X. Guo, X.L. Wei, and R. X. Xu. "Mean-Field controls with Q-learning for cooperative MARL: convergence and complexity analysis." *SIAM Journal on Mathematics of Data Science*, 2021. Arxiv 2002.04131.

45. R. Cont, X. Guo and R. Y. Xu. "Interbank lending with benchmark rates: Pareto optima for a class of singular control games." *Mathematical Finance*, 2021. SSRN 3745809.

44. B. S. Li, C. Wu, X. Guo, et al. Ultrasensitive detection of circulating tumour DNA via deep methylation sequencing aided by machine learning. *Nature, Biomedical Engineering*, 2021.

43. X. Guo, F. M. Tang and W. P. Tang. "Consistency of the Buckley-Osthus model and the HPAM model." *International Conference of Machine Learning (ICML)*, 2020, Arxiv: 1910.07698.

42. H. Y. Cao, and X. Guo. "MFGs for partially reversible investment." *Stochastic Processes and their Applications*, https://doi.org/10.1016/j.spa.2020.09.006, Arxiv:1908.10916, September 2020.

41. M. Basei, H. Y. Cao and X. Guo. "Nonzero-sum stochastic games with impulse controls." *Mathematics of Operations Research*, 2020, Arxiv:1901.08085

40. X. Guo, A. R. Hu, R. Y. Xu, and J. Z. Zhang. "Learning mean-field games." *Conference on Neural Information Processing Systems (NeurIPS)*, 2019, Arxiv:1901.09585. 39. X. Guo and R. Y. Xu. "Stochastic games for the fuel follower problem, N vs MFG." *SIAM Journal on Control and Optimization*, 57(1), 659–692, 2019.

38. D. Lin, Z. Y. Hu, and X. Guo. "Sparsemax and relaxed Wasserstein for topic sparsity", *WSDM*, 2018.

37. X. Guo, and C. Pan. "Itô's calculus in a sublinear expectation space via regularity of PDEs and rough path." *Stochastic Processes and Their Applications*, 11(2), 1711-1749, 2018.

36. X. Guo, C. Pan, and S. G. Peng. "Martingale problem under non linear expectations", *Mathematics and Financial Economics*, 12, 135-164, 2018.

35. X. Guo, A. de Larrard, and Z. Ruan. "Optimal placement in a limit order book, an analytical approach." *Mathematics and Financial Economics*, 11(2), 189-213, 2017.

34. X. Guo and M. Zervos. "Optimal execution with multiplicative price impact." *SIAM Journal on Financial Mathematics*, 6(1), 281-306, 2015.

33. X. Guo, R. A. Jarrow, and A. de Larrard. "Economic default time and the arcsine law." *Journal of Financial Engineering*, 2014.

32. X. Guo. "Optimal placement in a limit order book." *TUTORIALS in Operations Research, INFORMS*, 2013.

31. Y-S. A. Chen and X. Guo. "Impulse control of multidimensional jump diffusions in finite time horizon." *SIAM Journal on Control and Optimization*, 51(3):2638–2663, 2013.

30. I. O. Filiz, X. Guo, J. Morton, and B. Sturmfels. "Graphical models for correlated defaults." *Mathematical Finance*, 22(4), 621–644, 2012.

29. X. Guo, P. Kaminsky, P. Tomecek, and M. Yuen. "Optimal spot market inventory strategies in the presence of cost and price risk." *Mathematical Methods of Operations Research*, 73:109–137, 2011.

28. X. Guo and M. Zervos. "Pi options." *Stochastic Processes and their Applications*, 120:1033–1059, 2010.

27. M. A. Davis, X. Guo, and G. L. Wu. "Impulse controls for multi-dimensional jump diffusions." *SIAM Journal on Control and Optimization*, 48(8):5276–5293, 2010.

26. X. Guo and G. L. Wu. "Smooth fit principle for impulse control of multi-dimensional diffusion processes." *SIAM Journal on Control and Optimization*, 48(2):594–617, 2009.

25. X. Guo, R. Jarrow, and Y. Zeng. "Credit risk models with incomplete information," (earlier version (2005) with the title "Information reduction in credit risk models"), *Mathematics of Operations Research*, 34(2):320–332, 2009.

24. X. Guo, R. Jarrow, and Y. Zeng. "Modeling the recovery rate in a reduced form model," *Mathematical Finance,* 19(1):73–97, 2009.

23. X. Guo and P. Tomecek. "A class of singular control problems and the smooth fit principle," *SIAM Journal on Control and Opimization*, 47(6), 3076–3099, 2009.

22. X. Guo, H. Z. Lin, and R. Jarrow. "Distressed debt prices and recovery rate estimation," *Review of Derivative Research*, 11(3):171–204, 2008

21. X. Guo and P. Tomecek. "Connections between singular control and optimal switching," *SIAM Journal on Control and Optimization*, 47(1), 421-443, 2008.

20. X. Guo and Y. Zeng. "Intensity process and compensator: A new filtration expansion approach and the Jeulin–Yor theorem," *Annals of Applied Probability*, 18(1), 120-142, 2008.

19. X. Guo and P. Tomecek. "Solving singular control from optimal switching", Asia-Pacific Financial Market 2008.

18. X. Guo and G. Yin. "The Wonham filter with random parameters: Rate of convergence and error bounds," *IEEE Transactions on Automatic Control*, 51(3):460–464, 2006.

17. X. Guo and Q. Zhang. "Optimal selling rules in a regime switching model," *IEEE Transactions on Automatic Control*, 50(9):1450–1455, 2005.

16. X. Guo and J. Liu. "Stopping at the maximum of geometric Brownian motion when signals are received," *Journal of Applied Probability*, 42(3):826–838, 2005.

15. X. Guo, J. J. Miao, and E. Morellec. "Irreversible investment with regime shifts," *Journal of Economic Theory*, 122(1):37–59, 2005.

14. A. Banerjee, X. Guo, and H. Wang "On the optimality of conditional expectation as a Bregman predictor," *IEEE Transactions on Information Theory*, 51(7):2664–2669, 2005.

13. X. Guo and H. Pham. "Optimal partially reversible investment with entry decision and general production function," *Stochastic Processes and their Applications*, 115(5):705–736, 2005.

12. X. Guo, J. Liu, and X. Y. Zhou. "A constrained non-linear regular-singular stochastic control problem, with applications," *Stochastic Processes and Their Applications*, 109(2):167–187, 2004.

11. X. Guo and Q. Zhang. "Closed-form solutions for perpetual American put options with regime switching," *SIAM Journal on Applied Mathematics*, 64(6):2034–2049, 2004.

10. A. Banerjee, X. Guo, and H. Wang. "Optimal Bregman prediction and Jensen's equality," *Proc. IEEE International Symposium on Information Theory (ISIT),* 168, 2004.

9. X. Guo. "Option pricings in an incomplete market with regime switching," *Proc. of the Steklov Institute of Mathematics*, (237), 192–202, 2002.

8. X. Guo. "Some risk management problems for firms with internal competition and debt," *Journal of Applied Probability,* 39(1):55–69, 2002.

7. X. Guo. "An optimal strategy for sellers in an online auction," *ACM Transactions on Internet Technology,* 2(1):1–13, 2002.

6. X. Guo. "When the 'bull' meets the 'bear'—A first passage time problem for a hidden Markov process," *Methodology and Computation in Applied Probability,* 3(2):135–143, 2001.

5. X. Guo and L. Shepp. "Some optimal stopping problems with non-trivial boundaries for pricing exotic options," *Journal of Applied Probability,* 38(3):647–658, 2001.

4. X. Guo. "An explicit solution to an optimal stopping problem with regime switching," *Journal of Applied Probability,* 38(2):464–481, 2001.

3. X. Guo. "Information and option pricings," *Quantitative Finance,* 1:38–44, 2001.

2. Q. Yu, S. Gong, and X. Guo. "Schwarzian derivative of holomorphic mappings," *Singularities and complex geometry* (Q. Lu, S. S. T. Yau, and A. Libgober, eds.), *AMS/IP Studies in Advanced Mathematics*, 5:317–323, 1997.

1. X. Guo. "Cesàro summability of Fourier series under the critical index on unitary groups," *Chinese Annals of Mathematics,* 15A(4):386–395, 1994. Also in *Chinese Journal of Contemporary Mathematics,* 15(3):215–226, 1994.

Other Conference Publications

C4. X. Guo, A. R. Hu, R. Y. Xu, and J. Z. Zhang. "On consistency of regularized MLEs for MHPs." Arxiv:1910.02955, 2018. NIPS 2018 Workshop on Causality.

C3. X. Guo and P. Tomecek. "Connecting singular controls with optimal switching", CDC 2008.

C2. X. Guo. "A regime switching model: Statistical estimation, empirical evidence, and change point detection," *Proc. SIAM-AMS-IMA Research Conference in Mathematical Finance,* 139–153, 2004.

C1. X. Guo, Y. Lu, and M. S. Squillante. "Optimal probabilistic routing in distributed parallel queues," *SIGMETRICS Performance Evaluation Review*, 32(2):53–54, 2004.

Book Chapters

B4. H. Y. Cao and X. Guo. "GANs, some analytical perspectives." Handbook of Machine Learning and Applications to Mathematical Finance, Cambridge Press, 2022.

B3. A. Chakrabarty and X. Guo. "Optimal stopping times with different information levels and with time uncertainty." Chapter two in "Stochastic Analysis and its Application to Mathematical Finance," 19–38, World Scientific Publishers, 2011.

B2. X. Guo. "Some lookback option pricing problems," Chapter in *Recent Developments in Mathematical Finance* (J. Young, ed.), 39–48, World Scientific Publishers, 2002.

B1. X. Guo and L. Shepp. "Option pricing in a world with arbitrage," Chapter in *Stochastic Optimization: Algorithms and Applications* (S. Ursayev and M. Pardalos, eds.), 87–96, Kluwer Academic Publishers, 2000.

Submitted & Arxived Preprints

P1. H. Y. Cao, X. Guo, and G. Wang. "Meta-learning with GANs for anomaly detection, with deployment in high-speed rail system" Submitted, 2024. Arxiv 2202.05795

P2. Y. Kusuke, B. Wang, J. Yi, R. Zhou, Q. Zou, X. Guo. "Transfer learning for retinal vascular disease detection: a pilot study with diabetic retinopathy and retinopathy of prematurity." Submitted, 2024. Arxiv 2006.06968.

P3. H. T. Gu, X. Guo and X. Y. Li. "An SDE approach to adversarial learning, with convergence and robustness analysis." Submitted, 2023.

P4. X. Guo and Y. F. Zhang. "Towards an analytical framework for potential games." Submitted. 2023.

P5. H. Y. Cao, H. T. Gu, X. Guo, and M. Rosenbaum. "Risk of transfer learning and its applications in finance." Submitted. 2023.

P6. X. Guo. X. Y. Li, and R. Y. Xu. "Fast policy learning for LQR with entropy regularization." Submitted. 2023.

P7. X. Guo, L. H. Li, S. Nabih, R. Salhab, and J. Z. Zhang. "Balancing social optimality and mean-field equilibria with application to ad auction bidding." Submitted. 2024

P8. H. T. Gu, X. Guo, P. Kaminsky, T. Jacobs, and X. Y. Li. "Transportation marketplace rate forecast using signature transform." Submitted. 2024.

P9. X. Guo, R. X. Zhang, and C. Y. Zhao. "On consistency of feature selections in Lasso with signatures." Submitted. 2024.

P10. X. Guo, X. Y. Li, and Y. F Zhang. "An α-potential game framework for N-player games. Submitted. 2024.

P11. X. Guo, X. Y. Li, C. Maheshwari, S. Sastry, and M. X. Wu. "Markov α-potential games, equilibrium approximation and regret analysis. Submitted. 2024.

P12. H. Y. Cao, H. T. Gu, X. Guo. "Feasibility of transfer learning: a mathematical framework." Submitted. 2024.

P13. X. Guo, A. R. Hu, and J. C. Zhang. "Optimization frameworks and sensitivity analysis of Stackelberg mean-field games." Preprint, 2023.

Fundings/Grants

PI, Research fund on blockchain system from Ripple Inc. USA.	2018
PI, Research gift fund from Eunke Inc. USA	2018
PI, Research gift fund from Burning Rock Bio Inc. P.R. China.	2018
Co-PI, Research fund on cybersecurity from CLTC. USA.	2017-2018
Co-PI, Tsinghua-Berkeley-Shenzhen-Institute. USA.	2015–2020
Research fund for faculty Advisor of PhD Dissertation, "Statistical Analysis of Limit Order Book," NASDAQ OMX Education Group	2012–2013
PI, "Some Mathematical Topics on the Risk Management of the Financial Market," NSF DMS	2010–2013
PI, "New Mathematical Methodology in Stochastic Control Problems with Applications to Risk Management," UC Berkeley Coleman Fung Risk Management Center	2007-2009
PI, UC Berkeley Junior Faculty Grant	2006-2007
PI, "Credit Risk with Incomplete Information," NSF DMI	2006–2009
PI, "Decisions under Uncertainty: Prediction, Robustness and Optimization," Young Investigator Award, NSA	2004–2006

Awards	Chancellor's Research Award, UC at Berkeley,	2008
	Sonny Yau '72 excellence in teaching award, College of Engineering, Cornell U.	2006

First plateau patent application award, IBM	2002
First patent application invention achievement award, IBM	2000
Herman Goldstine postdoctoral fellowship, IBM	1999–2000

Plenary/Keynote/Tutorial

Tutorial: Scalability, Robustness, and Optimization of Learning in Large Stochastic Games, AAAI, Vancouver, Canada (February 2024)

Keynote lecture for Recent Advances on Quantitative Finance, Hong Kong (August 2023)
Keynote lecture for AI/ML for Healthcare, INFORMS Chicago Chapter (April 2023)

Tutorial for MLDYN2022, School in Machine Learning of Dynamic Processes and Time Series Analysis, Scuola Normale Superiore, Pisa, Italy (November 2022)
Keynote Lecture in ICAIF 2022, New York, NY (November 2022)
Distinguished Lecture for Quantitative Finance, CUHK, HongKong (April, 2022) (Virtual)
Distinguished Lecture for Applied Mathematics, HK Polytechnique (April, 2022) (Virtual)
Plenary Lecture in 2nd Workshop for Women in AI and Finance (November, 2021) (Virtual)
Tutorial for Bachelier Finance Society Summer School (September, 2021) (Virtual)
Tutorial at Thematic Workshop on Machine Learning with Applications to Finance, ISMI Chicago, (July 2021) (Virtual)
Three Tutorial Lectures at 13th European Summer School on Financial Mathematics, Vienna, Austria, (September 2020) (Virtual)
Public lecture for Autorité de Contrôle Prudentiel et de Résolution (ACPR), Paris, France, (July 2020) (Virtual)
Plenary Lecture in Tsinghua-Berkeley-Shenzhen-Institute Workshop on Data Science, China (December 2019)
Master Lecture Series I, II, III, Business school of NCCU, Taipei, Taiwan (December 2018)
Plenary Lecture in Forum for Postdoctoral Associations of Tsinghua U., Macau (November 2018)
Plenary Lecture in 10th World Congress of Bachelier Finance Society, Dublin, Ireland. (July 2018)
Plenary Lecture in METE - Mathematics and Economics: Trends and Explorations, ETHZ. Switzerland. (June 2018)
Plenary Lecture in AMAMeF Conference, Amsterdam, Netherland. (June 2017)
Plenary Lecture in Seventh Workshop on High Frequency Tradings. NJ. (November 2016)
Plenary Lecture in Quantitative Methods in Finance Conference. Sydney, Australia (December 2015)
Plenary Lecture in Third Asian Quantitative Finance Conference. Hong Kong, China. (July 2015)
Plenary Lecture in Workshop on Mathematical Finance and PDEs, Rutgers U., NJ. (November 2013)
Plenary Lecture in IMS-FPS 2013, National U. of Singapore, Singapore. (June 2013)
Plenary Lecture in SIAM Conference on Financial Mathematics and Engineering, Minneapolis, MN. (July 2012)
Plenary Lecture in Workshop on Stochastic Analysis and its Application to Mathematical Finance, Beijing, P. R. China. (July 2011)

Other invited talks

Modeling, Learning and Understanding: Modern Challenges between Financial Mathematics, Financial Technology and Financial Economics,
BIRS, Banff Station, Canada (November 2024)
Directions in Rough Analysis, Oberwolfach, Germany (November 2024)
World Congress in Probability and Statistics, Bernoulli-IMS 2024, Bochum, Germany (August 2024)
New Trends and Challenges in Stochastic Differential Games, BIRS, Banff Station, Canada (June 2024)
Mathematical Finance Colloq. Peking University, P. R. China (June 2024)
Byrne Conference on Stochastic Analysis in Finance and Insurance, Ann Arbor (June 2024)
Recent Advances in Stochastic Control, Machine Learning and Quantitative Finance, Shanghai, P. R. China (April 2024)
Global seminar on mathematical finance (virtual) (April 2024)
Data science and machine learning seminar, NYU Shanghai, P. R. China (April 2024)
Seminar at Institute of Economics Research, Kyoto University, Japan (April 2024)
IEOR-DRO Seminar, Columbia U. (March 2024)
Decision Making and Uncertainty, IMSI, Chicago (February, 2024)
Financial Mathematics Seminar, Chinese U. of HK. (January 2024)

Financial Mathematics Seminar, HKUST. (December 2023)
Financial Mathematics Seminar, HongKong PolyU. (December 2023)
Financial Mathematics Seminar, Department of Mathematics, Imperial College London, UK (October 2023)
Data Science Seminar, Mathematical Institute, U. of Oxford, UK (October 2023)
New Challenges in the Interplay between Finance and Insurance, Oberwolfach, Germany (October 2023)
Advances in Stochastic Analysis for Handling Risks in Finance and Insurance, CIRM, France (September 2023)
International Symposium for the 30th Anniversary of JAFEE, Tokyo, Japan (August 2023)
ICIAM, Symposium on Mean Field Games and Stochastic Control, Tokyo, Japan (August 2023)
Stochastic Control and Financial Engineering, Princeton, NJ (June 2023)
Stochastic Optimal Control in Economics, Finance, and Learning theory: Conference in honor of Martin Schweizer's 60th birthday, ETHZ, Switzerland (June 2023)
Workshop of Women in Mathematical Finance, Rutgers, NJ (June 2023)
Online Seminar by Women in Data Science and Mathematics (May 2023)
Workshop on Technology Innovation in Health Care Delivery, IMSI, Chicago (May 2023)
Quant Seminar, SEC (May 2023) (Virtual)
DataSig Seminar, University of Oxford (May 2023) (Virtual)
Computational and Applied Math Seminar, Harvard (May 2023)
Industrial and Enterprise System Engineering Graduate Seminar, UIUC (April 2023) (Virtual)
Workshop in Machine Learning and AI for Personalized Medicine, IMSI, Chicago (April 2023)

Applied Mathematics Seminar, UC Berkeley, CA (December 2022)
Northwestern IEMS Seminar, Evanston, IL (October 2022)
BGTS Colloquium at University of Bielefeld, Germany (October 2022)(Virtual)
Conference of Advances in Stochastic Control and Optimal Stopping, CIRM, Marseille, France (September 2022)
Logistic Research Lecture Series, Amazon (July, 2022)
Workshop for Mean Field Games, Center for Mathematical Research, Montreal, Canada (Virtual, April 2022)
IMSI Workshop on Model Uncertainty and Decision Makings, Chicago, IL (April, 2022)

IMSI Workshop on Mean Field Games with Applications to Financial Engineering, Chicago (Virtual, December, 2021)
Logistic Research Lecture Series, Amazon (November, 2021)
Conference on Stochastic Hybrid System, U. of Connecticut (November 2021)(Virtual)
Mean Field Games and Reinforcement Learning, Google Brain (November 2021)(Virtual)
Mathematical Finance Seminar, UC Santa Barbara (October 2021) (Virtual)
Probability Seminar, U. of Wisconsin at Madison (October 2021) (Virtual)
Machine Learning for Finance (October 2021) (Virtual)
TBSI Workshop on Machine Learning (July 2021) (Virtual)
Berlin Probability Colloquium (June 2021) (Virtual)
SIAM Conference on Financial Mathematics, (June 2021) (Virtual)
FE/FM Seminar Series, HK Consortium for Quantitative Finance (May 2021) (Virtual)
SIAM Mini-symposium on Mathematics of Machine Learning in Finance, (January 2021) (Virtual)

Logistic Research Lecture Series, Amazon (December 2020) (Virtual)
Optimal Transport and Mean Field Game Seminar, UCLA, (December 2020) (Virtual)
Online Seminars on Optimal Stopping and Related Topics, (November 2020) (Virtual)
Quantitative Finance Seminar Series, NUS, (November 2020) (Virtual)
Operations Management Seminar, Stern School of Business, NYU, (October 2020) (Virtual)
Bachelier Finance Congress One World Seminar, (June 2020) (Virtual)
Stochastic Seminar, Department of Mathematics, U. of Oxford, (May 2020) (Virtual)
AMS Annual Meeting, January 2020

Workshop for Philip Protter's seventy's birthday, Columbia U. (September 2019)
Workshop on Machine Learning and Quantitative Finance, NUS, Singapore (August 2019)
ICIAM, Vanlencia, Spain (July 2019)
Workshop on Mean Field Games, Vietnam (May 2019)
Workshop on Mean Field Games, Edinburgh (April 2019)

Quantitative Finance Seminar, HSBC Business School of Peking University in Shenzhen, China (December 2018)
Colloq. at Business School, U. of Texas at Austin (October 2018)
Workshop of IMS-FIPS 2018, London, UK. (September 2018)
Princeton-Rutgers Mathematical Finance Day. NJ. (April 2018)
Workshop on Mathematics of Behavioral Economics and Knightian Uncertainty in Financial Markets. Bielefeld, Germany. (May 2018)
Financial Math. Seminar, UC Santa-Barbara. (April 2018)
Financial Math. Seminar, Shanghai Jiaotong U. Shanghai, P.R. China. (March 2018)

IPAM FMRC2017, Lake Arrowhead, CA. (December 2017)
Midwest Probability Colloquium, Northwestern U. (October 2017)
Seminar at the Center for Financial and Risk Analytics, Stanford U., CA (May 2017)
National Conference for Women in Financial Mathematics. IPAM, CA. (April 2017)
WCMF, Seattle, WA. (March 2017)
IEOR Colloq. UC Berkeley, CA. (March 2017)

UIUC IESE Department Colloquium. IL. (September 2016)
Closing Conference on Robust Finance and Beyond. ZIF, Bielefeld, Germany (June 2016)
Workshop on the Optimization of Flow of Dividends. Paris, France (May 2016)

HKU-CUHK-HKUST-Stanford Conference in Quantitative Finance. Hong Kong, China. (December 2015)
Public Lecture on Financial Engineering. Xiamen University, China. (December 2015)
Workshop on Big Data. Paris, France. (November 2015)
Sixth Workshop on High Frequency Tradings. NJ. (October 2015)
International Workshop on Advanced Methods in Mathematical Finance. Angers, France (September 2015)
Columbia Workshop on Systemic Risk. New York, NY. (May 2015)
Workshop on Robust and Finance. ZIF, Bielefeld, Germany (May 2015)
IPAM Workshop on the Mathematics of High Frequency Financial Markets. LA, CA. (April 2015)
Financial Mathematics Seminar, USC. LA, CA. (April 2015)
Risk Seminar, UC at Berkeley, CA. (January 2015)

Invited lecture on high frequency trading, University of Technology, Sydney, Australia. (July 2014)
Seventh International Symposium on Backward Stochastic Differential Equations, Weihai, China. (June 2014)
Financial Math. Seminar, U. of Minnesota, MN. (April 2014)

INFORMS Annual Meeting, Minneapolis, MN. (Tutorial, November 2013)
5th Annual Conference on Modeling High-Frequency Data in Finance, Stevens Institute, NJ. (October 2013)
Applied Math. Seminar, Johns Hopkins U., MD. (September, 2013)
Workshop on Stochastic and Real World Models, Bielefeld, Germany. (July, 2013)
The Second Pacific Rim Mathematical Association Congress (PRIMA), Shanghai, P. R. China. (June 2013)
Workshop on Nonlinear Expectations, Stochastic Calculus under Knightian Uncertainty, and Related Topics, Singapore. (June 2013)
Financial Math. Seminar, Stanford U., CA. (April 2013)
Math. Finance Seminar, U. of Pittsburgh, PA. (April 2013)
Bachelier Seminar, Paris, France. (March 2013)
Math. Finance Seminar, U. of Evry, Paris, France. (March 2013)
Probability Seminar, INRIA, Paris, France. (March 2013)

International Workshop on Games, Model Uncertainty and Related Fields, Shandong U., P. R. China. (November 2012)
Tutorial and summer course, USTC, P. R. China (June 2012)
Hong Kong Consortium of Quantitative Finance, HK, P. R. China. (May 2012) Risk Seminar, Columbia U., NY. (April 2012)
Financial Math. Seminar, Stanford U., CA. (February 2012)

International Workshop on Finance, Kyoto, Japan. (August 2011)
ICIAM, Vancouver, Canada (July 2011)
Workshop on Imaging, Communications and Finance: Stochastic Modeling of Real-World Problems, New York, NY (June 2011)
4th Western Conference on Mathematical Finance, USC, CA. (June 2011)
Math. Colloquium, Florida State U., FL. (March 2011)
Seminar on Computational Mathematics, Hong Kong U., HK. P. R. China. (February 2011)

CREST and Sakigake International Symposium on Asymptotic Statistics, Risk and Computation in Finance and Insurance, Tokyo, Japan. (December 2010)
SIAM on Financial Mathematics, San Francisco, CA. (November 2010)

Computational Algebra Seminar, UC Berkeley, CA. (November 2010)
IEOR Colloquium, UC Berkeley, CA. (November 2010)

Financial Math. Seminar, Dept of Prob. and Stat. UC Santa Barbara (April 2009)
Math. Finance Seminar, Math. Dept. U. of Michigan. (March 2009)
Math Colloq. Math. Dept. UC at Berkeley (Feb 2009)
Math Finance Seminar, Math. Dept. U. Southern California (Feb. 2009)
AMS Annual Meeting, Washington D.C. (Jan 2009)

CDC 2008, Cancun, Mexico (Dec 2008)
SIAM-FM08, New Brunswick, New Jersey (Nov 2008)
Probability Seminar, Math. Dept. UC at Davis (Nov 2008)
WCMF Financial Workshop, Texas, Austin (Nov 2008)
Probability Seminar, Stat. Dept. Stanford U. (October 2008)
Openlink User Conference, Whistler, Canada. (March, 2008)
Workshop on Financial Engineering, Kyoto, Japan. (March, 2008)
AMS Annual Meeting, San Diego. (January 2008)

Applied Math. Colloquium, Cornell U. (September 2007)
Workshop on Financial Mathematics, Edinburgh, UK. (July 2007)
Probability Seminar, Humboldt University at Berlin,Germany. (July 2007)
Seminar on Optimization and Finance, University of Ulm, Germany. (June 2007)
Financial Math. Seminar, Technical University of Kaiserslautern, Germany. (June 2007)
OR Seminar, MSE Dept. Stanford U. (May 2007)
Neyman Seminar, Stat. Dept. UC at Berkeley. (April 2007)
Stanford-Tsukuba/WCQF workshop, Stanford U. (March 2007)
Financial Math. Seminar, Math. Dept. NCSU at Raleigh. (March 2007)
Workshop on Recent Development of Financial and Insurance Mathematics and its Interplay with Industry, MFO, Oberwolfach, Germany. (Feb 2007)

Probability Seminar, Stat. Dept. UC at Berkeley. (October 2006)
SIAM Annual Conference, Boston. (July 2006)
International Conference on Mathematical Finance, Guilin, China. (May 2006)
Colloquium, Inst. of Applied Math., Academic Sinica, Beijing, China. (May 2006)
Finance Seminar, Cambridge U. Cambridge, UK. (May 2006)
Math. Finance Seminar, King's College, London, UK. (May 2006)
Statistics Seminar, Stern Business School, NYU. (May 2006)
CCCP Workshop on Financial Engineering, New York. (April 2006)
International Conference on Financial Engineering, Gainesville. (March 2006)
IEOR Seminar, UC at Berkeley. (January 2006)
Mathematical Finance Seminar, Dept of Math. U. Texas at Austin. (January 2006)

Risk Seminar, Columbia U. (December 2005)
Tutorials, Shanghai Stock Exchange, Shanghai, China. (June 2005)
Workshop on Credit Risk, Newton Inst. of Math. Sciences, Cambridge, UK. (June 2005)
Mathematics Seminar, King's College, London, UK. (May 2005) Mathematical Finance
Seminar, U. Texas at Austin. (April 2005)
Workshop on Mathematical Finance, CMU. (February 2005)

Computational Finance Seminar, Cornell Theory Center. (December 2004)
Statistics Seminar, Colorado State U. (October 2004)
Semimartingale Theory and Practice in Finance, Banff, Canada. (June 2004)
Statistics Seminar, Cornell U. (April 2004)

Statistics Seminar, Rutgers U. (February 2004)
Statistics in Finance, MFO, Oberwolfach, Germany. (January 2004)
Bachelier Seminar, Paris, France. (January 2004)

Numerical Probabilistic Methods for High-dimensional Problems in Finance
AIM. Palo Alto, CA. (December 2003)
AMS Regional Conference, Binghamton. NY. (October 2003)
ORIE Colloquium, Cornell U. (September 2003)
AMS-IMA-SIAM Research Conference, Snowbird. (June 2003)
IEOR Seminar, UC at Berkeley. (Apil. 2003)
ORIE Seminar, Cornell U. (Feb. 2003)
Math Colloquium, U. of Georgia. (Feb. 2003)
ORFE Seminar, Princeton U. (Feb. 2003)
Finance Seminar, Business School, U. Michigan. (Jan. 2003)

Math Seminar, Shandong U., China. (April 2002)
Math Seminar, USTHK, Hong Kong, China. (April 2002)
IEOR Seminar, CUHK, Hong Kong, China. (April 2002)
Math Colloquium, Lehigh U. (May 2002)
American Mathematics Society Meeting, Ann Arbor. (March 2002)

Math Tutorial, Stanford U. (December 2001)
Applied Math Seminar, Stanford U. (November 2001)
Finance Seminar, MS&E Northwestern U. (October 2001)
International Conference on Mathematical Finance, Shanghai, China. (May 2001)

Goldstine Fellowship Inauguration Lectures, IBM Research at Watson, Almaden, Austin.
(November–December 1999)
Fields Institute, Toronto, Canada. (November 1999)

Workshop on Mathematical Finance, Northwestern U. (October 1998)

Patent applications	X. Guo and B. Wang. "System and method for detection of diabetic retinopathy in retinal fundus photographs," UC Ref. BK-2019-049-1, MNGD Ref. 407869-0039.
	X. Guo and B. Ray. "Model and structure for dynamic sampling method in on-line process," US pat. 6999895B2.
	X. Guo, T. Kumar, and G. Parija. "Evaluation of long-term lease contracts under demand uncertainty," YOR9-2003-0283-US1.
	X. Guo and J. Tomlin. "System and method for bandwidth management: Pricing and capacity planning," YOR8-2000-0879.
	X. Guo. "Optimal algorithm for online auctions," YOR8-2000-0293.
	X. Guo and Q-B. Nguyen. "Multiparty negotiation optimization algorithm," YOR8-2000-0673.
Collaborators	Arindam Banerjee (U. Minnesota)
	Matteo Basei (UC Berkeley)
	Haoyang Cao (Alan Turing Institute)
	Arijit Chakrabarty (Cornell U.)
	Victor Chan (TBSI)
	Aaron Chen (UC Berkeley)
	Rama Cont (Oxford)

Ismail Onur Filiz (UC Berkeley)
Haotain Gu (UC Berkeley)
Anran Hu (UC Berkeley)
Jiequn Han (Princeton U.)
Johnny Hong (UC Berkeley)
Anran Hu (UC Berkeley)
Charles-Albert Lehalle (Imperial, CFM)
Tim Jacobs (Amazon)
Robert Jarrow (Cornell U.)
Phil Kaminsky (UC Berkeley)
Yusuke Kikuchi (UC Berkeley)
Mathieu Lauriére (Princeton U.)
Joon Seok Lee (UC Berkeley)
Xinyu Li (UC Berkeley)
Haizhi Lin (Credit Swiss First Boston)
Tianyi Lin (UC Berkeley)
Jun Liu (Columbia U.)
Chinmay Maheshwari (UC Berkeley)
Jianjun Miao (Boston U.)
Christian Menn (Cornell U.)
Erwan Morellec (U. Rochester)
Jason Morton (Stanford U.)
Othmane Mounjid (UC Berkeley)
Chen Pan (NUS, Singapore)
Shige Peng (Shandong U., China)
Huyên Pham (U. Paris 7, France)
Mathieu Rosenbaum (Ecole Polytechnique)
Zhan Ruan (CIBC, China)
Shanka Sastry (UC Berkeley)
Bernd Sturmfels (UC Berkeley)
Larry Shepp (Rutgers U.)
Mahan Tajrobehkar (IEOR, UC Berkeley)
Wenpin Tang (Columbia U.)
Pascal Tomecek (J.P. Morgan)
Guan Wang (TBSI)
Hui Wang (Brown U.)
Xiaoli Wei (UC Berkeley)
Guoliang Wu (UC Berkeley)
Manxi Wu (Cornell U.)
Renyuan Xu (UC Berkeley)
Nan Yang (UC Berkeley)
George Yin (Wayne State U.)
Kuan Ming Yuen (UC Berkeley)
Thaleia Zariphopoulou (UT Austin)
Yan Zeng (Bloomberg Research)
Mihail Zervos (London School of Economics, UK)
Jiacheng Zhang (UC Berkeley)
Junzi Zhang (Stanford)
Ruixun Zhang (Peking)
Qing Zhang (U. Georgia)
Yufei Zhang (Oxford)
Caoyi Zhao (Peking)
Fangyuan Zhao (TBSI)
Xun Yu Zhou (Oxford U., UK)

Current Postdoc & PhD Advising

Jiacheng Zhang (Postdoc from Princeton, July 2021-)

Wangdong Jia (IEOR, second year, UC Berkeley)
Matteo Santamaris (IEOR, second year, UC Berkeley)
Xinyu Li (IEOR, fourth year, UC Berkeley)

Past Postdoc & PhD Advising

Othmane Mounjid (Postdoc from 2020–2022, Amazon Air Science and Tech)
Xiaoli Wei (Postdoc from 2019-2021, TBSI, Shenzhen, China)
Wenpin Tang (Postdoc from 2019–2020, Assistant Professor Columbia U.)
Matteo Basei (Postdoc from 2017–2019, EDF R&D, Paris)

Haotian Gu (Mathematics, Co-chair with F. Rezakhanlou, UC Berkeley, 2023)
Mahan Tajrobehkar (IEOR, UC Berkeley, 2023)
Guan Wang (Tsinghua-Berkeley-Shenzhen-Institute, 2022)
Anran Hu (IEOR, UC Berkeley, 2022, Oxford University)
Yusuke Kikuchi (IEOR, UC Berkeley, 2022, Genetech)
Haoyang Cao (IEOR, UC Berkeley, 2020, Alan Turing Institute)
Fangyuan Zhao (Tsinghua-Berkeley-Shenzhen-Insitute, May 2020)
Renyuan Xu (IEOR, UC Berkeley, 2019, Oxford U.)
Nan Yang (IEOR, UC Berkeley, 2019, Google)
Joon Seok Lee (IEOR, UC Berkeley, 2017, Paris VI)
Zhao Ruan (IEOR, UC Berkeley, 2015, CIBC, China)
Issac Mao (IEOR, UC Berkeley, 2015, Blackrock, CA)
Chen Pan (Math, USTC of China, Co-advisor with S. G. Zhang, 2015, NUS, Singapore)
Kelly Choi (IEOR, UC Berkeley, 2014, Google)
Kuan Ming Yuen (IEOR, UC Berkeley, Co-advisor with P. Kaminsky, 2012)
Aaron Chen (Mathematics, UC Berkeley, Co-advisor with C. Evans, 2012, Citadel)
Xingwei Wu (IEOR, UC Berkeley, 2011, Suntrading)
Mauricio Jose Junca Pelaez (IEOR, UC Berkeley, Co-advisor with C. Evans, 2011)
Guoliang Wu (Mathematics, UC Berkeley, Co-advisor with C. Evans, 2009, JP Morgan)
Ismail Onur Filiz (IEOR, UC Berkeley, Jan 2009, Facebook)
Pascal Tomecek (ORIE, Cornell, 2007, JP Morgan)
Yan Zeng (Mathematics, Cornell U. Co-advisor with P. Protter, 2006, Bloomberg)

Adrien Larrad (Mentor, Statistics, UC Berkeley and Paris VI)
Ying Xu (Thesis committee, Statistics, UC Berkeley)
Hung Vinh Tran (Thesis committee, Mathematics, UC Berkeley)
Lucy (Xuan) Fan (Thesis committee, ME, UC Berkeley)
Jason Morton (Thesis committee, Mathematics, UC at Berkeley)
Shadi Anani (Thesis Committee, Civil and Environmental Engineering, UC Berkeley)
Haizhi Lin (Mentor and Thesis committee, Statistics, Cornell)
Arindam Banerjee (Mentor, IBM summer student, U. Texas at Austin, 2003)
Jun Liu (Mentor and unofficial advisor, Rutgers U., 1999–2000)
David Chan (Mentor, IBM summer student, CSIRO, Australia, 2001)
Menghui Cao (Mentor, IBM summer student, Columbia U., 2000)

Professional services	Co-organizer, IMSI, Chicago. USA (2022) Co-founder and Co-Chair, Women In Financial Engineering, USA. (2014–) Council Member, Bachelier Finance Society, (2019–2022) Organizing Committee, Summer Program at IMSI, Chicago (2021) Scientific Committee, Asian Quantitative Finance Seminar (AQFS) (2021) Scientific Committee, Bachelier World Congress, Hong Kong. (2020) Scientific Committee, AMaMeF, Paris (2019) Organizing Committee, WCMF, USC (2018) Co-Chair, Second National Conference for Women in Financial Engineering, IPAM, (2017) Organizing Committee, Bachelier World Congress, New York, NY. (July 2016) Organizing Committee, IMS-FIPS workshop. Edmonton, Canada. (2016) Co-Chair, Berkeley-Columbia Workshop on Statistics and Engineering, Berkeley, CA. (2016, 2018, 2020) Co-Chair and Panelist, First National Conference for Women in Financial Engineering, IPAM, (2015) Panelist, Data Analytics. UC Berkeley and Paris. (2014, 2015) Scientific Committee, 6th Western Consortium in Mathematical Finance, Santa Barbara, CA. (2014) Organizing Committee, IMS Fourth Workshop on "Finance: Probability and Statistics," Sydney, Australia. (2014) Organizing Committee, Fifth SIAM Conference on Financial Mathematics and Engineering (FM14), Chicago, IL. (2014) Big Data Steering Committee, Haas Business School, UC Berkeley, CA. (2014) Co-organizer, Western Consortium of Mathematical Finance, Stanford, CA. (2013) Founder, Risk Analytics and Data Analysis Research Lab (RADAR), UC Berkeley. (2012) Co-organizer, IMS Second Workshop on "Finance: Probability and Statistics," Berkeley, CA. (2012) Co-founder and co-chair, IMS Special Interest Group on "Finance: Probability and Statistics," (2011–) Co-organizer, IMS First Workshop on "Finance: Probability and Statistics," New York, NY. (2011) Scientific Committee, 4th Western Consortium in Mathematical Finance, Los Angeles, CA. (2011) NSF Panel Review for Division of Applied Mathematics (2009, 2011, 2012) Organizing Committee, 3rd Western Consortium in Mathematical Finance, Santa Barbara, CA. (2009) Co-Editor-in-Chief, Frontier in Mathematical Finance (2020–) Associate Editor, Journal of Applied Probability (2022–) Associate Editor, Franklin Open (2021–) Associate Editor, Applied Mathematics and Optimization (2021–) Associate Editor, Mathematical Finance (2020–) Associate Editor, Operations Research (2015–) Associate Editor, Probability, Uncertainty and Quantitative Risk (2016–) Associate Editor, Mathematics and Financial Economics (2014–) Associate Editor, Market Microstructure and Liquidity (2014–) Associate Editor, Stochastic Models (2010–) Associate Editor, IIE Transactions (2015–2019) Editorial Board, European Journal of Industrial Engineering (2006–2009) Member of AMS, IMS, INFORMS, SIAM, and Bachelier
Professional services (referee)	AMS Review, AMS Book Review, Annals of Applied Probability, Computational Statistics

and Data Analysis, Finance and Stochastics, IEEE Trans. Automatic Control, IEEE Trans. Information Theory, J. Applied Probability, International J. Applied and Computational Finance, J. Economics and Dynamic Control, JMLR, Operations Research Letters, Mathematics of Operations Research, Mathematical Finance, NSF proposals in Applied Mathematics, NSF proposals in Economics, Operations Research, Probability Survey, Quantitative Finance, SIAM Control and Optimization, Stochastic Models, Stochastic Process and its Applications, STOC, FOCS.

UC Berkeley Services	Founder and Faculty Advisor, FinTech of IEOR for MEng Graduate Fellowship Committee, UC Berkeley, 2012, 2013, 2014, 2015, 2016, 2017 Chair of Ad-hoc Committee for Faculty Promotion, 2019 Faculty Advisory Council for College of Engineering (CoE), 2018–present Confidential Committee for CoE, 2015–present Student Relation Committee for CoE, 2015–present Dean Search Committee for CoE, 2018 Member, Graduate Studies, CoE, 2011–2014 Member of Diversity and Inclusion Task Force, CoE, 2009–2010 Chair of Hiring Committee, IEOR, 2018, 2020 Member of Hiring Committee, IEOR, 2014, 2016 Chair of Graduate Admission Committee, IEOR, 2015, 2016, 2017 Founder, RADAR Lab, 2012–present Co-chair, IEOR Colloquium, 2008-2009, 2013, 2014, 2016, 2017, 2018 Head Graduate Advisor, IEOR, 2009–2015 Graduate Admission Committee, IEOR, 2009, 2010
Cornell services	Graduate field member: CAM, OR, Statistics Organizer, Financial Engineering Seminar, ORIE Manhattan, 2005–2006 Organizer, ORIE Financial Engineering Seminar, 2005–2006 Member, College of Engineering, International Studies Committee, 2007 Member, School of ORIE Curriculum Reform Committee, 2005–2007 Member, School of ORIE Hiring Committee, Fall 2005–Spring 2006 Member, Center for Applied Mathematics Colloquium Committee, 2005–2006 Co-advisor, Society of Women Engineers, 2004–2007 Judge, Mathematics Modeling Competition, 2004–2006 Participant, Workshop for Search Committees in Women and Minority Hiring, 2005
Teaching	*UC Berkeley* Capston Project for FinTech of MEng (2017-2018, 2018-2019, 2019-2020) Financial Engineering II (Fall 2019) Risk, Modeling, and Uncertainty (MEng 241, Fall 2017-2019) Portfolio Risk Management (IEOR 290R, MEng level; Spring 2013) Applied Stochastic Processes (IEOR 263B, Advanced PhD level; Spring 2013- 2020) Operations Research (IEOR 172; Fall 2011) Financial Engineering I (IEOR 222; Fall 2011, 2014, 2015, 2016, Spring 2018-2020) Operations Research (IEOR 161; Spring 2011, 2014-2016) Introduction to Financial Engineering (IEOR 221; Spring 2011-2012) Probability and Risk Analysis for Engineers (IEOR 172; Fall 2010) Engineering Design and Analysis (E10, UG Level; Spring 2009) Financial Engineering (IEOR 290A, UG/Master/PhD level; Fall 2008) Seminar on Stochastic Calculus (IEOR 298, PhD level; Spring 2007, Spring 2008)

IEOR 290A (Financial Engineering II for Master/PhD level; Spring 2007, Fall 2008)
Applied Stochastic Processes (IEOR 263A, Master/PhD level; Fall 2006, Fall 2008, Fall 2009)

Cornell U.
OR Tools in Finance (ORIE 473, Masters level; Spring 2005, Cornell U.)
Applied Stochastic Processes (ORIE 650, PhD level; Fall 2004; Fall 2005; Fall 2007; Cornell U.)
Introduction to Probability and Statistics (ENG270, Sophomore level; Spring 2004, Cornell U.)
Selected Topics in Applied Probability (ORIE 768, PhD level; Fall 2003, Cornell U.)

Rutgers U. Calculus I (Freshman level; Fall 1998, Rutgers U.)
Calculus II (Business majors; Summer 1998, Rutgers U.)
Calculus III (Math/Engg. majors; Spring 1998, Rutgers U.)
Precalculus (Freshman level; Spring 1998, Rutgers U.)

MEng project advising Capstone project for FinTech MEng (2017, 2018, 2019, UC Berkeley.)
Project course for MEng FE focus (ORIE 565, Masters level; Spring 2006, Cornell U.)
Project course for MEng (ORIE 516, Masters level; Fall 2004, Fall 2005, Fall 2007; Cornell U.)

MEng & UG advising 16 MEngs in 2017, 13 MEngs in 2018, 35 MEngs in 2019; UC Berkeley
5 MEngs in 2003; 11 MEngs in 2004; 8 MEngs in 2005; 20 MEngs in 2007; Cornell U.
5 UGs in 2004; 14 UGs in 2005; Cornell U.