

# 12th Annual Derivatives Securities Conference

The conference organizers would like to thank Roberto Mendoza, 12th Annual Derivatives Securities Conference Keynote Speaker, as well as our colleagues, Peter Carr, Thomas Coleman, Alexander David, Stephen Figlewski, Paul Glasserman and Joshua Rosenberg for chairing each session.

## Dr. Peter Carr



Dr. Peter Carr is an independent senior consultant based in New York City. Prior to his current position, he headed equity derivative research groups for six years at Banc of America Securities and at Morgan Stanley. Dr. Carr is also a visiting professor at the Courant Institute of New York University. His prior academic positions include 4 years as an adjunct professor at Columbia University and 8 years as a finance professor at Cornell University. Since receiving his PhD. in Finance from UCLA in 1989, he has published articles in numerous finance journals. He is currently the treasurer of the Bachelier Finance Society and a practitioner director for the Financial Management Association. He is also an associate editor for 6 academic journals related to mathematical finance and derivatives. He has given numerous talks at both practitioner and academic conferences

## Dr. Thomas Coleman



Dr. Thomas Coleman is the Director of the Cornell Theory Center and CTC-Manhattan, a computational finance consulting center in New York City. Also a Cornell Professor of Computer Science and Applied Mathematics, Dr. Coleman's research centers on the design and understanding of practical and efficient numerical algorithms for continuous optimization. His primary interest is in the development of computational methods and tools for large-scale optimization problems with emphasis on applications of computational finance. Specifically, recent work of Dr. Coleman and his colleagues includes a new methodology for computing implied volatility surfaces from option prices, new hedging techniques, a parallel index tracking implementation, new portfolio optimization methods, and the use of parallel computing techniques in computational finance.

## Dr. Alexander David



Alexander David received his PhD in economics from the University of California in 1994. He worked as an economist with the International Finance Division and the Capital Markets Section at the Board of Governors of the Federal Reserve System in Washington DC from 1993-2001. His responsibilities included coverage of issues on derivatives regulation, mergers and acquisitions, and the credit risk issues for US corporate bonds. He is currently Assistant Professor of Finance at the Olin School of Business at Washington University in St. Louis. He has published papers in leading academic finance journals. His current interests are in studying the impact of investors' uncertainties about corporate fundamentals, macro-economic variables, and inflation on the prices of derivatives, government bonds, and defaultable corporate bonds.

## Dr. Stephen Figlewski



Stephen Figlewski is a Professor of Finance at the New York University Leonard N. Stern School of Business, where he has been since 1976. He holds a B.A. in Economics from Princeton University and a Ph.D in Economics from the Massachusetts Institute of Technology. He has published extensively in academic journals, especially in the area of financial futures and options. He is the founding Editor of *The Journal of Derivatives* and an Associate Editor for several other journals. He also edits the Financial Economics Network's two "Derivatives" series published over the Internet. He is the director of the NYU Stern School Derivatives Research Project, a research initiative that supports applied and theoretical research on derivatives and promotes intellectual interchange between academics and practitioners in derivatives, risk management, and financial engineering. Previously: s a Vice President, First Boston Corporation; member, New York Futures Exchange; Competitive Options Trader, New York Stock Exchange.

*\*\*Paul Glasserman and Joshua Rosenberg photographs and bios unavailable at time of printing.*

### Notables:

Technical papers are available on the enclosed CD.

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<http://www.tc.cornell.edu/news/events/2002/12th-derivatives/>

# 12th Annual Derivatives Securities Conference

Futures - Options - Fixed Income - All Forms of Contingent Claims - Real Options

New York, April 26 & 27, 2002

## KEYNOTE SPEAKER:



**Roberto Mendoza Co-CEO**  
**Hancock, Mendoza, Dachille & Merton, Ltd.**

Roberto G. Mendoza is co-Chief Executive Officer of HMDM. Mr. Mendoza joined J.P. Morgan & Co. in 1967 and served as Vice Chairman of the Board from 1990 to 2000. During his J.P. Morgan career, he was principally involved with the corporate finance, M&A and private equity functions of the firm. From 1980 to 1985, he headed the group that provided capital market services to clients, and then became head of the Mergers and Acquisitions group. In connection with his responsibilities at J.P. Morgan, he served on the boards of Banesto S.A., Continental Airlines, Inc., XL Capital Ltd. (Chairman), Mid Ocean Limited (Chairman of the Executive Committee) and the Travelers Group.



### Conference Organizers

Joseph A. Cherian *Banc of America Capital Management*  
Thomas F. Coleman *Cornell Theory Center*  
Robert A. Jarrow *Cornell University*  
Stuart Turnbull *Lehman Brothers, Inc.*

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**Derivatives Securities Conference**

*Friday, April 26<sup>th</sup>, 2002*

|                 |                      |   |
|-----------------|----------------------|---|
| 7:30am-8:15am   |                      | <b>Registration and Continental Breakfast</b>   |
| 8:15am-8:30am   |                      | <b>Opening Remarks:</b> Robert Jarrow, Johnson Graduate School of Management and Thomas Coleman, CTC-M  |
| 8:30am-10:00am  | <b>SESSION ONE</b>   | <b>SESSION ONE: Interest Rate and Credit Risk</b> Chair: Peter Carr   |
|                 |                      | <b>On Pricing and Hedging in the Swaption Market: How Many Factors, Really?</b><br>Anurag Gupta, Case Western Reserve University <i>Co-authors:</i> Rong Fan and Peter Ritchken, Case Western Reserve University            |
|                 |                      | <b>Cap and Swaption Approximations in LIBOR Market Models with Jumps</b><br>Paul Glasserman, Columbia University <i>Co-author:</i> Nicolas Merener, Columbia University   |
|                 |                      | <b>The Dynamic Correlation Structure Between Credit Spreads and the Term-Structure of Interest Rates: The Effects of Inflation Jitters on Corporate Bond Spreads</b><br>Alexander David, Washington University in St. Louis |
|                 |                      | <b>Decomposing Expected Return on Defaultable Bonds</b><br>Fan Yu, University of California, Irvine   |
| 10:00am-10:30am |                      | <b>Coffee Break</b>   |
| 10:30am-NOON    | <b>SESSION TWO</b>   | <b>SESSION TWO: Interest Rate and Credit Risk</b> Chair: Paul Glasserman  |
|                 |                      | <b>Structural Models of Corporate Bond Pricing: An Empirical Analysis</b><br>Jing-zhi Huang, Penn State University <i>Co-authors:</i> Young Ho Eom, Yonsei University and Jean Helwege, Ohio State University               |
|                 |                      | <b>Modeling Credit Risk with Partial Information</b><br>Robert Jarrow, Cornell University <i>Co-authors:</i> Umut Çetin, Philip Protter and Yildirim Yildirim, Cornell University   |
|                 |                      | <b>Pricing Multiname Credit Derivatives: Heavy Tailed Hybrid Approach</b><br>Roy Mashal, Columbia University <i>Co-author:</i> Marco Naldi, Lehman Brothers, Inc.   |
|                 |                      | <b>Maximum Likelihood Estimation of Structural Credit Spread Models – Deterministic and Stochastic Interest Rates</b><br>Jean-Guy Simonato, Ecole des Hautes Etudes Commerciales  |
| 12:00pm-1:30pm  |                      | <b>Lunch</b>  |
| 1:30pm-3:00pm   | <b>SESSION THREE</b> | <b>SESSION THREE: Computation</b> Chair: Thomas Coleman   |
|                 |                      | <b>The Credit Process in Continuous Time</b><br>Claudio Albanese, University of Toronto   |
|                 |                      | <b>Distance to Default: Calibrating Risk-Neutral Credit Default Models from Default Probabilities</b><br>Marco Avellaneda, New York University  |
|                 |                      | <b>Discrete Hedging Under Piecewise Linear Risk Minimization</b><br>Maria-Cristina Patron, Cornell University <i>Co-authors:</i> Thomas F. Coleman and Yuying Li, Cornell University  |
|                 |                      | <b>Convergence Pitfalls of Nonlinear Option Pricing Models</b><br>David Pooley, University of Waterloo <i>Co-authors:</i> P.A. Forsyth and K.R. Vetzal, University of Waterloo  |
| 3:00pm-3:30pm   |                      | <b>Coffee Break</b>   |
| 3:30pm-5:00pm   | <b>SESSION FOUR</b>  | <b>SESSION FOUR: Options</b> Chair: Alexander David   |
|                 |                      | <b>The Telescoping Overlap Problem in Options Data</b><br>Charlotte Strunk-Hansen, University of Aarhus <i>Co-authors:</i> Bent Jesper Christensen, Aarhus University and Nagpuranand R. Prabhala, University of Maryland   |
|                 |                      | <b>Option Pricing Implications of Maximin Hedging Strategies in Incomplete Markets</b><br>Alfredo Ibáñez, Instituto Tecnológico Autónomo de México  |
|                 |                      | <b>Which Volatility Model Should be Used for Option Pricing?</b><br>Kris Jacobs, McGill University & CIRANO <i>Co-author:</i> Peter Christoffersen, McGill University   |
|                 |                      | <b>On Pricing Kernels, Their Variance Bounds and the Smile</b><br>Philippe Henrotte, Groupe HEC Department of Finance   |
| 5:00pm-6:00pm   |                      | <b>Cocktail Reception</b>   |
| 6:00pm-7:30pm   |                      | <b>Dinner</b><br><b>Keynote Speaker:</b> Roberto Mendoza, Co-CEO, Hancock, Mendoza, Dachille & Merton, Ltd.   |

**Derivatives Securities Conference**

*Saturday, April 27<sup>th</sup>, 2002*

|                 |                     |  |
|-----------------|---------------------|--|
| 7:30am-8:30am   |                     | <b>Continental Breakfast</b>   |
| 8:30am-10:00am  | <b>SESSION FIVE</b> | <b>SESSION FIVE: Derivatives Securities</b> Chair: Stephen Figlewski   |
|                 |                     | <b>Efficient Sensitivity Analysis of Mortgage Backed Securities</b><br>Jian Chen, University of Maryland                           |
|                 |                     | <b>The Performance of Alternative Valuation Models in the OTC Currency Options Market</b><br>Nicolas Bollen, Vanderbilt University |
|                 |                     | <b>Nonparametric Pricing of Multivariate Contingent Claims</b><br>Joshua Rosenberg, Federal Reserve Bank of New York               |
|                 |                     | <b>American Style Indexed Executive Stock Options</b><br>Peter Løchte Jørgensen, University of Aarhus                              |
| 10:00am-10:30am |                     | <b>Coffee Break</b>  |
| 10:30am-NOON    | <b>SESSION SIX</b>  | <b>SESSION SIX: Options</b> Chair: Joshua Rosenberg  |
|                 |                     | <b>Semi-static Hedging of Path-Dependent Securities</b><br>Peter Carr, New York University   |
|                 |                     | <b>Black-Scholes as a Benchmark for Options Pricing</b><br>Stephen Figlewski, New York University                                  |
|                 |                     | <b>Options-Implied Risk Aversion Estimates: Robustness and Patterns</b><br>Robert R. Bliss, Federal Reserve Bank of Chicago        |
|                 |                     | <b>Option Pricing on Stock Mergers or Acquisitions</b><br>Ajay Subramanian, DuPree College of Management                           |
| NOON            |                     | <b>Closing Remarks: Stuart Turnbull, Lehman Brothers, Inc.</b>   |



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The International Association of Financial Engineers (IAFE) is a professional society dedicated to defining and fostering the profession of financial engineering. Its primary mission is to help establish and promote industry standards and practices relating to financial engineering theory and practice. Founded in 1992, the IAFE has grown to include thousands of members worldwide representing practitioners, academicians, and students from many financial disciplines. The IAFE hosts numerous industry groups in areas such as Investor Risk, Hedge Funds, Operational Risk, Credit Risk Modelling, Technology, Intellectual Property, Insurance and others.



CTC-Manhattan is a showcase for Windows high-performance computing with a special emphasis on computational finance. The facility, located at 55 Broad Street in Manhattan, is a satellite of the Cornell Theory Center (CTC), which is the home of the world's largest Windows high-performance computing cluster complex. At CTC-Manhattan, consultants develop innovative solutions to practical problems in computational and mathematical finance, portfolio optimization, and risk management with a focus on accelerating the development of high-performance systems for commercial and research applications.