

September 28, 2017  
**Curriculum Vitae**

## **SANJIV RANJAN DAS**

William and Janice Terry Professor of Finance and Data Science  
 Santa Clara University, Leavey School of Business  
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### **EDUCATION**

- University of California, Berkeley, M.S. in Computer Science (Theory), December 2000.  
 Master's Thesis: "Lattice Excursions in Financial Models".
- New York University, Ph.D in Finance, September 1994.  
 Ph.D. Dissertation: "Interest Rate Shocks, Characterizations of the Term Structure, and the Pricing of Interest Rate Sensitive Contingent Claims."
- New York University, M.Phil in Finance, May 1992.
- Indian Institute of Management, Ahmedabad, MBA, May 1984.
- Indian Institute of Cost & Works Accountants of India, AICWA, May 1983.
- University of Bombay, B.Com in Accounting and Economics, May 1982.

### **HONORS & AWARDS, APPOINTMENTS**

43. Best paper award at the R Finance conference, (Chicago 2016), for the paper "An Index-Based Measure of Liquidity."
42. Research Council of Canada SSHRC Insight Grant Award for "On the Interconnectedness of Financial Institutions" (with Professors Madhu Kalimipalli and Subhankar Nayak), April 2016.
41. First Prize in the MIT Center for Financial Policy Contest to define SIFIs (2016).
40. Best paper award at the R/Finance conference (Chicago, May 2015) for "Matrix Metrics: Network-Based Systemic Risk Scoring."
39. 2014 GARP (Global Association of Risk Professionals) Risk Management Research Program Award (with Seoyoung Kim).
38. National Stock Exchange Best Paper Award, at the Center for Analytic Finance Conference, ISB, Hyderabad, for the paper titled "Credit Spreads with Dynamic Debt," 2013. (with Seoyoung Kim)
37. Consortium for Systemic Risk Analytics, MIT, Academic Board Member, 2012–.
36. Santa Clara University Award for Sustained Excellence in Scholarship, 2012.
35. Leavey School Research Award (2012) for the paper with George Chacko that won the SPIVA Award.
34. Dauphine-Amundi Award for Asset Management Proposal on Liability-Directed Investing (2012). (with Seoyoung Kim and Meir Statman.)
33. Expert Panel, Center for Financial Research and Planning (CAFRAL), Reserve Bank of India, 2012–.
32. Second Prize, SPIVA Research Award 2011-12, from McGraw-Hill and Standard & Poors. (with George Chacko)
31. CFA Institute, Capital Markets Policy Council (CPMC), 2011– .
30. Program coordinator, Risk Management, Risk Measurement and Derivatives, at the Federal Deposit Insurance Corporation, Center for Financial Research (FDIC-CFR), 2008 - .
29. Santa Clara University-wide Award for Recent Achievement in Scholarship (2007).
28. Nominated for the Smith-Breeden Prize for the best paper in the *Journal of Finance* in 2005, for the paper "Systemic Risk and International Portfolio Choice" (with Raman Uppal).

27. *Breetwor Faculty Fellow*, Santa Clara University, 2002-2004, 2005-2007.
26. Western Finance Association Caesarea Center Award for the best paper on risk management at the WFA meetings (Portland, Oregon) for the paper "Common Failings: How Corporate Defaults are Correlated", 2005. (with Darrell Duffie and Nikunj Kapadia).
25. FDIC research fellowship for the project "Conditionally Correlated Default" (with Darrell Duffie and Nikunj Kapadia), 2004.
24. Extra-Ordinary research award, Santa Clara University: 2004-2005.
23. Extra-Ordinary faculty award, Santa Clara University: 2000-2001, 2001-2002, 2002-2003, 2003-2004, 2006-2007.
22. Award for the best paper presented at the 2002 meetings of INQUIRE for the paper "Systemic Risk and International Portfolio Choice" (with Raman Uppal).
21. Second best-paper award from the *Journal of Banking and Finance* for the article "A Theory of Banking Structure" (co-authored with Ashish Nanda), 2001.
20. *Dean Witter Foundation Faculty Fellowship*, Santa Clara University, 2000-2002.
19. *Price Waterhouse Coopers Risk Institute Research Sponsorship Award*, 2000.
18. *Association for Investment Management and Research (AIMR) Research Foundation Advisory Board*, 2000-2002.
17. *Faculty Research Fellow*, National Bureau of Economic Research (NBER), 1996 to 1999.
16. Deloitte and Touche *Chair in Risk Management* at the University of Antwerp, Belgium, 1998.
15. Merrill Lynch *Faculty Sponsorship Award*, Harvard Business School, 1997.
14. *Best Thesis Award* from the Financial Management Association, sponsored by the American Institute of Individual Investors, 1995.
13. *Best Thesis Award*, New York University, 1995 for the Ph.D. dissertation in the graduating class.
12. Canadian Investment Review *Academic Sponsorship Award* for the proposal "How Diversified are Internationally Diversified Portfolios" (with Prof. Raman Uppal, University of British Columbia), 1995.
11. *Best Paper Award* for the paper "Jump Diffusion Processes and the Bond Markets", awarded by the Financial Management Association of America, and sponsored by the Fixed-Income Analysis Society of New York, at the meetings in St. Louis, 1994.
10. Beta Gamma Sigma, New York, 1994.
9. C.W. Nichols Fellowship, New York University, 1993-94.
8. Jules I. Bogen Fellowship, New York University, 1992-93.
7. Doctoral Fellowship in Finance, New York University, 1990-92.
6. Citicorp Chairman's Award for Excellence, 1985.
5. *First Rank* in the MBA Class (of 165 students), Indian Institute of Management, 1984.
4. Industry Fellowship, Indian Institute of Management, Ahmedabad, 1983-84.
3. *Gold Medalist* in Financial Management at the Accountancy Examinations of the Institute of Cost & Works Accountants of India, 1983.
2. *First Rank and Gold Medalist* at the University of Bombay B.Com Examinations (of 13,563 candidates), 1982.
1. National Talent Search Fellowship (awarded annually to 150 students based on an All-India Examination), 1982.

## ACADEMIC EXPERIENCE

- Santa Clara University
  - William and Janice Terry Professor of Finance and Data Science, September 2012 - date.
  - Chair, Dept. of Finance, July 2007 - December 2011.
  - Professor, July 2006 - date.
  - Director of Faculty Research, July 2006 - 2007.
  - Associate Professor, July 2000 - June 2006.
- Indian School of Business, Hyderabad, India.
  - Short-term Visiting Professor since 2006.

- EDHEC Business School, Singapore.  
Short-term Visiting Professor, 2012, 2014.
- University of California, Berkeley.  
Visiting Associate Professor, July 1999 - June 2000.
- Harvard University, Graduate School of Business Administration.  
Associate Professor, July 1999 - June 2000.  
Assistant Professor, Finance Area, 1994 - 1999.

## OTHER ACADEMIC EXPERIENCE

- Advisory Board, Northwestern University, Department of Industrial Engineering and Management Science (IEMS), 2016-.
- Academic Advisory Board, Standard and Poors, Inc., 2016-.
- Academic Advisory Board, Consortium for Systemic Risk Analytics (CSRA), MIT, 2015-.
- SCU Accelerator Planning Committee (2015-16).
- SCU Founder Business Analytics Program (2015-16).
- SCU Business School Grievance Committee (2014-2016).
- SCU Co-chair, Dean Search Committee for the School of Business, 2014-2015.
- SCU Mid-Probationary Review Committee, 2014.
- SCU India Advisory Committee, 2013-2014.
- SCU Scholarship Standards Review Committee, 2013-2014.
- University-wide Rank and Tenure Committee  
Santa Clara University, 2010-2012, Chair in 2012-2013.
- Member, Dean Search Committee  
Santa Clara University, 2008-2009.
- Chairman, Department of Finance  
Santa Clara University, 2007-2011.
- Director for Faculty Development  
Santa Clara University, 2006-2007.
- Business School Rank and Tenure Committee  
Santa Clara University, 2003-04, 2004-05, 2007-08.
- PhD Committee and PhD Finance Program Coordinator  
Harvard Business School, 1997-98, 1998-99.

## NON-ACADEMIC EXPERIENCE

Citibank, N.A., Asia-Pacific Region, Vice-President, 1984-1990.  
Retail banking. Trading Room Operations. Analytics.

## BOOKS

3. "Data Science: Theories, Models, Algorithms, and Analytics" ([web book](#) in progress).
2. "Deep Learning" (with Subir Varma, [web book](#) in progress).
1. "Derivatives: Principles and Practice (2010), Rangarajan K. Sundaram & Sanjiv R. Das, McGraw-Hill. Second edition (2016).

## JOURNAL PUBLICATIONS

95. "Research Challenges in Financial Data Modeling and Analysis." (2017), (with Lewis Alexander, Zachary Ives, H.V. Jagadish, Claire Monteleoni), *Big Data*, forthcoming.

94. "An Index-Based Measure of Liquidity," (with George Chacko and Rong Fan), (2016), *Journal of Banking and Finance*, v68, 162–178. [This paper won the S&P SPIVA 2012 Award for innovation of an index. It also won the best paper award at the R Finance conference (Chicago 2016).]
93. "Matrix Metrics: Network-Based Systemic Risk Scoring." (2016). The *Journal of Alternative Investments*, Special Issue on Systemic Risk, v18(4), 33–51. [This paper won the First Prize in the MIT-CFP competition for the best paper on SIFIs (systemically important financial institutions).][Best paper award at R/Finance 2015.]
92. "Credit Spreads with Dynamic Debt," (with Seoyoung Kim), (2015), *Journal of Banking and Finance* 50, 121–140. [National Stock Exchange Best paper award at the ISB Center for Analytical Finance Conference, 2013.]
91. "Text and Context: Language Analytics for Finance," (2014), *Foundations and Trends in Finance*, v8(3), 145–260.
90. "Did CDS Trading Improve the Market for Corporate Bonds," (with Madhu Kalimipalli and Subhankar Nayak), (2014), *Journal of Financial Economics* 111, 495–525.
89. "Strategic Loan Modification: An Options-Based Response to Strategic Default," (with Ray Meadows), (2013), *Journal of Banking and Finance* 37, 636–647.
88. "Options and Structured Products in Behavioral Portfolios," (with Meir Statman), (2013), *Journal of Economic Dynamics and Control*, v37(1), 137-153.
87. "The Principal Principle", (2012), *Journal of Financial and Quantitative Analysis* 47(6), 1215–1246.
86. "Extracting, Linking and Integrating Data from Public Sources: A Financial Case Study," (with Douglas Burdick, Mauricio A. Hernandez, Howard Ho, Georgia Koutrika, Rajasekar Krishnamurthy, Lucian Popa, Ioana Stanoi, Shivakumar Vaithyanathan), (2011), *IEEE Data Engineering Bulletin* 34(3), 60-67.
85. "Polishing Diamonds in the Rough: The Sources of Syndicated Venture Performance" (with Hoje Jo and Yongtae Kim), (2011), *Journal of Financial Intermediation* 20(2), 199–230.
84. "Portfolio Optimization with Mental Accounts" (with Harry Markowitz, Jonathan Scheid and Meir Statman), (2010), *Journal of Financial and Quantitative Analysis* 45(2), 311–334.
83. "The Long and Short of It: Why are Stocks with Shorter Run Lengths Preferred?" (2010) (with Priya Raghurir), *Journal of Consumer Research*, 36(6), 964-982.
82. "Run Lengths and Liquidity" (with Paul Hanouna), (2010), *Annals of Operations Research*, 176(1), 127-152.
81. "Implied Recovery," (2009), (with Paul Hanouna), *Journal of Economic Dynamics and Control*, 33(11), 1837-1857.
80. "Accounting-based versus market-based cross-sectional models of CDS spreads" (2009), (with Atulya Sarin and Paul Hanouna), *Journal of Banking and Finance*, 33, 719-730.
79. "Hedging Credit: Equity Liquidity Matters" (2009). (with Paul Hanouna), *Journal of Financial Intermediation*, v18(1), 112-123.
78. "An Integrated Model for Hybrid Securities," (2007). (with Rangarajan Sundaram), *Management Science*, v53, 1439-1451.
77. "Yahoo for Amazon: Opinion Extraction from Small Talk on the Web," (2007). (with Mike Chen), *Management Science*, v53, 1375-1388.
76. "Common Failings: How Corporate Defaults are Correlated", (2007), (with Darrell Duffie, Nikunj Kapadia and Leandro Saita), *Journal of Finance*, v62, 93-117. [Western Finance Association Caesarea Center Award for the best paper on risk management at the WFA meetings (Portland, Oregon, 2005).]  
Reprinted in "The Foundations of Credit Risk Analysis", 2008, *The International Library of Critical Writings in Economics* 211, Eds: Willi Semmler and Lucas Bernard, Edward Elgar, UK.
75. "A Clinical Study of Investor Discussion and Sentiment," (2005), (with Asis Martinez-Jerez and Peter Tufano, HBS), *Financial Management*, v34(5), 103-137.
74. "International Portfolio Choice with Systemic Risk," (with Raman Uppal, London Business School), (2004), *Journal of Finance*, v59(6), 2809-2834. [Nominated for the Smith-Breeden Prize for the best paper in the *Journal of Finance* in 2005.][Award for the best paper presented at the 2002 meetings of INQUIRE.]

73. "Fee Speech: Signaling, Risk-sharing and the Impact of Fee Structures on Investor Welfare," 2002, (with Rangarajan Sundaram), *The Review of Financial Studies*, v15(5), 1465-1497.
72. "A Discrete-Time Approach to No-Arbitrage Pricing of Credit Derivatives with Rating Transitions," (with Viral Acharya and Rangarajan Sundaram), 2002, *Financial Analysts Journal*, May-June, 28-44.
71. "The Surprise Element: Jumps in Interest Rates," 2002, *The Journal of Econometrics*, v106, 27-65.
70. "Pricing Interest Rate Derivatives: A General Approach," (with George Chacko), 2002, *The Review of Financial Studies*, v15(1), 195-241.
69. "A Discrete-Time Approach to Arbitrage-Free Pricing of Credit Derivatives," 2000 (with Rangarajan Sundaram), *Management Science*, v46(1), 46-62.
68. "A Case for Theory Driven Experimental Enquiry," 1999, (with Priya Raghubir), *Financial Analysts Journal*, Nov-Dec, v55(6), 56-79.
67. "A Direct Discrete-Time Approach to Poisson-Gaussian Bond Option Pricing in the Heath-Jarrow-Morton Model," 1999, *Journal of Economic Dynamics and Control*, v23(3), 333-369.
66. "A Theory of Optimal Timing and Selectivity," (with George Chacko), 1999, *Journal of Economic Dynamics and Control*, v23(7), 929-966.
65. "A Theory of Banking Structure," 1999, (with Ashish Nanda), *Journal of Banking and Finance*, v23(6), 863-895.
64. "Of Smiles and Smirks: A Term Structure Perspective," 1999, (with Rangarajan Sundaram), *Journal of Financial and Quantitative Analysis*, v34(2), 211-240.
63. "The Central Tendency: A Second Factor in Bond Yields," 1998, (with Silverio Foresi and Pierluigi Balduzzi), *The Review of Economics and Statistics*, v80(1), 60-72.
62. "Efficiency with Costly Information: A Reinterpretation of Evidence from Managed Portfolios," (with Edwin Elton, Martin Gruber and Matt Hlavka), *Review of Financial Studies*, vol. 6(1), 1993, pp 1-22.  
Presented and Reprinted in the Proceedings of The Seminar on the Analysis of Security Prices at the Center for Research in Security Prices at the University of Chicago, Graduate School of Business.

#### **MORE JOURNAL PUBLICATIONS**

61. "Managing Rollover Risk with Capital Structure Covenants in Structured Finance Vehicles," (2017), (with Seoyoung Kim), *Journal of Fixed Income*, 26(4), 92-112.
60. "The Design and Risk Management of Structured Finance Vehicles," (2016), (with Seoyoung Kim), *Journal of Risk and Financial Management*, Special Issue on Credit Risk, 1-12. doi:10.3390/jrfm9040012
59. "Coming up Short: Managing Underfunded Portfolios in a LDI-ES Framework," (2014), (with Seoyoung Kim and Meir Statman), *Journal of Portfolio Management*, v41(1), 95-108.
58. "Going for Broke: Restructuring Distressed Debt Portfolios," (2014), (with Seoyoung Kim), *Journal of Fixed Income*, v24(1), 5-27.
57. "Digital Portfolios", (2013), *Journal of Portfolio Management*, v39(2), 41-48.
56. "Options on Portfolios with Higher-Order Moments," (2009), (with Rishabh Bhandari), *Finance Research Letters*, v6, 122-129.
55. "Dealing with Dimension: Option Pricing on Factor Trees" (2009), (with Brian Granger), *Journal of Investment Management*, 7(2), 73-85.
54. "Correlated Default Modeling with a Forest of Binomial Trees," (2007), (with Santhosh Bandreddi and Rong Fan), *Journal of Fixed Income*, Winter, 1-20.
53. "Basel II: Correlation Related Issues", (2007) *Journal of Financial Services Research*, v32, 17-38.
52. "Correlated Default Risk," (2006), (with Laurence Freed, Nikunj Kapadia, and Gary Geng), *Journal of Fixed Income*, Fall 2006, 7-32.
51. "A Simple Approach for Pricing Equity Options with Markov Switching State Variables," (2006), (with Donald Aingworth and Rajeev Motwani, Stanford University), *Quantitative Finance*, v6(2), 95-105.

50. "The Firm's Management of Social Interactions," (2005) (with Godes, D., D. Mayzlin, Y. Chen, C. Dellarocas, B. Pfeiffer, B. Libai, S. Sen, M. Shi, and P. Verlegh), *Marketing Letters*, v16, 415-428.
49. "Financial Communities," (2005), (with Jacob Sisk), *Journal of Portfolio Management*, v31(4), Summer, 112-123.
48. "Markov Chain Monte Carlo methods for Derivative Pricing and Risk Assessment," 2005, (with Alistair Sinclair, UC Berkeley), *Journal of Investment Management*, v3(1), 29-44.
47. "Correlated Default Processes: A Criterion-Based Copula Approach," (with Gary Geng), (2004) *Journal of Investment Management*, v2(2), 44-70, (Special Issue on Default Risk).  
Reprinted in "Credit Risk: Models, Derivatives and Management" (2008), editor Niklas Wagner, Chapman and Hall/CRC Financial Mathematics Series, 347-376.
46. "The Private Equity Discount: An Empirical Examination of the Exit of Venture Backed Companies," (with Murali Jagannathan, SUNY-Binghamton, and Atulya Sarin, Santa Clara University), (2003), *Journal of Investment Management*, v1(1), 152-177.
45. "A Numerical Algorithm for Consumption/Investment Problems," (with Rangarajan Sundaram, New York University), (2002), *International Journal of Intelligent Systems in Accounting, Finance and Management*, Special Issue on Computational Methods in Economics and Finance, December, 55-69.
44. "Bayesian Migration in Credit Ratings based on Probabilities of Default," (2002), (with Rong Fan and Gary Geng), *Journal of Fixed Income*, December, v12(3), 17-23.
43. "The Impact of Correlated Default on Credit Portfolios," (with Gifford Fong and Gary Geng), 2001, *The Journal of Fixed Income*, 9-19.
42. "How Diversified are Internationally Diversified Portfolios: Time-Variation in the Covariances between International Returns," 1998, (with Raman Uppal), *Canadian Investment Review*, Spring, 7-11.
41. "Discrete-Time Bond and Option Pricing for Jump-Diffusion Processes," 1997, *Review of Derivatives Research*, v1(3), 211-244.
40. "Macroeconomic Implications of Search Theory for the Labor Market," 1997, *Applied Economics Letters*, December, v4, 719-723.
39. "Exact Solutions for Bond and Options Prices with Systematic Jump Risk," 1996, (with Silverio Foresi), *Review of Derivatives Research*, v1(1), 7-24.
38. "A Simple Approach to Three Factor Affine Models of the Term Structure," (with Pierluigi Balduzzi, Silverio Foresi and Rangarajan Sundaram), 1996, *Journal of Fixed Income*, v6(3), 43-53.
37. "Analytical Approximations of the Term Structure for Jump-diffusion Processes: A Numerical Analysis," 1996, (with Jamil Baz), *Journal of Fixed Income*, v6(1), 78-86.
36. "Pricing Credit Sensitive Debt when Interest Rates, Credit Ratings and Credit Spreads are Stochastic," 1996, (with Peter Tufano), *The Journal of Financial Engineering*, v5(2), 161-198.
35. "Revisiting Markov Chain Term Structure Models: Extensions and Applications," 1996, *Financial Practice and Education*, v6(1), 33-45.
34. "Auction Theory: A Summary with Applications and Evidence from the Treasury Markets," 1996, (with Rangarajan Sundaram), *Financial Markets, Institutions and Instruments*, v5(5), 1-36.
33. "Credit Risk Derivatives," *Journal of Derivatives*, 1995, pg 7-21. (Also to be reprinted in a forthcoming Anthology on Contingent Claims edited by Dan Galai, Michel Crouhy and Zvi Wiener.)

#### **NON-REFEREED, SHORTER ARTICLES and BOOK CHAPTERS**

32. "Machine Learning in Finance: The Case of Deep Learning for Option Pricing" 2017, (with Robbie Culkin), forthcoming *Journal of Investment Management*.
31. "Did CDS Trading Improve the Market for Corporate Bonds," (2016), (with Madhu Kalimipalli and Subhankar Nayak), *Finance and Accounting Memos* Issue 3, 45-49.
30. "Big Data's Big Muscle," September 2016, *Finance and Development (IMF)*, 26-28.

29. "Portfolios for Investors Who Want to Reach Their Goals While Staying on the Mean-Variance Efficient Frontier," 2011, (with Harry Markowitz, Jonathan Scheid, and Meir Statman), *Journal of Wealth Management*, Fall, 14(2), 25–31.
28. "News Analytics: Framework, Techniques and Metrics," *The Handbook of News Analytics in Finance*, May 2011, John Wiley & Sons, U.K.
27. "Random Lattices for Option Pricing Problems in Finance," 2011, *Journal of Investment Management* 9(2), 88–106.
26. "Implementing Option Pricing Models using Python and Cython." (with Brian Granger), 2010, *Journal of Investment Management* 9(4), 73–84.
25. "The Finance Web: Internet Information and markets," 2010, *IEEE Intelligent Systems* 25(2), Mar/Apr, 74–78.
24. "Financial Applications with Parallel R," 2009, (with Brian Granger), *Journal of Investment Management*, v7(4), 66–77.
23. "Recovery Rates," 2009, (with Paul Hanouna), *Encyclopedia of Quantitative Finance*, John Wiley and Sons, U.K., pp 1505–1507.
22. "Recovery Swaps," 2009, (with Paul Hanouna), *Encyclopedia of Quantitative Finance*, John Wiley and Sons, U.K., pp 1507–1509.
21. "A Simple Model for Pricing Securities with a Debt-Equity Linkage," in *Innovations in Investment Management*, Bloomberg Press, 85–112.
20. "Credit Default Swaps," (with Paul Hanouna), *Journal of Investment Management*, 2006, v4(3), 93–105.
19. "Multiple-Core Processors for Finance Applications," *Journal of Investment Management*, 2006, v4(2), 76–81.
18. "Power Laws," (with Jacob Sisk), *Journal of Investment Management*, 2005, v3(3), 84–91.
17. "Genetic Algorithms," *Journal of Investment Management*, 2005, v3(2), 77–82.
16. "Recovery Risk," *Journal of Investment Management*, 2005, v3(1), 113–120.
15. "Venture Capital Syndication," (with Hoje Jo and Yongtae Kim), *Journal of Investment Management*, 2004, v2(4), 132–143.
14. "Modern Pricing of Interest Rate Derivatives - Book Review," *Journal of Economic Literature*, 2004, vXLII, 528–529.
13. "Technical Analysis," (with David Tien), *Journal of Investment Management*, 2004, v2(1), 79–85.
12. "Liquidity and the Bond Markets", (with Jan Ericsson and Madhu Kalimipalli), *Journal of Investment Management*, 2003, v1(4), 95–103.
11. "Contagion", *Journal of Investment Management*, 2003, v1(3), 78–84.
10. "Hedge Funds", 2003, *Journal of Investment Management*, v1(2), 76–81. Reprinted in "Working Papers on Hedge Funds," in *The World of Hedge Funds: Characteristics and Analysis*, 2005, World Scientific (republishing of earlier paper in special collection).
9. "The Internet and Investors", 2003, *Journal of Investment Management*, v1(1), 213–217.
8. "The Regulation of Fee Structures in Mutual Funds: A Theoretical Analysis," (with Rangarajan Sundaram), 2002, The Courant Institute of Mathematical Sciences, special volume on *Quantitative Analysis in Financial Markets*, Volume 3.
7. "A Discrete-Time Approach to Arbitrage-Free Pricing of Credit Derivatives," (with Rangarajan Sundaram), 2002, reprint in The Courant Institute of Mathematical Sciences, special volume on *Quantitative Analysis in Financial Markets*, Volume 3.
6. "Simply Credit: Useful things to know about Correlated Default Risk," (with Gifford Fong, Laurence Freed, Gary Geng, and Nikunj Kapadia), 2001, *Extra Credit*, November–December, 14–23.
5. "Stochastic Mean Models of the Term Structure," (with Pierluigi Balduzzi, Silverio Foresi and Rangarajan Sundaram), 2000, *Advanced Fixed-Income Valuation Tools* edited by N. Jegadeesh and B. Tuckman, John Wiley & Sons, Inc., 128–161.

4. "Interest Rate Modeling with Jump-Diffusion Processes," 2000, *Advanced Fixed-Income Valuation Tools*, edited by N. Jegadeesh and B. Tuckman, John Wiley & Sons, Inc., 162-189.
3. Comments on 'Pricing Excess-of-Loss Reinsurance Contracts against Catastrophic Loss,' by J. David Cummins, C. Lewis, and Richard Phillips, in *The Financing of Property and Casualty Risk*, Kenneth A Froot (Ed.), University of Chicago Press, 1999, 141-145.
2. "Pricing Credit Derivatives," 1999, *Handbook of Credit Derivatives*, eds J. Francis, J. Frost and J.G. Whittaker, 101-138.
1. "On the Recursive Implementation of Term Structure Models," 1998, *Pecunia*, The Netherlands, Summer 1998, 45-49.

## WORKING PAPERS

7. "The Future of FinTech."
6. "Zero-Revelation RegTech: Detecting Risk through Linguistic Analysis of Corporate Emails and News." (with Seoyoung Kim and Bhushan Kothari).
5. "Dynamic Risk Networks: A Note." (with Seoyoung Kim and Daniel Ostrov).
4. "Local Volatility and the Recovery Rate of Credit Default Swaps", (with Jeroen Jansen and Frank Fabozzi).
3. "Efficient Rebalancing of Taxable Portfolios." (with Dan Ostrov, Dennis Ding, Vincent Newell).
2. "The Fast and the Curious: VC Drift," (with Amit Bubna and Paul Hanouna).
1. "Venture Capital Communities," (with Amit Bubna and Nagpurnanand Prabhala).

## HARVARD BUSINESS SCHOOL CASES & TEACHING NOTES

13. "National Insurance Corporation," Ref No 296-036. (with Nils Haugestad). Teaching Note Ref No 296-036, (with Stephen Lynagh).
12. "It's Risk, Not Return," Ref No 296-043.
11. "Apex Investment Partners (B): May 1995," Ref No 296-029. (with Joshua Lerner)
10. "Pricing Interest Rate Derivatives," Ref No 296-085. (with Wai Lee)
9. "The Banana Republic (A)," Ref No 297-008. (with Stephen Lynagh). Teaching Note Ref No 298-025, (with Stephen Lynagh).
8. "Exotic Options," Ref No 297-031. (with Stephen Lynagh)
7. "Value at Risk," Ref No 297-069. (with Stephen Lynagh)
6. "An Overview of Credit Derivatives," Ref No 297-086. (with Stephen Lynagh)
5. "The New York Stock Exchange," Ref No 297-107. (with Stephen Lynagh)
4. "Enron Corp : Credit Sensitive Notes," Ref No 297-099. (with Stephen Lynagh). Teaching Note Ref No 298-100 (with Stephen Lynagh).
3. "Treasury Inflation Protected Securities," Ref No 298-017. (with Jeffrey Slovin). Teaching Note Ref No 298-017 (with Stephen Lynagh).
2. "Citibank Hong Kong: Capital Arbitrage in the Emerging Markets." Ref No 298-029. Teaching Note Ref No 298-030.
1. "Worldwide Paper Products." Ref No 298-060. Teaching Note Ref No 298-063 (with Zerrick Bynum, Emily Keeton, Tsutomu Noda, and Rod Parsley)

## PRESENTATIONS AND CONFERENCE ACCEPTANCES

242. Credit Suisse Data Conference (New York, September 2017). "The Future of FinTech".
241. JOIM Conference (Boston, September 2017). "The Future of FinTech".
240. Storm Ventures (Palo Alto, August 2017). "AI, Deep Learning in FinTech".
239. AI, Machine Learning, and Sentiment Analysis Applied to Finance, Conference (London, UK, June 2017). "Keynote: Text Mining and Networks for Systemic Risk Measurement."



238. AI, Machine Learning, and Sentiment Analysis Applied to Finance, Conference (London, UK, June 2017). "Sentiment Extraction and Applications for Finance."
237. Adobe Systems Research Seminar (San Jose, CA, May 2017). "AI and Deep Learning."
236. R Finance 2017 Conference (Chicago, IL, May 2017). "Zero-Revelation RegTech: Detecting Risk through Linguistic Analysis of Corporate Emails and News."
235. University of Delaware (Newark, DE, May 2017). "Dynamic Systemic Risk Networks."
234. New Frontiers in Computing (NFIC) Conference (Stanford University, Palo Alto, CA, May 2017). "Keynote: The Future of FinTech."
233. TiEcon 2017 (Santa Clara, CA, May 2017). "Why AI is Eating the World."
232. IIMA Pinnacle Conference at GooglePlex (Mountain View, CA, April 2017). "AI and Deep Learning."
231. McGill University (Montreal, Canada, April 2017). "Dynamic Systemic Risk Networks."
230. UC Riverside (Riverside, CA, April 2017). "Dynamic Systemic Risk Networks."
229. EDHEC Business School (Nice, France, March 2017). "Dynamic Systemic Risk Networks."
228. Indian School of Business (Mohali, India, December 2016). "The Future of FinTech."
227. Silicon Vikings Seminar on the Future of FinTech (San Francisco, November 2016). "The Future of FinTech."
226. Michigan Law School Conference on Big Data in Finance (Ann Arbor, October 2016). "Big Data in Finance: Philosophy and Examples."
225. MIT GCFP Conference on Systemic Risk (Boston, September 2016). "Dynamic Risk Networks."
224. UseR2016 conference (Stanford, June 2016). "More than Words: Text Analytics."
223. R Meetup (San Francisco, June 2016). "A Brief History of the Short History of Text Analytics in Finance."
222. R Finance conference (Chicago, May 2016). "An Index-Based Measure of Liquidity."
221. CapitalOne Labs (San Francisco, April 2016), "Networks and Risk Analytics."
220. Intel (Santa Clara, March 2016), "The Landscape of Data Science: Algorithms and Analytics."
219. BlackRock (San Francisco, February 2016), "Networks and Risk Analytics."
218. Silicon Valley Long Term Investors (SLVTI) Group (Mountain View, February 2016). "Goal-Based Investing with Mental Accounts."
217. INFORMS conference (Philadelphia, November 2015). "Systemic Risk Networks."
216. University of Washington (Seattle, October 2015). "Systemic Risk Networks."
215. University of Washington (Seattle, October 2015). "Text Analytics in Finance."
214. San Jose Mayor's Office (San Jose, October 2015). "Using R in Data Analytics."
213. CDAR (Center for Data Analytics and Risk, Berkeley, October 2015). "Systemic Risk Networks."
212. Franklin Templeton (San Mateo, August 2015). "The Evolving Investment Landscape."
211. Loring Ward (San Jose, August 2015). "Portfolio Construction with Mental Accounts."
210. CFTC Webinar (Washington DC, July 2015). "Systemic Risk Networks."
209. R Meetup (Santa Clara, June 2015). "Systemic Risk Networks."
208. R-Finance Conference (Chicago, May 2015). "Matrix Metrics: Network-Based Systemic Risk Modeling."
207. R-Finance Conference (Chicago, May 2015). "Efficient Rebalancing of Taxable Portfolios."
206. JOIM Meetings (San Diego, April 2015). "Efficient Rebalancing of Taxable Portfolios."
205. PAN-IIM Meetings (Google, Mountain View, April 2015). "Risk Networks".
204. Moody's Inc. (San Francisco, February 2015). "Risk Networks".
203. HEC (Montreal, November 2014). "Risk and Return Networks."
202. QWAFAFEW, Society for Financial Analysts (San Francisco, November 2014). "Risk and Return Networks."
201. Seoul National University (Korea, October 2014). "Risk and Return Networks."
200. Federal Deposit Insurance Corporation, (Washington DC, July 2014). "Risk and Return Networks."
199. International Monetary Fund, (Washington DC, July 2014). "Risk and Return Networks."
198. International Risk Management Conference (IRMC) at the Warsaw School of Economics, (Poland, June 2014). "Risk and Return Networks."
197. BlackRock Inc., (San Francisco, June 2014). "Risk and Return Networks."
196. Santa Clara University, (April 2014). "Risk and Return Networks."
195. Journal of Investment Management Conference (San Diego, March 2014). "Social Network Modeling in Finance."
194. California Polytechnic (San Luis Obispo, February 2014). "Social Network Modeling in Finance."
193. Federal Reserve Bank (San Francisco, January 2014). "Social Network Modeling in Finance."
192. Villanova University (Philadelphia, November 2013). "Social Network Modeling in Finance."
191. George Washington University (Washington DC, November 2013). "Social Network Modeling in Finance."
190. Franklin Templeton Advisors (Daly City, October 2013). "What is Data Science? Algorithms, Analytics, Applications for Big Data in Finance."

189. Federal Deposit Insurance Corporation conference (Washington DC, October 2013). "Designed for Failure? Risk-Return Tradeoffs and Risk Management of Structured Investment Vehicles."
188. Center for Analytic Finance, Indian School of Business (Hyderabad, India, July 2013). "Credit Spreads with Dynamic Debt."
187. Center for Analytic Finance, Indian School of Business (Hyderabad, India, July 2013). "Style Drift: An Analysis of Venture Investing."
186. Conference on Behavioral Models and Sentiment Analysis applied to Finance (London, July 2013). "Network Analysis for Systemic Risk and Venture Capital Communities."
185. Conference on Behavioral Models and Sentiment Analysis applied to Finance (London, July 2013). "Text Mining for Sentiment Analysis."
184. Bank of Korea, Global Initiative Program Seminar (Seoul, June 2013). "Big Data, Algorithms, and Business Intelligence."
183. R Finance Conference (Chicago, May 2013). "R in Academic Finance."
182. Yahoo! (Santa Clara, April 2013). "Mathematical Modeling and Data Analytics in Finance."
181. Georgia State University (Atlanta, April 2013). "Going for Broke: Optimizing Investments in Distressed Debt" and "Credit Spreads with Dynamic Debt."
180. Hong Kong University of Science and Technology (Hong Kong, March 2013). "Going for Broke: Optimizing Investments in Distressed Debt" and "Credit Spreads with Dynamic Debt."
179. Midwest Finance Association Meetings (Chicago, March 2013). "Venture Capital Communities."
178. BlackRock (San Francisco, January 2013). "Social Network Modeling in Finance with Text Analytics."
177. American Finance Association (AFA, San Diego, January 2013). "Did CDS Trading Improve the Market for Corporate Bonds?"
176. Center for Systemic Risk Analytics (Boston, December 2012). "Webinar on Data Mining for Systemic Risk Analysis of Bank Colending Networks."
175. Indian School of Business (Hyderabad, December 2012). "Going for Broke: Optimizing Investments in Distressed Debt" and "Credit Spreads under Mean-reverting Capital Structure."
174. EDHEC Risk Institute (Singapore, September 2012). "Risk, Regulation, and Restructuring of Distressed Mortgage Debt."
173. Singularity University (NASA, Ames, June 2012). "Risk, Regulation, and Restructuring of Distressed Mortgage Debt."
172. Western Finance Association (WFA) conference (Las Vegas, June 2012). "Did CDS Trading Improve the Market for Corporate Bonds?"
171. Fourth Stanford Conference in Quantitative Finance (Stanford University, June 2012). "Restructuring Debt in the Global Economy."
170. Institute of Chartered Accountants Conference (Dubai, April 2012). "Restructuring Debt in the Global Economy."
169. Financial Risk Conference, Macquarie University, Center for Financial Risk (Sydney, March 2012). "Risk Regulations, and Restructuring of Distressed Mortgage Debt."
168. Macquarie University (Sydney, March 2012). "Text Analytics and Network Modeling in Finance."
167. JOIM Conference (San Francisco, March 2012). "Risk Regulations, and Restructuring of Distressed Mortgage Debt."
166. R User Group Meeting at Intuit (Mountain View, December 2011). "Venture Capital Communities."
165. R User Group Meeting at Facebook (Palo Alto, November 2011). "Using R in Academic Finance."
164. Risk USA Conference (New York, November 2011). "Did CDS Trading Improve the Market for Corporate Bonds?"
163. Financial Management Association (FMA, Denver, October 2011). "Did CDS Trading Improve the Market for Corporate Bonds?"
162. Financial Management Association (FMA, Denver, October 2011). "The Principal Principle."
161. Financial Management Association (FMA, Denver, October 2011). "Roundtable on the Future of Housing Finance."
160. FDIC/JFSR Banking Conference (Washington DC, September 2011). "Did CDS Trading Improve the Market for Corporate Bonds?"
159. University of Maryland (Maryland, September 2011). "Strategic Loan Modification."
158. Financial Management Association Applied Conference (New York, May 2011). "Did CDS Trading Improve the Market for Corporate Bonds?"
157. National University of Singapore (February 2011). "Modeling Recovery."
156. National University of Singapore (February 2011). "The Principal Principle: Optimal Modification of Distressed Home Loans." & "Strategic Loan Modification: An Options-Based Response to Strategic Default."
155. Risk USA Workshop (New York, November 2010). "Beyond Mean-Variance: Portfolios with Structured Products and Non-Gaussian Returns."
154. Risk USA (New York, November 2010). "The Principal Principle: Optimal Modification of Distressed Home Loans." & "Strategic Loan Modification: An Options-Based Response to Strategic Default."
153. FDIC Conference on Mortgage Finance Reform (Washington DC, October 2010). "Strategic Loan Modification: An Options-Based Response to Strategic Default."

152. IBM Almaden (San Jose, October 2010). "The Principal Principle: Optimal Modification of Distressed Home Loans." & "Strategic Loan Modification: An Options-Based Response to Strategic Default."
151. Fordham University (New York, October 2010). "Strategic Loan Modification: An Options-Based Response to Strategic Default."
150. Bellatore Investor Offsite (Napa, July 2010). "The Principal Principle: Optimal Modification of Distressed Home Loans."
149. QWAFAFEW (San Francisco, April 2010). "The Principal Principle: Optimal Modification of Distressed Home Loans."
148. Santa Clara University, Department of Finance (Santa Clara, April 2010). "The Principal Principle: Optimal Modification of Distressed Home Loans."
147. Moodys KMV (San Francisco, March 2010). "The Principal Principle: Optimal Modification of Distressed Home Loans."
146. Santa Clara University, Department of Mathematics (Santa Clara, February 2010). "The Principal Principle: Optimal Modification of Distressed Home Loans."
145. Indian School of Business (Hyderabad, December 2009). "The Principal Principle: Optimal Modification of Distressed Home Loans."
144. Risk Conference (New York, October 2009). "Recovery Rate Modeling."
143. Risk Conference (New York, October 2009). "Modeling Liquidity."
142. Federal Deposit Insurance Corporation (Washington, DC, September 2009). "Saving Homes and Banks: The Optimal Modification of Distressed Home Loans."
141. Quant Congress (New York, July 2009). "Beyond Mean-Variance: Modeling Mental Account Portfolios with Structured Products and Nonlinear Securities."
140. University of Paris, Dauphine (Paris, June 2009). "Modeling Recovery Rates."
139. Claremont McKenna College (Claremont, May 2009). "Modeling Recovery Rates."
138. University of Chicago, Liquidity Conference (Chicago, November 2008). "Run Lengths and Liquidity".
137. International Risk Management Conference (Firenze, Italy, June 2008). "Accounting-Based versus Market-Based Cross-Sectional Models of CDS Spreads".
136. Moody's Credit Conference (New York, May 2008). "Hedging Credit: Equity Liquidity Matters."
135. California Polytechnic (San Luis Obispo 2008). "Extracting and Using Credit Information in Hybrid Models".
134. American Mathematical Society Meetings (San Diego 2008). "Extracting and Using Credit Information in Hybrid Models" (in the Special Session on Financial Mathematics).
133. Hong Kong University of Science and Technology (December 2007). "Processing Graphical Information: Perceptual Illusions of Risk and Return."
132. Society for Judgment and Decision Making Conference (Long Beach 2007). "Processing Graphical Information: Perceptual Illusions of Risk and Return."
131. Risk (New York 2007). Workshop on "Innovations in Credit Models"
130. Villanova University (2007). "Information Extraction in Hybrid Models" (presentation of three papers).
129. Association for Consumer Research Conference (Memphis 2007). "Processing Graphical Information: Perceptual Illusions of Risk and Return."
128. University of Chicago, Stevanovich Center for Financial Mathematics (2007). "Implied Recovery".
127. University of Houston (2007). "Information Extraction in Hybrid Models" (presentation of three papers).
126. Journal of Investment Management Conference (Boston 2007). Discussion of "Anticipating Correlations" (by Robert Engle).
125. Calpers (2007, Sacramento). "Run Lengths and Liquidity".
124. QWAFAFEW (2007, San Francisco). "Run Lengths and Liquidity".
123. Korean Finance Association Conference (2007, Korea). "Polishing Diamonds in the Rough: The Sources of Syndicated Venture Performance".
122. Moodys KMV (2007, San Francisco). "Implied Recovery"
121. Festschrift for Ed Altman (2006, New York). "Implied Recovery".
120. S&P Credit Congress (2006, New York). "Implied Recovery".
119. Journal of Investment Management Conference (2006, Boston). "A Simple Model for Pricing Securities with Equity, Interest-rate, and Default Risk".
118. Federal Deposit Insurance Corporation (2006, Washington DC). "Basel II Technical Issues."
117. Federal Deposit Insurance Corporation (2006, Washington DC). "Back to Basics: Fundamentals-Based versus Market-Based Cross-Sectional Models of CDS Spreads"
116. Pacific Investment Management Company (2006, Orange County). "Implied Recovery".
115. Pacific Investment Management Company (2006, Orange County). "A Simple Model for Pricing Securities with Equity, Interest-rate, and Default Risk".
114. Barclays Global Investors (2006). "Back to Basics: Fundamentals-Based versus Market-Based Cross-Sectional Models of CDS Spreads" and "Implied Recovery".

113. Barclays Global Investors (2006). "Information Structure and Investor Sentiment Extraction using the Internet."
112. Carnegie-Mellon University (2006). "Modeling Correlated Default" (a presentation of three papers).
111. Stanford University (2005). "Information Structure and Investor Sentiment Extraction using the Internet."
110. Q-group conference, (Carlsbad 2005). "Common Failings: How Corporate Defaults are Correlated".
109. Western Finance Association (WFA) conference (Portland, 2005). "Common Failings: How Corporate Defaults are Correlated".
108. Moody's Credit Conference (London, 2005). "Common Failings: How Corporate Defaults are Correlated".
107. Derivatives Securities Conference (Washington 2005) "A Simple Model for Pricing Securities with Equity, Interest-rate, and Default Risk".
106. Quant Congress (New York, 2004) "Common Failings: How Corporate Defaults are Correlated".
105. Citigroup (New York, 2004) "Common Failings: How Corporate Defaults are Correlated".
104. QFAFAFEW - Quantitative Analysts Society (San Francisco, 2004) "Common Failings: How Corporate Defaults are Correlated".
103. Federal Deposit Insurance Corporation (Washington, 2004) "Common Failings: How Corporate Defaults are Correlated".
102. American Psychology Association (APA) Conference (Honolulu, 2004) "Why are Stocks with Shorter Run Lengths Preferred?".
101. Choice Symposium (Colorado, 2004) "Yahoo for Amazon: Sentiment Extraction from Stock Message Boards" and "Financial Communities" (in the special session on Word of Mouth Effects in Business Models).
100. University of Massachusetts (Amherst 2004) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, and Default Risk".
99. Federal Deposit Insurance Corporation (Washington, 2004) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, and Default Risk".
98. American Finance Association Meetings (San Diego, 2004) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, and Default Risk".
97. Lehman Brothers (New York, 2003) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, and Default Risk".
96. Morgan Stanley (New York, 2003) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, and Default Risk".
95. Credit Risk Summit (New York, 2003) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, and Default Risk".
94. European Finance Association Conference (Glasgow 2003). "Modeling Correlated Default."
93. Moodys KMV Corporation (San Francisco, 2003) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, and Default Risk".
92. Universita La Sapienza (Rome, 2003) "Modeling Correlated Default."
91. Universita La Sapienza (Rome, 2003) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, and Default Risk".
90. Santa Clara University (Santa Clara, 2003) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, Default and Liquidity Risk".
89. Stanford University (Palo Alto, 2003) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, Default and Liquidity Risk".
88. University of Oklahoma (Norman, OK 2003) "A Simple Unified Model for Pricing Derivative Securities with Equity, Interest-rate, Default and Liquidity Risk".
87. New York University (New York 2003) "A Simple Model for Pricing Derivative Securities with Equity, Interest-rate, Default and Liquidity Risk".
86. York University (Toronto 2003) "A Simple Model for Pricing Derivative Securities with Equity, Interest-rate, Default and Liquidity Risk".
85. American Finance Association Meetings (Washington 2003) "Correlated Default Risk".
84. American Finance Association Meetings (Washington 2003) "International Portfolio Choice with Systemic Risk."
83. MSRI Event Risk Conference (New York 2002) "Correlated Default Risk".
82. Carnegie-Mellon University (Pittsburgh 2002) "Correlated Default Risk".
81. University of Arizona (Tucson 2002) "Yahoo for Amazon: Sentiment Extraction from Small Talk on the Web".
80. Australian Society of Financial Analysts (Sydney 2002) "Yahoo for Amazon: Sentiment Extraction from Small Talk on the Web".
79. Australian Society of Financial Analysts (Sydney 2002) "The Private Equity Discount: An Empirical Examination of the Exit of Venture Backed Companies".
78. Singapore Chapter of Financial Analysts (Singapore 2002) "Credit Derivatives for Fixed Income Portfolios".
77. Japan Institute of Securities Practitioners (JISP) (Tokyo, 2002) "Credit Derivatives for Fixed Income Portfolios".

76. Barclays Global Investor Seminar (San Francisco, 2002) "Modelling Correlated Default".
75. Risk Conference (Boston, 2002) "Modelling Correlated Default".
74. AIMR Conference (Toronto, 2002) "Modelling Correlated Default".
73. American Finance Association (Atlanta, 2002). "The Private Equity Discount: An Empirical Examination of the Exit of Venture Backed Companies".
72. American Finance Association (Atlanta, 2002). "e-Information: Preliminary Findings".
71. Q-Group conference, Phoenix, Arizona (2001). "Correlated Default Analysis of Bonds".
70. University of Wisconsin, Madison (2001). "Yahoo for Amazon: Opinion Extraction from Small Talk on the Web".
69. KMV Corporation, San Francisco (2001). "A Discrete-Time Approach to No-Arbitrage Pricing of Credit Derivatives with Rating Transitions" , and "Markov Chain Monte Carlo methods for Option Pricing."
68. European Finance Association Conference, Barcelona, Spain (2001). "The Private Equity Discount: An Empirical Examination of the Exit of Venture Backed Companies".
67. European Finance Association Conference, Barcelona, Spain (2001). "Yahoo for Amazon: Opinion Extraction from Small Talk on the Web".
66. Asia-Pacific Finance Association Conference, Bangkok, Thailand (2001). "The Private Equity Discount: An Empirical Examination of the Exit of Venture Backed Companies".
65. Asia-Pacific Finance Association Conference, Bangkok, Thailand (2001). "Yahoo for Amazon: Opinion Extraction from Small Talk on the Web".
64. London Business School, U.K. (2001). "Yahoo for Amazon: Opinion Extraction from Small Talk on the Web".
63. Multinational Finance Society Conference, Garda, Italy (2001). "Yahoo for Amazon: Opinion Extraction from Small Talk on the Web".
62. Risk 2001 conference, Boston (2001). "A Discrete-Time Approach to No-Arbitrage Pricing of Credit Derivatives with Rating Transitions" , and "Markov Chain Monte Carlo methods for Option Pricing."
61. Western Finance Association Conference, Tuscon, Arizona (2001). "International Portfolio Choice with Systemic Risk."
60. Santa Clara University, Santa Clara (2000). "Fee Speech: Adverse Selection and the Regulation of Fee Structures in Mutual Funds".
59. Bombay Stock Exchange, India (2000). Talk on Derivatives Markets.
58. Northwestern University, Chicago (2000). "Yahoo for Amazon: Opinion Extraction from Small Talk on the Web".
57. Price Waterhouse Coopers Risk Institute Conference, New York (2000). "A Discrete-Time Approach to No-Arbitrage Pricing of Credit Derivatives with Rating Transitions" , and "Markov Chain Monte Carlo methods for Option Pricing."
56. Northeastern University, Boston (1999). "The Regulation of Fee Structures in Mutual Funds: A Theoretical Analysis".
55. The Fields Institute, Toronto (1999). "Pricing Interest Rate Derivatives: A General Approach".
54. The Courant Institute of Mathematical Sciences, New York University (1999). "Pricing Interest Rate Derivatives: A General Approach".
53. Purdue University, Indiana (1999). "Pricing Interest Rate Derivatives: A General Approach".
52. Derivatives Securities Conference, Boston (1999). "Pricing Interest Rate Derivatives: A General Approach".
51. RISK99 conference, Boston (1999). "Pricing Interest Rate Derivatives: A General Approach".
50. Western Finance Association Meetings, Santa Monica (1999). "Fee Speech: Adverse Selection and the Regulation of Fee Structures in Mutual Funds".
49. Q-conference, Palm Springs (1999). "A Case for Theory Driven Experimental Enquiry".
48. Money Talks II, India (1999). Special talk on the use of Real Options for Investment Decisions.
47. University of Antwerp, Belgium (1998). "Pricing Credit Risk Derivatives," a special talk for the Risk Management Chair.
46. University of Wisconsin, Madison (1998). "The Regulation of Fee Structures in Mutual Funds: A Theoretical Analysis".
45. Federal Reserve Bank, Kansas City (1998). "Pricing Credit Risk Derivatives".
44. Derivatives Securities Conference, Boston (1998). "Of Smiles and Smirks: A Term Structure Perspective".
43. Stochastic Programming Conference on Asset Liability Management, Vancouver (1998). "International Portfolio Choice with Systemic Risk".
42. Berkeley Program in Finance, Santa-Barbara (1998). "Of Smiles and Smirks: A Term Structure Perspective".
41. University of California, Los Angeles (1997). "Of Smiles and Smirks: A Term Structure Perspective".
40. Citibank, Hong Kong (1997). "A Direct Discrete-Time Approach to Poisson-Gaussian Bond Option Pricing in the Heath-Jarrow-Morton Model".
39. Erasmus University, Rotterdam (1997). "Of Smiles and Smirks: A Term Structure Perspective".
38. Stanford University (1997). "Of Smiles and Smirks: A Term Structure Perspective".
37. University of California, Berkeley (1997). "Of Smiles and Smirks: A Term Structure Perspective".
36. Global Derivatives Conference, Paris (1997). "Pricing Credit Risk Derivatives".

35. International Association of Financial Engineers Meetings, Boston (1997). "Of Smiles and Smirks: A Term Structure Perspective".
34. Financial Management Association Meetings, Hawaii (1997). "Of Smiles and Smirks: A Term Structure Perspective".
33. Risk Conference, Geneva (1997). "Pricing Credit Risk Derivatives".
32. Credit Risk Conference, Erasmus University, Rotterdam (1997). "Pricing Credit Risk Derivatives".
31. Asset Pricing Meetings NBER, Boston (1996). "International Portfolio Choice with Systemic Risk".
30. Hong Kong University of Science and Technology (1996). "A Theory of Optimal Timing and Selectivity".
29. Virginia Tech, Blacksburg (1996). "A Theory of Optimal Timing and Selectivity".
28. Board of Governors, Federal Reserve, Washington (1996) "A Direct Discrete-Time Approach to Poisson-Gaussian Bond Option Pricing in the Heath-Jarrow-Morton Model".
27. University of Massachusetts, Amherst (1996). "A Theory of Optimal Timing and Selectivity".
26. American Finance Association Meetings, San Francisco (1996). "The Central Tendency: A Second Factor in Bond Yields".
25. Western Finance Association Meetings, Sunriver (1996). "A Theory of Banking Structure".
24. Financial Management Association, New Orleans (1996). "The Central Tendency: A Second Factor in Bond Yields".
23. NBER Conference on the Financing of Property and Casualty Risk, Palm Beach Florida (1996). "Comments on 'Pricing Excess-of-Loss Reinsurance Contracts against Catastrophic Loss',".
22. Econometric Society (Econometrica) conference, New Delhi (1996). "The Central Tendency: A Second Factor in Bond Yields".
21. Hong Kong University of Science and Technology (1995). "Pricing Credit Sensitive Debt when Interest Rates, Credit Ratings and Credit Spreads are Stochastic".
20. Santa-Clara University (1995). "Pricing Credit Sensitive Debt when Interest Rates, Credit Ratings and Credit Spreads are Stochastic".
19. Boston University (1995). "Pricing Credit Sensitive Debt when Interest Rates, Credit Ratings and Credit Spreads are Stochastic".
18. Citibank N.A., London (1995). "Pricing Credit Sensitive Debt when Interest Rates, Credit Ratings and Credit Spreads are Stochastic".
17. Federal Reserve Bank-Case Western University, Cleveland (1995). "Pricing Credit Sensitive Debt when Interest Rates, Credit Ratings and Credit Spreads are Stochastic".
16. National Bureau of Economic Research (NBER), Boston (1995). "Pricing Credit Sensitive Debt when Interest Rates, Credit Ratings and Credit Spreads are Stochastic".
15. American Finance Association Meetings, Washington, D.C. (1995) "Jump-Diffusion Processes and the Bond Markets".
14. Western Finance Association Meetings, Aspen, Colorado (1995). "Jump-Diffusion Processes and the Bond Markets".
13. TIMS-ORSA Meetings, New Orleans (1995). "Pricing Credit Sensitive Debt when Interest Rates, Credit Ratings and Credit Spreads are Stochastic".
12. University of Illinois, Urbana-Champaign (1994). "Jump-Diffusion Processes and the Bond Markets".
11. Carnegie-Mellon University (1994). "Jump-Diffusion Processes and the Bond Markets".
10. University of Southern California (1994). "Jump-Diffusion Processes and the Bond Markets".
9. University of Pennsylvania, Wharton School of Business (1994). "Jump-Diffusion Processes and the Bond Markets".
8. Harvard University, Boston (1994). "Jump-Diffusion Processes and the Bond Markets".
7. University of Michigan, Ann Arbor (1994). "Jump-Diffusion Processes and the Bond Markets".
6. Cornell University, Ithaca (1994). "Jump-Diffusion Processes and the Bond Markets".
5. University of Chicago (1994). "Jump-Diffusion Processes and the Bond Markets".
4. Citibank N.A., Hong Kong (1994) "Jump-Diffusion Processes and the Bond Markets".
3. Asset Pricing Meetings NBER, Boston (1994) "Jump-Diffusion Processes and the Bond Markets".
2. S.P. Jain Institute of Management, India (1994). Special talk on using derivatives to solve Emerging Markets problems in India.
1. Eastern Finance Association Meetings, Boston (1994). "Stochastic Mean Models of the Term Structure".
0. European Finance Association Meetings, Brussels (1994). "How Diversified are Internationally Diversified Portfolios: Time-Variation in the Covariances between International Returns".
0. Financial Management Association Meetings, St. Louis (1994). "Jump-Diffusion Processes and the Bond Markets".

## PROFESSIONAL SERVICE

### Editorial and Advisory Positions

Co-Editor, *Journal of Derivatives*, 2002–  
 Co-Editor, *Journal of Financial Services Research*, 2013–  
 Senior Executive Editor, *Journal of Investment Management*, 2003–  
 Associate Editor, *Journal of Financial Intermediation*, 2010–  
 Scientific Committee, *Finance, Ecole de Hautes Etudes Commerciales Du Nord*, 2000–.  
 Associate Editor, *International Journal of Theoretical and Applied Finance*, 1999–  
 Associate Editor, *Review of Derivatives Research*, 1999–  
 Associate Editor, *Global Credit Review*, 2012–  
 Advisory Editor, *Studies in Economics and Finance*, 2014–  
 Editorial Board, *Quantitative Finance Letters*, 2013–2016  
 Editorial Advisory Board, *Vikalpa, The Journal for Decision Makers*, IIMA, 2015–  
 Research Advisory Board Member, *Association for Investment Management and Research (AIMR)*, 2000–2014  
 Associate Editor, *Financial Analysts Journal*, 2000–2002  
 Associate Editor, *Management Science*, 2001–2008  
 Associate Editor, *Journal of Financial Services Research*, 1999–2012  
 Associate Editor, *The Journal of RISK*, 1999–2005.

**Refereeing:** Reviewer for the following journals and organizations:

*Annals of Operations Research; Applied Economics; Big Data; CFA Research Foundation; Econometrica; European Finance Review; European Journal of Finance; Finance and Stochastics; Financial Analysts Journal; Financial Management; Financial Practice and Education; Finance Research Letters; Fuzzy Systems Journal; Global Finance Journal; Hong Kong Research Council; Intelligent Systems in Accounting, Finance and Management; International Journal of Theoretical and Applied Finance; International Review of Economics and Finance; Journal of Banking and Finance; Journal of Business; Journal of Business and Economic Statistics; Journal of Computational Finance; Journal of Derivatives; Journal of Econometrics; Journal of Economics and Business; Journal of Economic Dynamics and Control; Journal of Empirical Finance; Journal of Finance; Journal of Financial and Quantitative Analysis; Journal of Financial Economics; Journal of Financial Engineering; Journal of Financial Markets; Journal of Financial Research; Journal of Financial Services Research; Journal of Futures Markets; Journal of Investment Management; Journal of Marketing Research; Journal of Money, Credit and Banking; Journal of Risk; Journal of Supercomputing; Management Science; Mathematical Finance; National Science Foundation; Pacific Basin Finance Journal; Quantitative Finance; Quarterly Journal of Business and Economics; Research Policy; Review of Derivatives Research; Review of Economics and Statistics; Review of Financial Studies; Risk; Scandinavian Actuarial Journal; Spanish Economic Review*

### Conferences/Programs/Judging

48. Program Committee for the Data Science for Macro-Modeling (DSMM2018) Workshop in conjunction with SIGMOD 2018 (May 2018).
47. Academic program organizer for the Journal of Investment Management Conference: Boston, September 2017.
46. Academic program organizer for the Journal of Investment Management Conference: San Diego, April 2017.
45. Program Committee for the Data Science for Macro-Modeling (DSMM2017) Workshop in conjunction with SIGMOD 2017 (Chicago, May 2017).
44. Program Committee, OptiRisk conferences on AI, Machine Learning and Sentiment Analysis Applied to Finance, Bangalore, Hong Kong, and London, 2017.
43. Program Committee, 2016 IEEE Workshop on Big Data for Financial News and Data.
42. Scientific Committee, Moody's Academic Conference December 2016, India.
41. Academic program organizer for the Journal of Investment Management Conference: Oxford University, September 2016.
40. Academic program organizer for the Journal of Investment Management Conference: Northwestern University, Chicago, September 2016.

39. Program Committee for the Data Science for Macro-Modeling (DSMM2016) Workshop in conjunction with SIGMOD 2016 (San Francisco, July 2016).
38. Academic program organizer for the Journal of Investment Management Conference: Sonoma, March 2016.
37. Program Committee, Financial Intermediation Research Society (FIRS) Conference 2016.
36. Scientific Committee, Moody's Academic Conference December 2015, India.
35. Academic program organizer for the Journal of Investment Management Conference: Boston, October 2015.
34. Academic program organizer for the Journal of Investment Management Conference: San Diego, March 2015.
33. Program Committee, FDIC/JFSR Banking Conference, Washington DC, September 2014.
32. Academic program organizer for the Journal of Investment Management Conference: Napa, September 2014.
31. Program Committee, Sigmod 2014 Workshop - Data Science for Macro-Modeling: Snowbird, Utah, June 2014.
30. Academic program organizer for the Journal of Investment Management Conference: San Diego, March 2014.
29. Academic program organizer for the Journal of Investment Management Conference: Napa, October 2013.
28. Judges panel for the S&P SPIVA awards 2014.
27. Academic program organizer for the Journal of Investment Management Conference: Stanford, March 2013.
26. Academic program organizer for the Journal of Investment Management Conference: Chicago, September 2012.
25. Judges panel for the S&P SPIVA awards 2013.
24. Academic program organizer for the Journal of Investment Management Conference: San Francisco, March 2012.
23. Academic program organizer for the Journal of Investment Management Conference: Boston, October 2011.
22. Program Committee, Society for Financial Econometrics, June 2011.
21. Academic program organizer for the Journal of Investment Management Conference: San Diego, March 2011.
20. Academic program organizer for the Journal of Investment Management Conference: Boston, October 2010.
19. Program Committee, "Conference on Risk Management," National University of Singapore, July 2010.
18. Conference Co-Chair, "The Value of Values," Conference on Social Investing and Corporate Social Responsibility, Santa Clara, May 2010.
17. Program Committee, Workshop on Parallel and Distributed Computing in Finance, April 2010, Atlanta.; as part of the 24th IEEE International Parallel and Distributed Processing Symposium - IPDPS 2010.
16. Academic program organizer for the Journal of Investment Management Conference: San Francisco, March 2010.
15. Academic program organizer for the Journal of Investment Management Conference: Boston, October 2009.
14. Program Committee, Workshop on Parallel and Distributed Computing in Finance, May 2009, Rome, Italy; as part of the 23rd IEEE International Parallel and Distributed Processing Symposium - IPDPS 2009.
13. Academic program organizer for the Journal of Investment Management Conference: San Francisco, March 2009.
12. Academic program organizer for the Journal of Investment Management Conference: Boston, October 2008.
11. Academic program organizer for the Journal of Investment Management Conference: New York, April 2008.
10. Program Committee for the Financial Management Conference, Dallas, Texas, October 2008. Track Chair for Derivatives.
9. Program Committee, The First Workshop on Parallel and Distributed Computing in Finance (Computational Finance), April 2008, Miami; as part of the 22nd IEEE International Parallel and Distributed Processing Symposium - IPDPS 2008.
8. Co-editor of Special Issue of the Journal of Fixed Income (based on the Midwest Finance Conference papers) 2008.
7. Program Committee, Midwest Finance Conference, San Antonio, TX, February 2008. Co-chair of special track on Fixed-Income.
6. Academic program organizer for the Journal of Investment Management Conference: Boston, September 2007.
5. Academic program organizer for the Journal of Investment Management Conference: San Francisco, March 2007.
4. Academic program organizer for the Journal of Investment Management Conference: Boston, September 2006.
3. Academic program organizer for the Journal of Investment Management Conference: San Francisco, March 2006;
2. Conference Organizer for the Conference on "Event Risk" (November 2002), organized by the Mathematical Sciences Research Institute, Berkeley, in New York.
1. Organizing committee, Conference on "Randomized Algorithms in Finance" March 2001, (Mathematical Sciences Research Institute at Berkeley).



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