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3rd Annual

Global Derivatives USA 2013 Trading & Risk Management

November 19-22 • Swissôtel Chicago, IL, USA
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GUEST ACADEMIC SPEAKERS



George Constantinides
Leo Melamed Professor
Of Finance
UNIVERSITY OF
CHICAGO BOOTH
SCHOOL OF BUSINESS



Emanuel Derman
Professor
COLUMBIA UNIVERSITY
& Head Of Risk
PRISMA CAPITAL
PARTNERS



John Hull
Maple Financial
Professor Of Derivatives
& Risk Management
JOSEPH L. ROTMAN
SCHOOL OF
MANAGEMENT,
UNIVERSITY OF
TORONTO

America's Leading Derivatives & Quantitative Finance Event

DON'T MISS
Key Insights Into
Geopolitical
Risk
"Hot Spots" &
The
Implications
For Trading
Strategies



Jesper Andreasen
Global Head Of
Quantitative Research
DANSKE BANK



Jean-Philippe Bouchaud
Chairman
CAPITAL FUND
MANAGEMENT



Ilija Bouchouev
Managing Director,
Head Of Derivatives
KOCH SUPPLY &
TRADING



Benjamin Bowler
Global Head Of Equity
Derivatives Research
BANK OF AMERICA
MERRILL LYNCH



Bruno Dupire
Head Of Quantitative
Research
BLOOMBERG



Maneesh Deshpande
Managing Director, Head
Of Equity Derivatives
Strategy Research
BARCLAYS



Anlong Li
Head Of Quantitative
Volatility Group
ALLSTON TRADING



Marcos Lopez de Prado
Head Of Quantitative
Trading & Research
HESS ENERGY
TRADING COMPANY



Dariush Mirfendereski
Global Head Of Inflation
Trading
HSBC



Marco Avellaneda
Professor Of
Mathematics & Finance
COURANT
INSTITUTE, NYU



Mike Giles
Professor Of Scientific
Computing
OXFORD-MAN
INSTITUTE OF
QUANTITATIVE
FINANCE



Paul Glasserman
Jack R. Anderson
Professor Of Business
COLUMBIA BUSINESS
SCHOOL



Roger Lee
Associate Professor,
Department Of
Mathematics
UNIVERSITY OF
CHICAGO



Dilip Madan
Professor Of
Mathematical Finance
ROBERT H. SMITH
SCHOOL OF
BUSINESS,
UNIVERSITY OF
MARYLAND



Marvin Zonis
Professor Emeritus
BOOTH SCHOOL OF
BUSINESS, UNIVERSITY
OF CHICAGO

What Makes Global Derivatives USA 2013 The Must-Attend Event For All Leading Derivatives & Quantitative Finance Practitioners?

New For 2013

Our Most Diverse Speaker Line-Up Ever With More Traders, More Prop Shops & More Buy Side Firms

Meet and Network with senior practitioners from 80+ leading global Banks, Prop Shops, Hedge Funds, Asset Managers, Energy Companies and Insurers.

New For 2013

A Dedicated Stream On Quantitative Investment Strategies & Algorithmic Trading

One of the 'hottest' topics around, **Systematic Trading** will be a big focus this year. Topics under the microscope for our experts include **developing algorithms, market microstructure, optimal execution and big data.**

New For 2013

More Expert Quantitative Finance Speakers & Focus Sessions Than Ever Before

Based on industry feedback we have expanded the agenda to include more in-depth technical sessions on 'hot' industry topics including **Pricing Equity Derivatives, Modelling FX, Pricing & Hedging Commodities & Portfolio Optimization**

New For 2013

More Academic Research And Insight

You told us you wanted more new research from Academic institutions, and of course we delivered. Hear new ideas and fresh thinking from **University of Chicago, Columbia University, Carnegie Mellon, The Rotman School of Management** and many more.

Don't Miss Global Derivatives USA's First Ever Portfolio Optimization & Quantitative Investment Summit!

Tuesday November 19, 2013

The summit will bring together senior industry figures from leading buy and sell side firms to discuss practical solutions to the key challenges buy side firms face in the derivatives markets. Learn how to develop successful alpha generation strategies and construct portfolios with an optimal balance of risk and return, even in today's cost-constrained, risk-averse market environment. Don't miss invaluable insights from: **Aurora Investment Management, Bank Of America Merrill Lynch, Citi, Core Capital Management, Courant Institute Of Mathematical Sciences, Gelber Group, Hess Energy Trading Company, University Of California Berkeley** & more.

Maximise Your Learning With Our Technical Workshops

Friday November 22, 2013

The Valuation Of Credit Derivatives

Led by: **John Hull**, Maple Financial Professor Of Derivatives & Risk Management
JOSEPH L. ROTMAN SCHOOL OF MANAGEMENT,
UNIVERSITY OF TORONTO

Volatility & Correlation Modelling & Trading In Practice

Led by: **Bruno Dupire**, Head Of Quantitative Research,
BLOOMBERG

Adjoint Methods For Option Pricing: Algorithmic Differentiation Tool Support For Greeks & Calibration Using PDEs & SDEs

Led by: **Mike Giles**, Professor Of Scientific Computing,
OXFORD-MAN INSTITUTE OF QUANTITATIVE
FINANCE
Uwe Naumann, Professor Of Computer Science,
RWTH AACHEN UNIVERSITY

Lévy, Sato & Hunt Processes Calibrated & Applied To Problems Of Capital Allocation & Risk Management Using The Theories Of Conic Finance & Nonlinear Expectations

Led by: **Dilip Madan**, Professor Of Mathematical Finance
ROBERT H. SMITH SCHOOL OF BUSINESS,
UNIVERSITY OF MARYLAND

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Main Conference: November 20-21 • Portfolio Optimization Summit: November 19 • Workshops: November 22
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Fax: +44 (0) 20 7017 7807 Email: info@icbi.co.uk

Friday November 22, 2013 (9 am - 5 pm)

Choose Between These In-Depth Technical Workshops

The Valuation Of Credit Derivatives



Led by: **John Hull, Maple Financial Professor Of Derivatives & Risk Management, JOSEPH L. ROTMAN SCHOOL OF MANAGEMENT, UNIVERSITY OF TORONTO**

John Hull is an internationally recognized authority on derivatives and risk management. His work has an applied focus. His areas of research have included the impact of stochastic volatility on the pricing and hedging of options, the valuation of interest rate and credit derivatives, the calculation of value at risk, and the evaluation of model risk. He was, with Alan White, one of the winners of the Nikko-LOR research competition for his work on the Hull-White interest rate model. In 1999 he was voted Financial Engineer of the Year by the IAFE and has won many teaching awards. He has written three books: "Risk Management and Financial Institutions" (now in its 3rd edition), "Options, Futures, and Other Derivatives" (now in its 8th edition) and "Fundamentals of Futures and Options Markets" (now in its 8th edition) which are widely used in trading rooms and classrooms throughout the world. Dr. Hull is co-director of Rotman's Master of Finance program and has also taught at York University, University of British Columbia, New York University, Cranfield University, and London Business School.

Estimating Default Probabilities

- Real world vs risk neutral default probabilities
- Using historical data
- Using credit spreads
- Scenario analysis vs valuation
- Valuation of credit default swaps
- Merton's model

Valuing Derivatives With Counterparty Credit Risk

- Choice of a discount rate: LIBOR vs OIS
- Estimation of CVA and DVA
- Wrong way risk
- Should an FVA adjustment be made

Correlation Models & CDO Valuation

- How copulas work
- How they are used in credit risk
- The Gaussian copula model and Basel II applications
- Application to CDOs
- Extensions of the basic model

Volatility & Correlation Modelling & Trading In Practice



Led by: **Bruno Dupire, Head Of Quantitative Research, BLOOMBERG**

Bruno Dupire joined Bloomberg L.P. in 2004. Prior to this he has headed the Derivatives Research teams at Société Générale, Paribas Capital Markets and Nikko Financial Products where he was a Managing Director. He is best known for having pioneered the widely used Local Volatility model (simplest extension of the Black-Scholes-Merton model to fit all option prices) in 1993 and subsequent stochastic volatility extensions. He is a Fellow and Adjunct Professor at NYU and he is in the Risk magazine "Hall of Fame" of the 50 most influential people in the history of Derivatives and Risk Management. He is the recipient of the 2006 "Cutting edge research" award of Wilmott magazine and was the recipient of the Risk Magazine "Lifetime Achievement" award for 2008.

Review Of Some Pressing Market Topics

- Building a good volatility surface
- Stochastic Local Volatility Models
- Calibration of local correlation
- Decomposition of Vega across strikes and maturities
- Joint calibration to SPX and VIX skew
- Options on double short ETF

- Heston model
- SABR model
- Bergomi model
- Stochastic Local Volatility Models

Building A Good Implied Volatility Surface

- Requirements: accurate, arbitrage free, robust and smooth
- First step: model fitting
- Second step: non parametric fitting of residuals
- Examples and applications

Review Of Some Pressing Market Topics

- Building a good volatility surface
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- Options on double short ETF

The Fundamentals Of Volatility

- The different kinds of volatility
- Market facts: volatility behavior and regimes
- Historical volatility estimation

- Implied volatility inter/extrapolation, Roger Lee's moment formula
- Study of empirical behavior market facts: volatility and regimes
- Historical volatility estimation
- Implied volatility inter/extrapolation, Roger Lee's moment formula
- Study of empirical behaviour

Modeling Correlation

- Estimating correlation: asynchronous and incomplete data
- Study of empirical facts
- nD Local Volatility model
- Stochastic covariance matrix modelling
- How to model stochastic correlation
- How to correlate jumps

Volatility Models Review

- Black-Scholes model
- Local Volatility Model
- Heston model
- SABR model
- Bergomi model
- Stochastic Local Volatility Models

Building A Good Implied Volatility Surface

- Requirements: accurate, arbitrage free, robust and smooth
- First step: model fitting
- Second step: non parametric fitting of residuals
- Examples and applications

Pricing With Correlation

- Break-even points in n dimensions
- Correlation skew: basket options and CDO examples
- Spread options and sleepers
- Pricing Mountain Range options
- Hedgeability with options on the components

Correlation Trading

- What can be locked and not locked
- Correlation swaps and options
- Correlation management
- Dispersion and diversification trades and arbitrage

Adjoint Methods For Option Pricing: Algorithmic Differentiation Tool Support For Greeks & Calibration Using PDEs & SDEs



Led by: **Mike Giles, Professor Of Scientific Computing, OXFORD UNIVERSITY MATHEMATICAL INSTITUTE**

Mike Giles then completed a PhD in Aeronautical Engineering at MIT where he became an Associate Professor before moving to Oxford in 1992. After working closely with Rolls-Royce for many years developing computational fluid dynamics techniques for turbomachinery, in 2005 he moved into the development of Monte Carlo methods in computational finance. In 2007 he was named "Quant of the Year" by Risk magazine, together with Paul Glasserman of Columbia Business School, for their "Smoking Adjoints" paper on the use of adjoints for the efficient calculation of Monte Carlo sensitivities. More recently, he was given the 2011 INFORMS Outstanding Simulation Publication Award for his 2008 Operations Research paper on "Multilevel Monte Carlo path simulation", which has led to a very active new area of research in Monte Carlo methods.



Led by: **Uwe Naumann, Professor Of Computer Science, RWTH AACHEN UNIVERSITY**

Dr. Naumann heads the research group "Software and Tools for Computational Engineering" (STCE) at RWTH. STCE specializes in numerical algorithms for high-performance scientific computing with applications in science, engineering, and finance. Particular focus is on adjoint methods in the context of large-scale nonlinear parameter estimation, calibration and both convex and non-convex optimization. This research is supported by the development of software for Algorithmic Differentiation that is actively used by a number of tier-1 banks. Dr. Naumann is a member of the Numerical Algorithms Group Ltd. and the author of the book "The Art of Differentiating Computer Programs. An Introduction to Algorithmic Differentiation" published by SIAM in 2011.

In computational finance it is very important to be able to compute the sensitivity of option prices to various input parameters. As well as being used to compute the so-called Greeks for risk hedging, they are also used for calibrating models to market prices. Adjoint methods are a well-established mathematical approach for efficiently computing sensitivities when there are multiple input parameters, but only one output quantity. In this case, the computational cost is similar to the original pricing calculation, whereas the standard linear sensitivity approach would have a cost proportional to the number of inputs. In this one-day course, we will discuss the mathematical foundations for adjoints methods, concentrating on the discrete level, not the differential level (i.e. finite difference and recurrence equations, rather than PDEs) and the use of algorithmic differentiation (AD) software to generate the adjoint code. We will then discuss its application to both finite difference methods for PDEs, and Monte Carlo methods for SDEs. Practical examples/exercises will be based on the AD software tools dco (derivative code compiler) and dco (derivative code by overloading) for C/C++ (Naumann: The Art of Differentiating Computer Programs. An Introduction to Algorithmic Differentiation. Software, Environments, and Tools 24, SIAM, 2012). Brief introductions to both tools will be followed by fully worked out case studies in computational finance.

1. Fundamentals Of Algorithmic Differentiation

- Generic black-box approach
- Algorithmic differentiation
- Adjoint for higher-level linear algebra
- Algorithmic differentiation software tools dco and dcc

2. PDEs & Finite Difference Methods: I

- Formulation of adjoint PDEs and finite difference methods
- Financial application
- Possible advantages for pricing calculation
- FDE sensitivities for linear explicit discretisations

3. PDEs & Finite Difference Methods: II

- Nonlinear implicit equations
- What can go wrong?
- Calibration using Fokker-Planck discretisation
- Greeks using Black-Scholes discretisation
- Local volatility example with dco/dcc

4. SDEs & Monte Carlo Methods: I

- Monte Carlo simulation and augmented state
- LRM and pathwise sensitivity approaches
- Adjoint pathwise approach
- Use of automatic differentiation software
- Storage / re-computation tradeoff
- Local volatility example with dco/dcc, revisited

5. SDEs & Monte Carlo Methods: II

- Multiple payoffs
- Binning and correlation Greeks
- Non-smooth payoffs

Lévy, Sato & Hunt Processes Calibrated & Applied To Problems Of Capital Allocation & Risk Management Using The Theories Of Conic Finance & Nonlinear Expectations



Led by: **Dilip Madan, Professor Of Mathematical Finance, ROBERT H. SMITH SCHOOL OF BUSINESS, UNIVERSITY OF MARYLAND**



Dilip Madan is Professor of Finance at the Robert H. Smith School of Business specializing in Mathematical Finance and currently serving as a consultant to Morgan Stanley and Meru Capital. He is Managing Editor of Mathematical Finance, and Co-editor of the Review of Derivatives Research. He held the 2006 von Humboldt award in applied mathematics, the 2007 Quant of the year award, the 2008 Medal for Science from the University of Bologna and the 2010 Eurandom chair.

The lectures will introduce Lévy, Sato and Hunt Processes along with methods for their calibration to option surfaces. This will be followed by an introduction to Conic finance and two price economies with applications to identifying capital requirements, determining the value of the taxpayer put option, introducing capital minimization as a new criteria for hedging and conservative value maximization as a new criteria for corporate objectives. The procedures will be illustrated in both static and dynamic contexts.

**Portfolio Optimization &
Quantitative Investment Summit
Tuesday November 19, 2013**

8.00	Registration & Coffee
8.40	Chairman's Opening Address
8.45	 The Sharpe Ratio Efficient Frontier Marcos Lopez de Prado, Head Of Quantitative Trading & Research HESS ENERGY TRADING COMPANY
9.25	Alpha Generation Strategies Exploring The Significance Of Time Horizon & Correlation In Alphas Yusuf Capar, Trading Manager, GELBER GROUP 
10.05	 Harvesting Alternative Risk Premium & Managing Risk Through Engineered Diversification Benjamin Bowler, Global Head Of Equity Derivatives Research BANK OF AMERICA MERRILL LYNCH
10.45	Morning Coffee
11.15	Exploring Potential Solutions To The Challenges End Investors Face In Achieving Diversification & Generating Alpha David Kuenzi, Director Of Risk Management & Quantitative Research AURORA INVESTMENT MANAGEMENT 
11.55	Panel Discussion The Search For Yield Optimizing The Risk & Return Balance Of Your Portfolio In The Current Environment Of Low Rates & Expensive Yield Sorina Zahan, Portfolio & Risk Manager, CORE CAPITAL MANAGEMENT  Niaz Haider, Director, Head Exotic Hybrid & Fund Derivatives Trading, CITIGROUP  David Kuenzi, Director Of Risk Management & Quantitative Research, AURORA INVESTMENT MANAGEMENT
12.35	Lunch + Meet The Speaker Lunch Tables Benjamin Bowler, BANK OF AMERICA MERRILL LYNCH Marcos Lopez de Prado, HESS ENERGY TRADING COMPANY <i>Plus more tbc!</i>
14.30	Basis Risk Exploring New Techniques For Managing Basis Risk & Minimising Replication Error
14.40	 Risk Based Portfolio Construction Levering Low-Risk Portfolios Lisa Goldberg Director Of Research, Center For Risk Management & Adjunct Professor Of Statistics UNIVERSITY OF CALIFORNIA, BERKELEY
15.20	Afternoon Tea
15.50	Using Algorithmic Strategies & Structured Products To Extract Risk-Premia In Various Markets Niaz Haider, Director, Head Exotic Hybrid & Fund Derivatives Trading CITIGROUP 
16.30	Dynamic Portfolio Optimization – Classical & Bayesian Approaches Petter Kolm, Director, Mathematics In Finance Masters Program COURANT INSTITUTE OF MATHEMATICAL SCIENCES
17.10	Liquidity Vs. Trading Edge Examining The Impact Of Constraints On Bank Balance Sheets For The Buy Side & How Increased Edge May Be Offset By Reduced Market Liquidity: What Does This Mean For Trading Strategies?
17.50	Chairman's Closing Remarks
18.00	Drinks Reception

**Main Conference – Day 1
Wednesday November 20, 2013**

8.00	Coffee & Registration			
8.30	Chairman's Opening Address			
8.40	 Ways Of Knowing & The Consequences For Financial Risk Management Emanuel Derman, Professor, COLUMBIA UNIVERSITY & Head Of Risk, PRISMA CAPITAL PARTNERS			
9.20	Guest Academic Address The FVA Debate John Hull, Maple Financial Professor Of Derivatives & Risk Management JOSEPH L. ROTMAN SCHOOL OF MANAGEMENT, UNIVERSITY OF TORONTO 			
10.00	 Examining The Future For Derivatives Where Is The Derivatives Market Going? Will People Still Trade Complex Derivatives In The Future? What Will The Job Of Quant Look Like In 5 Years' Time? Will Regulation Drive Innovation? Attilio Meucci, Chief Risk Officer, KKR Bruno Dupire, Head Of Quantitative Research, BLOOMBERG 			
10.45	Morning Coffee			
	Stream A Volatility Modelling & Trading Techniques	Stream B Valuation Adjustments	Stream C Pricing, Hedging & Trading Of Equity Derivatives	Stream D Commodities Trading & Risk Management
11.15	Examining Recent Volatility Market Dynamics Is The "New Normal" Of High Volatility Dead? Maneesh Deshpande BARCLAYS	Bounding Wrong-Way Risk In CVA Calculation Paul Glasserman COLUMBIA BUSINESS SCHOOL	Trading Equity Options Based On Fundamentals Euan Sinclair BLUEFIN TRADING	How Not To Trade Commodity Options Ilia Bouchouev KOCH SUPPLY & TRADING
11.55	Trading Strategies For A Low VIX Environment Bruno Dupire BLOOMBERG	Calculating CVA Across Portfolios Milena Imamovic-Tomasovic DEUTSCHE BANK	Dividends Overcoming The Challenges Of Consistently Modelling Options & Futures On Dividends	Trading Strategies In The Commodity Space From Calendar & Cross Commodity Spreads To ETFs & ETNs Helyette Geman UNIVERSITY
12.35	Lunch + Meet The Speaker Lunch Tables Jesper Andreasen, DANSKE BANK • Emanuel Derman, COLUMBIA UNIVERSITY Paul Glasserman, COLUMBIA BUSINESS SCHOOL • John Hull, UNIVERSITY OF TORONTO			
14.00	Model Independent Greeks Jesper Andreasen DANSKE BANK	An Efficient Simulation Model For CVA/ FVA Calculations Dongsheng Lu BNY MELLON	Should We Model Financial Correlations With A Stochastic Process? Gunter Meissner UNIVERSITY OF HAWAII	Modeling Natgas Intra-Month Spot (Daily Or 'Cash') Price Movements Ehud Ronn UNIVERSITY OF TEXAS AT AUSTIN
14.40	Index Options, Leveraged ETF Options & VIX Options Exploring The Linkages Among The Three Volatility Skews Roger Lee UNIVERSITY OF CHICAGO	Three Methods For Incorporating Trade Specific Calibration Into Path Consistent CVA/ FVA Simulation Alexander Sokol COMPATIBL	Stream C Quantitative Investment Strategies & Algorithmic Trading Price Impact & The Stability Of Markets Jean-Philippe Bouchaud CAPITAL FUND MANAGEMENT	Gold Examining Potential Drivers Of Gold Volatility Matt Tonelli CAPSTONE INVESTMENT ADVISORS
15.20	Afternoon Tea			
15.50	Panel Examining Volatility As An Alpha Generating Strategy Moderator: Paul Stephens CBOE John-Mark Piampiano PINE RIVER CAPITAL MANAGEMENT Matt Tonelli CAPSTONE INVESTMENT ADVISORS	CVA & CCR Model Validation: Challenges & Test Designs Chuang Yi BANK OF AMERICA MERRILL LYNCH	BIG DATA MASTERCLASS Session 1: 40 Minutes Managing Big Data Exploring How To Best Retrieve & Use Big Data Sets Rachel Schutt JOHNSON RESEARCH LABS	Agricultural Term Structure New Products & Volatility Modeling Alexandre St-Jacques Burke INFINIUM CAPITAL MANAGEMENT
16.30	Volatility Arbitrage Exploring How To Develop Volatility Arbitrage Strategies: What Works & What Doesn't? Anlong Li ALLSTON TRADING	Fully Incorporating Collateral Into Valuation Of OTC Derivatives Dealing With Unobservable Parameters & The Intricacies Of Legal Agreements	Session 2: 40 Minutes Quantifying Trading Behavior In Financial Markets Using Google Trends & Wikipedia Tobias Preis WARWICK BUSINESS SCHOOL	Incorporating FX Volatility Into Commodity Derivative Pricing Joe Chen NEXEN INC.
17.10	Cross-Asset Volatility Understanding How Volatilities Are Connected	Bergman, Piterberg & Beyond: Derivative Pricing Under Collateralization & Differential Rates Fabio Mercurio BLOOMBERG	Factor-Based Diversification Management Attilio Meucci KKR	Freight Modelling How To Optimize The Use Of Ships To Benefit From Price Spreads
17.50	Chairman's Closing Remarks	Chairman's Closing Remarks	Chairman's Closing Remarks	Chairman's Closing Remarks
18.00	The Global Derivatives USA 2013 Drinks Reception <i>Plus - Champagne Roundtables</i>			
	Ilia Bouchouev KOCH SUPPLY & TRADING	Maneesh Deshpande BARCLAYS	Helyette Geman UNIVERSITY OF LONDON	Roger Lee UNIVERSITY OF CHICAGO
				Euan Sinclair BLUEFIN TRADING



**Meet The Speaker Lunch Tables –
Summit & Main Conference Days 1 & 2**

This is your opportunity to have lunch with one of the world's leading quants! The lunch tables provide an informal environment where you can chat and ask questions as you enjoy lunch with a small group of your peers and one of the leading lights of the industry.



**Champagne Roundtables –
Main Conference Day 1**

The champagne roundtable discussion groups provide you with the ideal place to meet face-to-face with some of our key speakers, in small groups of about 10 people. You will be able to choose between the tables and discuss specific issues and ideas that have arisen over the course of the day in a highly interactive environment with a glass of champagne in hand!



**Drinks Receptions –
Summit & Main Conference Day 1**

Meet and network with hundreds of senior quants, traders, risk managers and academics from around the world. Share war stories, learn from the experience of your peers, reconnect with old friends and make some new ones.

Main Conference – Day 2 Thursday November 21, 2013

8.25	Registration & Coffee			
8.55	Chairman's Opening Address			
9.00	 New Insights Into Geopolitical Risk Examining Geopolitical Risk "Hot Spots" & The Implications For Trading Strategies & Risk Management Marvin Zonis, Professor Emeritus BOOTH SCHOOL OF BUSINESS, UNIVERSITY OF CHICAGO			
9.45	Guest Academic Address The Puzzle Of Index Option Returns  George Constantinides, Leo Melamed Professor Of Finance UNIVERSITY OF CHICAGO BOOTH SCHOOL OF BUSINESS			
10.30	Morning Coffee			
	Stream A Volatility Modelling & Trading Techniques	Stream B Modelling & Trading Fixed Income Products	Stream C Quantitative Investment Strategies & Algorithmic Trading	Stream D Regulation & Risk Management
11.00	Monetary Policy & Equity Market Volatility Michael Purves WEEDEN & CO	Asset Pricing Theory For Two Price Economies Dilip Madan UNIVERSITY OF MARYLAND	Panel Discussion Optimising Execution & Minimizing Market Impact Dan Penley SPOT TRADING Michael Sotiroopoulos BANK OF AMERICA MERRILL LYNCH Peter van Kleeff LAKEVIEW CAPITAL MARKET SERVICES	Liquidity Modeling & Risk Margin Calculations For OTC Derivatives Marco Avelaneda COURANT INSTITUTE, NYU
11.40	How To Efficiently & Cheaply Hedge Market Risk Using VIX Options Jeremy Wien JP MORGAN	Long Term Interest Rates Developing A Long Term Yield Curve Model	A Diffusion Model Of The Limit-Order Book Steven Shreve CARNEGIE MELLON UNIVERSITY	Examining The Impact Of New Collateral Requirements On The Market Atanas Goranov GUARDIAN LIFE
12.20	Lunch + Meet The Speaker Lunch Tables Dilip Madan, UNIVERSITY OF MARYLAND • Marvin Zonis, UNIVERSITY OF CHICAGO <i>Plus more tbc!</i>			
13.50	Macro Volatility Strategies Discovering Investment Opportunities In Cross-Asset Volatility Arthur Berd GENERAL QUANTITATIVE	Inflation Relative Value Between Inflation Swaps & Levels Implied By Inflation Bond Markets In The US, UK & Eurozone Markets & Associated Trading Strategies Dariusz Mirfendereski HSBC	Optimal Limit Order Execution In A Simple Model For Market Microstructure Dynamics Yuri Burlakov CHICAGO TRADING COMPANY	Regulatory Capital Optimization Optimizing Your Portfolio To Achieve Regulatory Capital Efficiency Arthur Maghakin GOLDMAN SACHS
14.30	Multi-Factor Unspanned Stochastic-Local Volatility Model Igor Halperin JP MORGAN	Variable Annuities Large Scale Hedging Projections Of Variable Annuity Blocks: Impacts On PnL Eoin Elliffe LINCOLN FINANCIAL GROUP	Advanced High-Frequency Trading Techniques For Determining Flash Crashes & Other Rare Events Irene Aldridge ABLE ALPHA TRADING	Exploring New Advances In Developing Model Free Estimation Techniques For Valuing Derivatives
15.10	Afternoon Tea			
15.40	Asymmetric Volatility Risk Management In A Low Volatility Environment Peter van Kleeff LAKEVIEW CAPITAL MARKET SERVICES	Stream B Modelling & Trading FX Derivatives Analysing The Impact Of QE On Global Currency Markets Steven Englander, CITI	Exploratory Trading Discovering How High Frequency Traders Could Parlay Their Speed Into Valuable Information	Adjoints In Finite Difference Methods Mike Giles OXFORD-MAN INSTITUTE OF QUANTITATIVE FINANCE
16.20	Volatility Estimation: Classical vs. Bayesian Methods Alireza Javaheri JP MORGAN	How Post-Crisis Correlations Can Drive Alpha In The FX Option World Jessica James COMMERZBANK	Portfolio Trading In The Presence Of Intraday Risk Michael Sotiroopoulos BANK OF AMERICA MERRILL LYNCH	Adjoint Algorithmic Differentiation For Computational Finance Uwe Naumann RWTH AACHEN UNIVERSITY
17.00	Forward Volatility Calibrating Models To Properly Capture Forward Volatility Dynamics	Events & FX Implied Volatility Understanding The Impact Of Events On FX Implied Volatility Saeed Amen NOMURA	Developing High Frequency Options Market Making Strategies & How Stochastic Control Theory Can Help Donggeng Gong MQT INVESTMENTS LLC	Systemic Risk Techniques For Using Options Prices As Systemic Risk Indicators
17.40	Chairman's Closing Remarks	Chairman's Closing Remarks	Chairman's Closing Remarks	Chairman's Closing Remarks
17.45	End Of Main Conference			

Don't Miss Our Brand New, Separately-Bookable Portfolio Optimization & Quantitative Investment Summit

Whether you are already using quantitative techniques in your investing and portfolio construction or are eager to learn how you can implement these exciting techniques in your firm, the summit will teach you how to successfully develop, implement and optimise quantitative investment strategies.

Attending will enable you to:

- Discover how quantitative investment approaches can benefit your firm
- Learn how to construct alpha generation strategies that make money
- Get insight from leading firms including Aurora Investment Management, Bank Of America Merrill Lynch, Citi, Gelber Group & Hess Energy Trading Company
- Explore how to optimise the risk and return balance of your portfolio in the current environment of low rates and expensive yield
- Examine risk based portfolio construction techniques
- Find out how to extract risk premia in various markets
- Hear about the future role of diversification in a time of growing correlation
- Network with senior portfolio and risk managers from leading buy and sell side firms

Don't miss your opportunity to discuss cutting-edge quantitative investment strategies with senior experts from leading buy and sell side firms and benefit from their expertise.

Maximise Your Learning At Our Full-Day, In-Depth Technical Workshops

Our workshops are in-depth, classroom-based learning sessions led by world-renowned experts in the field of quantitative finance.

Run in small groups so that each participant can receive one-on-one attention, workshops provide the perfect opportunity to ask questions and gain real understanding of complex topics, as the workshop leader examines the topic in far more depth than is possible in a 40 minute session.

Focused on specific areas so you can choose the workshop best suited to your area of interest, attending the workshop will enable you to learn concrete solutions to problems you face every day in your role that you can implement as soon as you are back in the office.

Class sizes are limited to facilitate greater learning so book your place now to avoid disappointment!

Keep Up To Date With The Latest News

While nothing can replace the opportunity to meet face to face, here at Global Derivatives, we believe social media is key to bridging the information and networking gap between our annual conferences. With that in mind, we would like to invite you to join us on our social media journey of discovery.



Our blog blogs.icbi-events.com/global-derivatives/ brings you interviews, original articles from some of our high profile guest speakers and a digest of news and views from around the web. Register for email updates or add our RSS feed to your reader.



Follow us on Twitter at @Global_Derivs or @MarieHoughton for the latest industry updates and live tweets from our events.



The Global Derivatives Trading & Risk Management LinkedIn group is a great place for you to connect with your peers, share ideas and discuss the latest news and industry developments.



You can watch interviews with key speakers and highlights from past events by logging on to the GlobalDerivativesTV YouTube channel youtube.com/GlobalDerivativesTV



Visit www.pinterest.com/icbi to see pictures and video footage from last year's conference, plus other market leading events organised by ICBI.

In-Depth Technical Workshops - Friday November 22, 2013

The Valuation Of Credit Derivatives

led by: **John Hull, Maple Financial Professor Of Derivatives & Risk Management**
JOSEPH L. ROTMAN SCHOOL OF MANAGEMENT, UNIVERSITY OF TORONTO

Volatility & Correlation Modelling & Trading In Practice

led by: **Bruno Dupire, Head Of Quantitative Research, BLOOMBERG**

Adjoint Methods For Option Pricing: Algorithmic Differentiation Tool Support For Greeks & Calibration Using PDEs & SDEs

led by: **Mike Giles, Professor Of Scientific Computing, OXFORD-MAN INSTITUTE OF QUANTITATIVE FINANCE**
& **Uwe Naumann, Professor Of Computer Science, RWTH AACHEN UNIVERSITY**

Lévy, Sato & Hunt Processes Calibrated & Applied To Problems Of Capital Allocation & Risk Management Using The Theories Of Conic Finance & Nonlinear Expectations

led by: **Dilip Madan, Professor Of Mathematical Finance**
ROBERT H. SMITH SCHOOL OF BUSINESS, UNIVERSITY OF MARYLAND

Tuesday November 19, 2013 Portfolio Optimization & Quantitative Investment Summit

08.00 Registration & Coffee

08.40

Chairman's Opening Address

The Sharpe Ratio Efficient Frontier

- The Sharpe ratio wrongly "translates" skewness and excess kurtosis into standard deviation
- As a result, it deflates the skill measured on "well-behaved" investments ...
- ... and it inflates the skill measure on "badly-behaved" investments
- Sharpe ratio estimates need to account for Higher Moments, even in a mean-variance framework



Marcos López de Prado, *Head Of Quantitative Trading & Research, HESS ENERGY TRADING COMPANY*
Before his current role, Marcos was Head of Global Quantitative Research at Tudor Investment Corporation. He joined Tudor from PEA6 Investments, where he was a Partner and ran the Statistical Arbitrage group at the Futures division. Prior to that, he was Head of Quantitative Equity Research at UBS Wealth Management, and a Portfolio Manager at Citadel Investment Group. Marcos has received several academic appointments, including Postdoctoral Research Fellow of RCC at Harvard University, Visiting Scholar at Cornell University, and Research Affiliate at Lawrence Berkeley National Laboratory. He is a scientific advisor to Enlightenment's Python projects (NumPy, SciPy), and a member of the editorial board of the Journal of Investment Strategies.

09.25

Exploring The Significance Of Time Horizon & Correlation In Alphas

- Time horizon in strategies
- Correlation between alphas
- The relationship between time horizon and correlations



Yusuf Capar, *Trading Manager, GELBER GROUP*
Yusuf Capar is responsible for strategic and operational leadership of algorithmic market making in Macro Trading Group at Gelber Group. Before taking this role Mr. Capar served as the President/Manager of Ketchum Trading focusing on market making in futures, equities and options. Mr. Capar holds a master's degree in business administration from Harvard Business School and two Bachelors of Science degrees from Massachusetts Institute of Technology.

10.05

Harvesting Alternative Risk Premium & Managing Risk Through Engineered Diversification

- Systematically harvesting market risk premium is an increasingly popular source of alpha
- An innovative way of managing risk is engineering strategies to have low cross-correlation
- This allows for efficient liquid alternative investment portfolios to be created at low cost
- Specific examples from the equity derivatives and listed volatility markets



Benjamin Bowler, *Managing Director & Head Of Global Equity Derivatives Research, BANK OF AMERICA MERRILL LYNCH*

Benjamin Bowler's team is focused on product and strategy research across global equity derivatives markets, and cross-asset volatility for efficient hedging and alpha generation. During his 15 years as a publishing research analyst, Ben has helped to pioneer financial market developments including trading volatility as an asset class, hedge fund replication, and the use of cross-asset risk in portfolio management through the creation of the iM's Global Financial Stress Index. The team is also the originator of numerous investable indices, which provide access to innovative alternative investment strategies utilizing derivatives and quantitative asset allocation.

10.45 Morning Coffee

11.15

Exploring Potential Solutions To The Challenges End Investors Face In Achieving Diversification & Generating Alpha

For real money investors, diversification has become more difficult to achieve and alpha is often packaged incongruently to their broader portfolios. We propose potential alternative investment solutions (through portfolio construction and product structuring) that fit squarely into pension fund Equity, Fixed Income, and Alternatives buckets.



David Kuenzi, *Managing Director of Risk Management and Quantitative Research, AURORA INVESTMENT MANAGEMENT*

Aurora is a \$10 billion alternative investment solutions provider. Until December 2008, David Kuenzi served as Head of Risk Management and Quantitative Research at Man Investments (Glenwood). Prior to joining Glenwood in 2003, Mr. Kuenzi was at Nuveen Investments where he held a number of roles, before which he was at Perini Capital Management. Mr. Kuenzi received an M.F.A. from the University of Iowa and an M.B.A. in Analytic Finance and an M.S. in Financial Mathematics from the University of Chicago. He is also a Chartered Financial Analyst. His articles have appeared in The Journal of Alternative Investments, The Journal of Portfolio Management, The Journal of Investing, The Journal of Performance Measurement and the "Cutting Edge" section of Risk.

11.55

Panel Discussion The Search For Yield

Optimizing The Risk & Return Balance Of Your Portfolio In The Current Environment Of Low Rates & Expensive Yield

- Are investors overinvested in equities?
- Are people building portfolios that are fundamentally more risky than they realise or have appetite for due to the current low volatility?
- How can derivatives help?



Sorina Zahan, *Portfolio & Risk Management, CORE CAPITAL MANAGEMENT*

Sorina Zahan joined Core Capital Management, an alternative asset management company established in 2004 in Chicago, at inception. She is a partner and serves the roles of Co-Portfolio Manager and Risk Manager. Besides her primary responsibilities of portfolio and risk management she also leads the firm's research team. Prior to joining Core Capital, Dr. Zahan worked as the strategy and risk analyst with PGA, a multi-strategy hedge fund in Chicago. Before 2002 Dr. Zahan was a Professor at the Technical University of Cluj-Napoca, Romania, with specialization in artificial intelligence and uncertainty management.



Niaz Haider, *Head Of Hybrids & Fund Exotics, CITIGROUP*

Niaz Haider is the head of hybrids and fund exotics at Citigroup where he is involved in developing and risk-managing quantitative investment strategies and derivatives on illiquid assets. Prior to joining Citigroup, he was the Americas head of fund derivatives for HSBC. Prior experiences include 3 years as a quantitative analyst at Bankers Trust and 6 years' experience at Societe-Generale/Constellation where he traded multi-correlation options book with embedded behavioral risks. Current interests include management of basis risks and portfolio replication strategies.

David Kuenzi, *Managing Director of Risk Management and Quantitative Research, AURORA INVESTMENT MANAGEMENT*
Bio available to the left

12.35

Lunch + Meet The Speaker Lunch Tables

14.00

Basis Risk

Exploring New Techniques For Managing Basis Risk & Minimising Replication Error

Speaker tbc

14.40

Levering Low-Risk Portfolios

- Investment strategies that lever low-risk portfolios have become popular in the aftermath of the financial crisis as investors search for strategies that offer both high return and limited risk exposure.
- By expressing a levered strategy in terms of primitive elements, we show how to assess the performance of levered low-risk strategies in different economic scenarios and we provide a framework for deciding whether to lever, and if so how.
- Borrowing and trading costs, including market impact, are key elements of the leverage decision.



Lisa Goldberg, *Director Of Research, Center For Risk Management & Adjunct Professor Of Statistics, UNIVERSITY OF CALIFORNIA, BERKELEY*

Lisa Goldberg is also Director at the Berkeley Research Group, where she provides consulting services in risk management and security valuation. Lisa is an inventor on four patents. She is the co-author of a book, *Portfolio Risk Analysis*, which was published by Princeton University Press in 2010, and more than forty published articles in mathematics and financial economics. Lisa is Book Review Editor for *Quantitative Finance*: she serves on the editorial board of *Financial Analysts Journal*, as Associate Editor for *Journal of Investment Strategies* and on the board of the *Journal of Investment Management* conference series.

15.20 Afternoon Tea

15.50

Using Algorithmic Strategies & Structured Products To Extract Risk-Premia In Various Markets

Niaz Haider, *Head Of Hybrids & Fund Exotics, CITIGROUP*
Bio available above

16.30

Dynamic Portfolio Optimization – Classical & Bayesian Approaches

- While the traditional view of portfolio construction, risk analysis, and execution is that these three functions are separable in practice they are not
- We present an integrated multi-period portfolio optimization model, that takes alpha, alpha decay, risk and market impact costs simultaneously into account
- We show that the multi-period portfolio optimization problem has a natural Bayesian dynamic model associated to it
- We discuss how new methods for estimation and simulation in Bayesian dynamic models can be brought to bear on realistic portfolio optimization problems

Petter Kolm, *Director Of The Mathematics In Finance Masters Program, COURANT INSTITUTE OF MATHEMATICAL SCIENCES, NEW YORK UNIVERSITY*

Petter Kolm is the Director of the Mathematics in Finance Masters Program and Clinical Associate Professor at the Courant Institute and the Principal of the Heimdall Group, LLC. Previously, he worked in the Quantitative Strategies Group at Goldman Sachs Asset Management. Petter co-authored the books *Financial Modeling of the Equity Market: From CAPM to Contingent (Wiley, 2006)*, *Trends in Quantitative Finance (CFA Research Institute, 2006)*, *Risk Portfolio Management and Optimization (Wiley, 2007)*, and *Quantitative Equity Investing: Techniques and Strategies (Wiley, 2010)*. He holds a Ph.D. in mathematics from Yale.

17.10

Liquidity Vs. Trading Edge

Examining The Impact Of Constraints On Bank Balance Sheets For The Buy Side & How Increased Edge May Be Offset By Reduced Market Liquidity: What Does This Mean For Trading Strategies?

Speaker tbc

17.50

Chairman's Closing Remarks

18.00

Drinks Reception

Wednesday November 20, 2013 Main Conference Day One

08.00

Registration & Coffee

08.30

Chairman's Opening Address

08.40

Ways Of Knowing & The Consequences For Financial Risk Management

- There are four modes of explaining the world: intuition, theories, models & statistics.
- Theories are attempts to describe the true nature of systems. Intuition provides their basis. Models are analogies. Statistics avoids causality.
- So far, all financial models are limited metaphors.
- Risk management should involve as many different models as possible, and no suspension of disbelief, since none of them will encompass the financial system itself.



Emanuel Derman, *Professor, COLUMBIA UNIVERSITY & Head Of Risk, PRISMA CAPITAL PARTNERS*

Emanuel Derman is the author of *My Life As A Qu* which he introduced the quant world to a wide audience. His latest book is *Models Behaving Badly: Why Confusing Illusion with Reality Can Lead to Disasters, On Wall Street and In Life*. He started out as a theoretical physicist, doing research on unified theories of elementary particle interactions. At AT&T Bell Laboratories in the 1980s he developed programming languages for business modeling. From 1985 to 2002 he worked on Wall Street, running quantitative strategies research groups in fixed income, equities and risk management, and was appointed a managing director at Goldman Sachs & Co. in 1997. The financial models he developed there, the Black-Derman-Touy interest rate model and the Derman-Kani local volatility model, have become widely used industry standards. Among his many awards and honors, he was named the SunGard/IAE Financial Engineer of the Year in 2000. He has a PhD in theoretical physics from Columbia University and is the author of numerous articles in elementary particle physics, computer science, and finance.

09.20

The FVA Debate

- Theory vs. practice in derivatives pricing
- Accountants vs. traders
- Unintended consequences of FVA
- Private value vs. fair market value
- Best practice proposal

John Hull, *Maple Financial Professor Of Derivatives & Risk Management, JOSEPH L. ROTMAN SCHOOL OF MANAGEMENT, UNIVERSITY OF TORONTO*

Bio available on pg. 2

10.00

Panel Discussion

Exploring The Market Impact Of Regulation

Examining The Impact Of Clearing, Collateral & Capital Constraints On Risk, Volatility, Liquidity & Interconnectedness In The Market



Attilio Meucci, *Chief Risk Officer, KKR*

Attilio Meucci is also adjunct professor at the Master's in Financial Engineering - Baruch College - CUNY, where he teaches the Intensive Advanced Risk and Portfolio Management bootcamp. Previously, Attilio was Chief Risk Officer at Kepos Capital and prior to that he was the head of research at ALPHA. Bloomberg LP's portfolio analytics and risk platform: a researcher at POINT, Lehman Brothers' portfolio analytics and risk platform: a trader at the hedge fund Relative Value International; and a consultant at Bain & Co, a strategic consulting firm. Concurrently he taught at Columbia, NYU-Courant, and Bocconi University. Attilio is the author of *Risk and Asset Allocation - Springer* and numerous other publications in practitioner and academic journals. He holds a PhD in Mathematics from the University of Milan and he is CFA charterholder.

Bruno Dupire, *Head Of Quantitative Research, BLOOMBERG*

Bio available on pg. 2

10.45 Morning Coffee

Stream A: Volatility Modelling & Trading Techniques

11.15

Examining Recent Volatility Market Dynamics Is The "New Normal" Of High Volatility Dead?



Maneesh Deshpande, *Managing Director & Head Of Americas Equity Derivatives Strategy, BARCLAYS CAPITAL*

Maneesh S. Deshpande joined Barclays Capital in September 2008. He was part of the team which has been ranked No. 1 in Institutional Investor's annual survey from 2007-2010 in the Equity Derivatives/Equity Linked category. Prior to Barclays Capital, Maneesh held a similar role at Lehman Brothers since 2007. He joined Lehman Brothers from Goldman Sachs, where he established and ran its Systematic Portfolio trading desk. Prior to that, Maneesh was the head of the Principal Trading desk at Morgan Stanley Japan and was the head of the U.S. Interest Rate Options Trading desk at BNP. Maneesh earned a Ph.D. in Theoretical Physics from the University of Pennsylvania.

11.55

Trading Strategies For A Low VIX Environment

Bruno Dupire, *Head Of Quantitative Research, BLOOMBERG*

Bio available on pg. 2

Wednesday November 20, 2013 Main Conference Day One

12.35

Lunch + Meet The Speaker Lunch Tables

14.00

Model Independent Greeks

- Minimum variance Greeks: delta, gamma, and theta
- Short maturity expansion of option prices and their Greeks
- If no jumps, at-the-money minimum variance delta and gammas only depend on the volatility smile
- The effect of stochastic volatility for out-of-the-money options
- Options on volatility and the MV theta
- The effect of jumps on Greeks
- Empirical investigations



Jesper Andreasen

Global Head Of Quantitative Research

DANSKE BANK

Jesper Andreasen heads the Quantitative Research Department at Danske Bank in Copenhagen. Prior to this, Jesper has held positions in the quantitative research departments of Bank of America, Nordex, and General Re Financial Products. Jesper's research interest includes: term structure modeling, volatility smiles, and numerical methods. In 2001 Jesper received Risk Magazine's Quant of the Year award.

14.40

Index Options, Leveraged ETF Options & VIX Options:

Exploring The Linkages Among The Three Volatility Skews

- What can an index /ETF volatility skew tell us about the leveraged ETF volatility skew?
- What can an index volatility skew tell us about the VIX volatility skew?
- Explicit asymptotic formulas



Roger Lee

Associate Professor Of Mathematics

UNIVERSITY OF CHICAGO

Roger Lee is Associate Professor of Mathematics at the University of Chicago, where he has taught in the financial mathematics MS program since 2004. Previously he held postdoctoral positions at Stanford University and NYU, and worked in Global Equity Linked Products at Merrill Lynch in New York. His recent publications address topics in robust pricing/hedging, asymptotics of implied volatility, and trading of realized volatility. He has a PhD from Stanford University.

15.20

Afternoon Tea

15.50

Panel Discussion

Examining Volatility As An Alpha Generating Strategy



Paul Stephens, Vice President

CHICAGO BOARD OPTIONS EXCHANGE

Paul Stephens is Head of Institutional End-User Business Development for the Chicago Board Options Exchange. He currently focuses on index-related products such as S&P 500 options (SPX), the most active U.S. index option, and options on the CBOE Volatility Index (VIX), the world's benchmark for market volatility. The CBOE is the creator of listed options and the largest U.S. options exchange. Mr. Stephens has over twenty years industry experience in options, futures and other derivative securities. Previously Mr. Stephens was a Senior Staff Instructor with The Options Institute division of the CBOE. He also taught classes for the University of Chicago's Masters in Financial Mathematics program. Before arriving at the CBOE, he served as Financial Derivatives Instructor for the global investment bank S.C. Warburg. Mr. Stephens has also been a floor broker at the Chicago Mercantile Exchange for clients of Resco, Inc.



John-Mark Piampiano, Portfolio Manager, Global Volatility PINE RIVER CAPITAL MANAGEMENT

Prior to joining Pine River, John-Mark was a Principal at Engineered Portfolio Partners from 2009 to 2010 where he traded a variety of volatility strategies. From 2007 to 2009, John-Mark was a Senior Portfolio Manager at H&B Investments in Dallas where he was responsible for the global volatility business including portfolio trading, risk management and staffing. While he was at H&B, he implemented a wide array of proprietary trading strategies to expand the scope of the volatility portfolio. From 2000 to 2002, John-Mark served as an Equities Derivative Trader at K&B Financial Products in New York, where he was the primary market maker for a variety of exchange-listed equity options. From 1999 to 2000, he served as a Trader at Hess Energy Trading Company where he traded natural gas futures, options, basis swaps and other derivatives.



Matthew Tonelli, Chief Risk Officer

CAPSTONE HOLDINGS GROUP

Matt Tonelli began his career in 1997 as a U.S. Equity and Index derivatives proprietary trader on the CBOE and the AMEX. For 12 years, Matt managed derivative portfolios across every asset class. He was Capstone's Head of Fixed Income and Foreign Exchange for 3 years before he became the Global Chief Risk Officer. Capstone has over \$1B in AUM. Capstone's flagship fund, Capstone Volatility Master, focuses on multi-strat volatility arbitrage.

16.30

Exploring How To Develop Volatility Arbitrage Strategies: What Works & What Doesn't?



Anlong Li

Head Of Quantitative Volatility Group

ALLSTON TRADING

Prior to his current role, Anlong Li was a Partner and the Director Of Financial Engineering at Spot Trading. He has over 20 years of trading and research experience in derivatives. Prior to joining Spot, he was Head of Quantitative Analytics for Emerging Market, Credit and Principal Mortgage Trading at Barclays Capital. Managing Director and Head of Research at XL Weather and Energy. Director of Quantitative Research at Citicad Investment Group. Senior Vice President and U.S. Head of Structured Product Trading at ABN AMRO. First Vice President and Head of Derivatives Modeling at First Chicago. Vice President of Derivatives Research at Salomon Brothers and Associate on the Swap Desk at Lehman Brothers. Anlong also served as Research Fellow at the Federal Reserve. Adjunct Professor in the Financial Engineering Program at Columbia University, and Adjunct Professor at the Illinois Institute of Technology. He received his PhD in Operation Research from Case Western Reserve University. Many of his publications can be found at <http://issm.com/author16402>.

17.10

Cross-Asset Volatility

Understanding How Volatilities Are Connected

Speaker Ibc

17.50

Chairman's Closing Remarks

18.00

The Global Derivatives USA 2013 Drinks Reception + Champagne Roundtables

Stream B: Valuation Adjustments

11.15

Bounding Wrong-Way Risk In CVA Calculation

- A key challenge in CVA is accurate modeling of dependence between market exposure and counterparty credit risk
- We present a practical method to bound the potential impact of this dependence
- The method allows combination of separate models for market and credit
- It also interpolates from no wrong-way risk to worst-case wrong-way risk



Paul Glasserman

Jack R. Anderson Professor Of Business

COLUMBIA BUSINESS SCHOOL

Paul Glasserman is the Jack R. Anderson Professor of Business at Columbia Business School, where he specializes in derivatives, risk management, and portfolio selection. He has previously held visiting positions at the U.S. Treasury's Office of Financial Research, the Federal Reserve Bank of New York, NYU, and Princeton. He currently serves as research director of the Program for Financial Studies at Columbia. He has received several awards for his research, and he is a past recipient of Risk magazine's Quant of the Year award.

11.55

Calculating CVA Across Portfolios

Milena Imamovic-Tomasovic

Head Of CVA & Funding Methodology

DEUTSCHE BANK

12.35

Lunch + Meet The Speaker Lunch Tables

14.00

An Efficient Simulation Model For CVA/ FVA Calculations

- CVA/ FVA basics and calculations
- CSA netting, correlations and random numbers
- Credit migrations and credit simulations
- Greeks, incremental risk and wrong way risk



Dongsheng Lu

Managing Director & Head Of Quantitative Research

BNY MELLON

Dongsheng Lu is currently Managing Director and Head of Quantitative Research at BNY Mellon's Derivatives Trading Unit. His group is responsible for developing derivatives trading/pricing models and building trading/risk management infrastructure for interest rate, equity and foreign exchange derivatives trading business. Before joining BNY Mellon in 1998, he did two years of postdoctoral research at University of Pennsylvania on quantum mechanical calculations and molecular simulations of biological enzymes. He holds a PhD in Theoretical Chemistry from the Ohio State University.

14.40

Reexamining The Fundamentals Of Modeling CVA

For Fully Collateralized Counterparties

- CVA of fully collateralized counterparties is determined by the change of uncollateralized exposure during MPR (a short period preceding closeout), rather than its absolute magnitude
- The author proposes model calibration for fully collateralized CVA which specifically targets MPR, and is fundamentally different from the calibration for the uncollateralized case
- Several key modifications to the standard formula for obtaining collateralized exposure from uncollateralized are also proposed



Alexander Sokol

Founder

COMPATIBL

Alexander Sokol is founder of Numerix, a leading derivatives and risk analytics vendor, and Compatibl, a software integrator and consultancy specializing in CVA/FVA and Basel III/IV. Alexander is the author of the exposure sampling method of modeling wrong way risk (Sokol, 2010), and co-author of a model for CVA of systematically important counterparties (Pykhtin, Sokol, 2011). He holds a PhD from the Landau Institute for Theoretical Physics.

15.20

Afternoon Tea

15.50

CVA & CCR Model Validation: Challenges & Test Designs

- CVA/ CCR system
- Validation process
- Validation requirements
- Challenges of validating CVA/ CCR system
- Implementation test
- Stress/ convergence test
- Test designs



Chuang Yi, Director

BANK OF AMERICA MERRILL LYNCH

Prior to his current role, Dr. Chuang Yi was a Vice President in Risk Analytics at Bank of America Merrill Lynch, responsible for validation of front office Credit Value Adjustment (CVA) models. Prior to that, he has worked in Royal Bank of Canada and Bank of Montreal on various pricing and risk models including: CVA model development, Counterparty Credit Risk, Debt Specific Risk & Incremental Risk Charge, CDS-Bond Basis, etc. He has several journal publications in the area of quantitative finance. Chuang holds a PhD in Financial Mathematics from McMaster University.

16.30

Fully Incorporating Collateral Into Valuation Of OTC Derivatives: Dealing With Unobservable Parameters & The Intricacies Of Legal Agreements

Speaker Ibc

17.10

Bergman, Piterberg & Beyond: Derivative Pricing Under Collateralization & Differential Rates

- Review of pricing under collateralization and unique funding rate
- Introducing different rates for lending and borrowing
- Solving the buyer and seller pricing problems
- Characterizing buyer and seller derivative prices
- Examples of payoffs admitting explicit prices
- Numerical examples



Fabio Mercurio, Head Of Derivatives Research

BLOOMBERG

Fabio is head of Derivatives Research at Bloomberg LP, New York. Previously, he was head of Financial Engineering at Banca IMI, Milan. He is also adjunct professor at NYU. Fabio has jointly authored the book "Interest rate models: theory and practice" and published extensively in books and international journals, including 13 cutting-edge articles in Risk Magazine. Fabio holds a BSc in Applied Mathematics from the University of Padua, Italy, and a PhD in Mathematical Finance from the Erasmus University of Rotterdam, The Netherlands.

17.50

Chairman's Closing Remarks

18.00

The Global Derivatives USA 2013 Drinks Reception + Champagne Roundtables

Stream C: Pricing, Hedging & Trading Of Equity Derivatives

11.15

Trading Equity Options Based On Fundamentals

Option traders normally look at volatility forecasts based on the time series of stock returns. Here we focus instead on the fundamental information contained in common accounting ratios to construct equity volatility portfolios.



Euan Sinclair, Trader, BLUEFIN TRADING

Dr Euan Sinclair is an option trader with over fifteen years of professional trading experience. He has traded options on indices, stocks, commodities and interest rate products. He currently works on strategy design and is the risk manager at Bluefin Trading. He holds a PhD in theoretical physics from the University of Bristol and has written two books, "Volatility Trading" and "Option Trading", both published by Wiley.

11.55

Overcoming The Challenges Of Consistently Modelling Options & Futures On Dividends

Speaker Ibc

12.35

Lunch + Meet The Speaker Lunch Tables

14.00

Should We Model Financial Correlations With A Stochastic Process?

- What are financial correlations and financial correlation risk?
- Status quo of current modeling of financial correlations
- Can we apply statistical correlation approaches as Pearson, Spearman and Kendall?
- How do financial correlations behave in the real world?
- Should we model financial correlation with a stochastic process? If so, which process?
- Can we hedge financial correlation risk?



Gunter Meissner, Professor Of Finance,

Director Of MFE Program, UNIVERSITY OF HAWAII

After a lectureship in mathematics and statistics at the Economic Academy Kiel, Gunter Meissner PhD joined Deutsche Bank in 1990, trading interest rate futures, swaps and options in Frankfurt and New York. He became Head of Product Development responsible for originating algorithms for new derivatives products. Gunter Meissner was Head of Options at Deutsche Bank Tokyo. Gunter was Professor of Finance at Hawaii Pacific University. Currently, he is Founder and CEO of Cassandra Capital Management, www.cassandracap.com, and Adjunct Professor of Mathematical Finance at NYU Courant. Gunter Meissner has published numerous papers on derivatives in international journals and is author of 5 books, including his forthcoming book "Correlation Risk - An Applied Guide including the Basel III Correlation Framework" (John Wiley).

Stream C: Quantitative Investment Strategies & Algorithmic Trading

14.40

Price Impact & The Stability Of Markets

- How much do trades impact prices?
- Distinguishing simple orders and metaorders
- The square-root impact law: empirical facts and theoretical puzzles
- A simple argument and a numerical (Agent Based) model
- The true cost of trading and some consequences
- Vanishing liquidity and market fragility



Jean-Philippe Bouchaud, Chairman

CAPITAL FUND MANAGEMENT

Jean-Philippe Bouchaud obtained his PhD in Physics from the Ecole Normale Supérieure in Paris. He was then appointed by the CNRS until 1992. After a year spent in the Cavendish Laboratory (Cambridge), he joined the Service de Physique de l'Etat Condensé (CEA-Saclay), where he worked on the dynamics of glassy systems and on granular media. His work in finance includes extreme risk models, agent based simulations, market microstructure and price formation. He founded the company Science & Finance in 1994 that merged with Capital Fund Management (CFM) in 2000.

Wednesday November 20, 2013 Main Conference Day One

15.20 Afternoon Tea

15.50

BIG DATA MASTERCLASS

Session 1: 40 Minutes

Managing Big Data

Exploring How To Best Retrieve & Use Big Data Sets

Rachel Schutt

Senior Research Scientist

JOHNSON RESEARCH LABS

Session 2: 40 Minutes

Quantifying Trading Behavior In Financial Markets Using Google Trends & Wikipedia

- Using big data to develop efficient trading strategies.
- Can we anticipate large scale economic decision making captured in big data?
- Big data analytics: Increasing the signal to noise ratio



Tobias Preis

Founder & Managing Director

ARTEMIS CAPITAL ASSET MANAGEMENT

Tobias Preis is a German physicist and founder of the Artemis Capital Asset Management GmbH. He performed complex systems research with H. Eugene Stanley at Boston University and Dirk Helbing at ETH Zurich. He was awarded a Ph.D. in physics from the Johannes Gutenberg University of Mainz and was a junior member of the Gutenberg Academy.

His current research focuses on quantifying and modeling financial market fluctuations. In addition, he has made contributions to general-purpose computing on graphics processing units in statistical physics and econophysics. Recently, he headed a research team which provided evidence that search engine query data and stock market fluctuations are correlated. More details on his research can be found at www.tobiaspreis.de

17.10

Factor-Based Diversification Management

- Traditional risk parity: marginal contributions
- New risk parity: diversification distribution
- Minimum-torsion bets
- Effective number of bets
- Factor-based risk-return-diversification frontier

Attilio Meucci, Chief Risk Officer, KKR

Bio available on pg. 5

17.50

Chairman's Closing Remarks

18.00

The Global Derivatives USA 2013 Drinks Reception + Champagne Roundtables

Stream D: Commodities Trading & Risk Management

11.15

How Not To Trade Commodity Options

- Financialisation of commodities: volatility side-effects
- Volatility risk premium and hidden risks
- Skew arbitrage, and pricing vanna
- Structural changes in volatility term-structure
- Buying seasonal lottery tickets
- Volatility relative value and implied correlation
- New volatility trading landscape



Ilija Bouchoev

Managing Director, Head Of Derivatives

KOCH SUPPLY & TRADING

For the last fifteen years Ilija Bouchoev has been managing the global derivatives business for Koch Industries, the world second largest privately held company. Koch's derivatives group is one of the leading quantitative traders. The group operates globally with trading desks in New York, Houston, Wichita (Kansas), Geneva, and Singapore. This team has pioneered a number of unique derivatives instruments and been recognized as a leading quantitative trader in commodities. Ilija has a PhD in Applied Mathematics.

11.55

Trading Strategies In The Commodity Space

From Calendar & Cross Commodity Spreads To ETFs & ETNs

- Taking advantage of the contango and backwardation shapes of the forward curve
- Trading strategies backed by physical assets in natural gas and ags
- Mispricing opportunities in the ETFs and the ETNs



Helyette Geman

Director Commodity Finance Centre

UNIVERSITY OF LONDON & ESCP EUROPE

Professor Geman has been a scientific advisor to major financial institutions, energy and mining companies as well as major commodity houses for the last 16 years. She was previously the Head of Research at Caisse des Depots in Paris and first President of the Bachelor Finance Society. Prof Geman has widely published papers in top international

finance Journals including the Journal of Finance, Mathematical Finance, Journal of Financial Economics. Her research includes interest rates and catastrophic insurance, commodity spot prices and forward curve modeling. Prof Geman was named in 2004 in the Hall of Fame of Energy Risk and received in July 2008 the medal for Sciences of the Institute for Advanced Studies of the University of Bologna for the CGMY model. Her book Commodities and Commodity Derivatives: Energy, Metals and Agriculturals has become the reference in the field. Prof Geman is a Member of the Board of the UBS-Bloomberg Commodity Index and a Scientific Advisor to the European Commission.

12.35

Lunch + Meet The Speaker Lunch Tables

14.00

Modeling Natgas Intra-Month Spot (Daily Or 'Cash') Price Movements

- Objective: Model daily NG prices in relation to contemporaneous monthly NG prices, to attain improved valuation/hedging
- Rationale: Provide valuation/hedging of assets contingent on daily NG prices – including in particular volatility – as of date-0, long before daily (or balance-of-month) prices come into existence
- Examples of assets contingent on daily prices:
 - Tolling agreements
 - Power plants
 - Pipelines
 - Strip of daily options
 - Storage facilities using intra-month optimization
- Summary



Ehud I. Ronn

Professor Of Finance

UNIVERSITY OF TEXAS AT AUSTIN

Ehud I. Ronn received his Ph.D. from Stanford University. Prior to joining the University of Texas in July 1988, Dr. Ronn was a faculty member at the University of California, Berkeley, and the University of Chicago. During 1991 – 93, Dr. Ronn served as Vice President, Trading Research Group at Merrill Lynch & Co. Dr. Ronn was the founding director of the Center for Energy Finance Education and Research at the McCombs School of Business, University of Texas from 1997 – 2009. From Jan. 2010 to Feb. 2011, Prof. Ronn was Commodity Market Modeling practice area manager at Morgan Stanley & Co. In Nov. 2004, Dr. Ronn was selected by Energy Risk to the "Energy Risk Hall of Fame."

14.40

Examining Potential Drivers Of Gold Volatility

Matthew Tonelli

Chief Risk Officer

CAPSTONE HOLDINGS GROUP

Bio available on pg. 6

15.20 Afternoon Tea

15.50

Agricultural Term Structure

New Products & Volatility Modeling

- Short-dated options
- Calendar spread options
- Trading and pricing these new instruments
- Customer behavior changes affected by electronic markets
- Asset class volatility, the new normal?



Alexandre St-Jacques Burke

Senior Trader

INFINIUM CAPITAL MANAGEMENT

Alexandre has served as risk manager and head of trading for a large commercial commodity trading firm. He is currently a senior trader at Infinium Capital Management, focusing on relative value and global arbitrage. He received a B. Comm in finance from the John Molson School of Business and also holds the Financial Risk Manager designation from GARP.

16.30

Incorporating FX Volatility In Commodity Spread Option Pricing

- Applications in commodity shipment across-currency border: gas transport, oil and LNG transport/shipment etc
- Commodity spread option pricing incorporates foreign exchange volatility
- A simple closed-form – an extension of Kirk's formula
- The applicability of Samuelson Effect and long-term commodity strategies



Joseph Chen

Chief, Market Analytics

NEXEN INC.

Joseph Chen has ten plus years in option pricing, market analytics, quantitative modeling, asset valuation, portfolio optimization, and risk management in commodity industry (oil, gas, and power). He has previously held analytical roles at Duke Energy and Williams Energy.

17.10

Freight Modelling

How To Optimise The Use Of Ships To Benefit From Price Spreads

Speaker tbc

17.50

Chairman's Closing Remarks

18.00

The Global Derivatives USA 2013 Drinks Reception + Champagne Roundtables

Thursday November 21, 2013 Main Conference Day Two

08.25

Registration & Coffee

08.55

Chairman's Opening Address

09.00

New Insights Into Geopolitical Risk

Examining Geopolitical Risk "Hot Spots" & The Implications For Trading Strategies & Risk Management



Marvin Zonis

Professor Emeritus

BOOTH SCHOOL OF BUSINESS, UNIVERSITY OF CHICAGO

At Chicago Booth, Prof. Zonis has taught courses on International Political Economy, Leadership, and E-Commerce. He is a member of the Board of Directors of the Institute for Psychoanalysis, Chicago. He is a member of the Board of Directors of the Foundation Elais Unis, Paris. What unites these activities is his unique awareness of the intersections of politics, economics, emergent technologies, emotions and leadership. Prof. Zonis has written extensively on globalization, digital technologies, emerging markets, Middle Eastern politics, the oil industry, Russia, and U.S. foreign policy. He is a leading authority on the Middle East, and has spent the last 50 years studying the volatile mix of Islam, terrorism, and the Middle East. His writings have been published, among other places, in The Financial Times, The New York Times, The International Herald Tribune and Chief Executive Magazine. His latest book is Risk Rules: How Local Politics Threaten the Global Economy (May 2011). His other books include The Kimchi Matters: Global Business and Local Politics in a Crisis Driven World and The Eastern European Opportunity. Prof. Zonis has appeared on numerous network television news programs, including Nightline, and CNN's Larry King Live, as well as a commentator on National Public Radio. He was educated at Yale University, Harvard Business School, Massachusetts Institute of Technology and the Institute for Psychoanalysis, Chicago.

09.45

Guest Academic Address

The Puzzle Of Index Option Returns

- A long-standing puzzle with index options is the high implied volatility of OTM puts
- Crisis-related factors explain away the alphas of OTM index puts
- Volatility jumps and price jumps are the most successful crisis related factors
- Option liquidity also contributes towards explaining away the alphas
- The factors work even when their premia are constrained to equal the corresponding premia in the cross-section of equities



George Constantinides

The Leo Melamed Professor Of Finance

UNIVERSITY OF CHICAGO, BOOTH SCHOOL OF BUSINESS

George Constantinides is a leader of academic finance, an expert in portfolio theory, asset pricing, derivatives pricing, and capital markets behavior. Widely published and a frequent speaker and editor, he is former president of the American Finance Association and the Society for Financial Studies and member of Dimensional's boards of directors of the US mutual funds, among many other professional affiliations. A graduate of Oxford University in England and Indiana University, he has also visited at Harvard University.

10.30

Morning Coffee

Stream A: Volatility Modelling & Trading Techniques

11.00

Monetary Policy & Equity Market Volatility

- Aggressive monetary policy has defined equity market behavior in the United States and other economies for several years. While we may have seen a peak in amount of QE, the after effects of the Fed's aggressive policy will be felt for several years
- The relationship between risk free interest rates and volatility is reviewed, as is the relationship between currency volatility and equity market volatility
- The tail risk discussion has traditionally been defined by deflationary shocks over the last five years. Going forward, the ability to gracefully exit these aggressive monetary experiments (in the United States and elsewhere) against a back drop of an over leveraged developed market economies will emerge as one of the dominant tail risk themes



Michael Purves

Chief Global Strategist & Head Of Derivatives Research

WEEDEN & CO

In his role, Michael develops actionable trade ideas and hedging strategies using listed derivatives. Drawing on more than two decades of experience, he integrates fundamental analysis and trading dynamics with options to generate ideas with optimized risk/return profiles. Michael is well recognized for his "Wolf Market" framework and his timing and understanding of precious metals. Prior to joining Weeden & Co, he held similar posts at BGC Financial and Pall Capital. Previously, Michael was a founding partner at Hudson Fairfax, an Indian long-short hedge fund, where he was in charge of the short portfolio, market hedging and macro economic analysis. He also worked at Compass Group where he ran equity analysis for their flag ship Latin American focused hedge fund. Before this, Michael was an investment banker at S.G. Warburg (now UBS), Merrill Lynch and RBC Capital Markets and served as Acting CFO of Fusion Telecommunications, a publicly traded emerging markets telecommunications company. Additionally, Michael has served on the Advisory Board of three technology companies and has been a consultant to a prominent global macro hedge fund. Michael holds an MBA from the Wharton School of Business. He is frequently interviewed in the financial media, including Bloomberg, CNBC and the Wall Street Journal.

Thursday November 21, 2013

Main Conference Day Two

11.40

How To Efficiently & Cheaply Hedge Market Risk Using VIX Options



Jeremy Wien, Head Of VIX Trading
JP MORGAN

Jeremy Wien joined JPM in March 2012 to build out their customer VIX business. JPM's VIX market share grew from #7 in 2011 to #2 in 2012. Previously, Jeremy started and built the VIX business at Société Générale. In 2007, as the first dedicated VIX trader on Wall Street. By the time of his departure from Soc Gen in 2010, SG had attained #1 market share in VIX trading. Jeremy has appeared a number of times on CNBC's Fast Money and on Bloomberg television. Jeremy began his career on the index volatility trading desk at Goldman Sachs and worked on the buy-side at Peak6 Capital Management in 2010/2011 before re-joining the sell-side. Jeremy graduated Cum Laude from Georgetown University's McDonough School of Business in 2006.

12.20

Lunch + Meet The Speaker Lunch Tables

13.50

Macro Volatility Strategies

Discovering Investment Opportunities In Cross-Asset Volatility



Arthur Berd
Founder & Chief Executive Officer
GENERAL QUANTITATIVE LLC

Arthur M. Berd is the Founder and CEO of General Quantitative LLC, an emerging diversified financial services firm whose GO Asset Management division focuses on systematic volatility-driven strategies, while GO

Analytics division offers institutional advisory services in portfolio and tail risk management, and GO Technologies division, in partnership with SmartQuant Ltd., produces end-to-end infrastructure for developing, testing, and trading of algorithmic strategies. He also founded and edits the Journal of Investment Strategies. Earlier, Arthur was the Head of Macro Volatility Strategies at Capital Fund Management, and held senior strategy and research positions at BlueMountain Capital Management, Lehman Brothers and GSAM.

14.30

Multi-Factor Unspanned Stochastic-Local Volatility Model

- Unspanned volatility and Linearity-Generating Processes
- Adding local volatility
- Mapping onto a non-linear Quasi-Birth-Death process
- Calibration and computational methods



Igor Halperin
Executive Director, Quantitative Research
JP MORGAN

Igor Halperin is an Executive Director in Quantitative Research at JP Morgan. His interests include derivatives pricing, incomplete market models, and statistical methods. He is also an adjunct professor at the department of Finance and Risk Engineering at NYU Poly. Igor has a Ph.D. in Theoretical High Energy Physics.

15.10

Afternoon Tea

15.40

Asymmetric Volatility Risk Management In A Low Volatility Environment

- Term structure risk
- Skew risk
- Event risk and wing exposure



Peter van Kleef
Partner
LAKEVIEW CAPITAL MARKET SERVICES

Prior to his role at Lakeview, Peter managed significant hedge fund type investment portfolios and quantitative trading departments for among others Cooper Neff, Salomon Brothers, HypoVereinsbank and Credit Lyonnais. He has over 15 years of experience in the development and running of sophisticated automated trading operations. He holds a MBA degree from the Owen Graduate School at Vanderbilt University, Nashville, USA.

16.20

Volatility Estimation: Classical vs. Bayesian methods

- Classical inference methods: Nonlinear filtering
- Bayesian inference: MCMC approaches
- Comparison between the methodologies
- Challenges, limitations and solutions



Alireza Javaheri
Head Of Equities Quantitative Research Americas
J.P. MORGAN

Alireza Javaheri is the Head of Equities Quantitative Research Americas at J.P. Morgan and Adjunct Professor of Mathematical Finance at the Courant Institute. He has been working since 1994 in the field of derivatives quantitative research in various investment banks including Goldman Sachs and Citigroup. He holds a Ph.D. in Finance from Ecole des Mines de Paris and is also a CFA Charter holder. He has authored several quantitative finance papers on the subject of volatility, including articles with Peter Carr, Paul Wilmott and Espen Haug. His book "Inside Volatility Arbitrage" was elected the quantitative finance book of the year by Wilmott magazine.

17.00

Forward Volatility

Calibrating Models To Properly Capture Forward Volatility Dynamics

Speaker Ibc

17.40

Chairman's Closing Remarks

17.45

End Of Main Conference

Stream B: Modelling & Trading Fixed Income Products

11.00

Asset Pricing Theory For Two Price Economies

Nonlinear martingales are to no arbitrage in two price economies as martingales are to no arbitrage in one price economies. Furthermore, if risk acceptability requires a positive physical expectation then expected rates of return on ask prices should be dominated by expected rates of return on bid prices. A preliminary investigation supports this hypothesis. Asset pricing theory in two price economies leads to asset pricing inequalities. A brief survey of nonlinear martingales in the extant finance literature is also presented.

Dilip Madan, Professor Of Mathematical Finance, ROBERT H. SMITH SCHOOL OF BUSINESS, UNIVERSITY OF MARYLAND
Bio available on pg. 2

11.40

Long Term Interest Rates

Developing A Long Term Yield Curve Model

Speaker Ibc

12.20

Lunch + Meet The Speaker Lunch Tables

13.50

Inflation

Relative Value Between Inflation Swaps & Levels Implied By Inflation Bond Markets In The US, UK & Eurozone Markets & Associated Trading Strategies

- Supply-demand dynamics in each market
- IL bond asset swaps as the 'glue' between inflation bond and swap markets
- Seasonality issues
- Trading strategies

Dariusz Mirfenderesi, Global Head Of Inflation Trading, HSBC

Dariusz is the global head of inflation trading at HSBC, covering the US, UK, European, and Asian markets. Previously, Dariusz worked eight years at Barclays Capital as a derivative trader where he helped develop the inflation derivative market with a focus on the UK and European markets. He then joined UBS, where he worked for over 7 years, heading up the global inflation trading desk, combining inflation bond and derivative trading in the US, UK, and European markets and later incorporating the Japanese and Australian inflation markets. Dariusz is also the co-author of the book: "Inflation-Indexed Securities: Bonds, Swaps, and Other Derivatives" published in 2004 by Wiley Finance and considered the standard reference on this asset class.

14.30

Large Scale Hedging Projections Of Variable Annuity Blocks: Impacts On PnL

I will present various numerical experiments designed to analyze the impacts of different hedging strategies on a portfolio of VA guarantees.

Eoin Eliffe, Head Of Strategy & Analytics, LINCOLN FINANCIAL GROUP
Eoin Eliffe is currently Head of Strategy and Analytics at Lincoln Financial Group. He and his team of quantitative strategists have built a large scale federated Monte Carlo engine based on GPU technology. His work involves developing hedging strategies for mitigating risks on path-dependent variable annuity guarantees and designing rebalancing algorithms for risk managed funds. Eoin completed his PhD. in Thermal noise modeling for Gravitational Wave detectors at the University of Glasgow. After spending sometime as a post-doctoral fellow he joined the Royal Bank of Canada as a senior quantitative analyst working on credit and economic capital modeling projects. He subsequently left that position to participate in the creation of a Bermuda reinsurance entity under the alternative investment initiative of Man Group PLC (UK Hedge Fund). His role as director of modeling analytics focused on credit and variable annuity arbitrage.

15.10

Afternoon Tea

Stream B: Modelling & Trading FX Derivatives

15.40

Analysing The Impact Of QE On Global Currency Markets

Steven Englander, Managing Director & Global Head Of G10 FX Strategy, CITI

Dr. Steven Englander took up his current role in April of 2010. Citi has been named #1 in FX Research and Strategy by FX Week the past two years, and has moved to #2 in the Euromoney poll on G10 Research vs. #3, #6 and #11 in previous years. Steve is a frequent consultant to Citi's internal and external clients on how macroeconomic policy, regulation and asset markets affect FX markets. His expertise is on reserves management, earnings repatriation, capital flows, and global imbalances; his research in these areas is frequently quoted by academics, policymakers and investors. Prior to joining Citi, Mr. Englander was Chief Foreign Exchange Strategist for the Americas at Barclays Capital. Previously he spent eight years with Citibank/Salomon Smith Barney where he was Global Currency Economist. Citi was ranked #1 in currency economics and long-term strategy every year that he occupied that position. Before moving to the private sector, he spent four years at the Organization for Economic Cooperation and Development as the Principal Economist in the Economic Prospects Division. Dr. Englander's career also includes the Federal Reserve Bank of New York, where he was Senior Research Officer and Head of the Domestic Research Department. Dr. Englander is frequently invited to discuss currency and economic developments on television and radio. Mr. Englander received his PhD from Yale University.

16.20

How Post-Crisis Correlations Can Drive Alpha In The FX Option World

- Safe haven behaviour in the post crisis world means that equity-like correlations can be observed in the FX spot and volatility world
- By understanding the connections between option volatility and spot direction, a degree of forecasting power can be obtained
- We show how this may be utilised to drive alpha generating strategies



Jessica James, Head Of The FX Quantitative Solutions Team, COMMERZBANK

Jessica James joined Commerzbank from Citigroup where she held a number of FX roles, latterly as Global Head of the Quantitative Investor Solutions Group. Before her career in finance, Jessica lectured in physics at Trinity College, Oxford. Her previous significant publications include 'Interest Rate Modelling (Wiley)', and 'Currency Management' (Risk books). She is on the Board of the Journal of Quantitative Finance, and is a Visiting Lecturer at Cass Business School. She has also been involved with the Institute of Physics as a member of their governing body and a member of their Industry and Business Board.

17.00

Events & FX Implied Volatility: Understanding The Impact Of Events On FX Implied Volatility

We try to quantify the impact of scheduled events on FX implied volatility, calculating events vol add-ons. We also investigate whether during these scheduled events realised vol performs compared to implied vol to ascertain whether the size of event vol add-ons are justified. Later we delve into other stylised properties of FX vol.

Saeed Amen, Vice President, Quantitative Strategy NOMURA

Saeed started his career at Lehman Brothers. He worked on the FX desk developing systematic trading models for both G10 and EM and was part of the team who developed the MarCoUS suite of models. He was also responsible for a systematic FX prop trading book and conducted research around high frequency FX including economic events. He currently works at Nomura as a Vice President in Quantitative Strategy, also in FX, developing their model infrastructure and also covering gold. He has been quoted in numerous articles on FT, WSJ and ZeroHedge. Saeed is also a co-founder of Thalesians, a finance discussion group, which meets in London, New York and San Francisco.

17.40

Chairman's Closing Remarks

17.45

End Of Main Conference

Stream C: Quantitative Investment Strategies & Algorithmic Trading

11.00

Panel Discussion

Optimising Execution & Minimizing Market Impact

Dan Penley, Director Of Algorithmic Trading & Execution SPOT TRADING

Dan Penley has worked at Spot Trading since March 2011, managing a team of traders and technologists. His decade of experience designing and innovating automated trading systems position him well to lead Spot's algorithmic trading business. Dan's years of experience in computerized trading include roles at Greenback Automation, Infinium Capital Management, Fox River Partners, and Allston Trading LLC. Dan holds a BS in Computer Science and a BA in Mathematics from University of Illinois, Champaign. He is a Chartered Financial Analyst, and NASD Series 7, 24, 44 and 55 certified.



Michael Sotiropoulos, Global Head Of Algorithmic Trading Quantitative Research, BANK OF AMERICA MERRILL LYNCH

Michael Sotiropoulos is the global head of algorithmic trading quantitative research at Bank of America Merrill Lynch. His group supports the Global Execution Services business, and focuses on market microstructure and algorithmic trading research and development. Michael joined Bank of America in 2004, as an equity derivatives quant after spending three years at Bear Stearns in the same role. He was head of equities quantitative research for year 2008 before moving to algorithmic trading. He has a Ph.D. in Theoretical Physics from SUNY Stony Brook. Prior to joining the finance industry he taught and worked in quantum field theory and particle physics at the University of Southampton, England and at the University of Michigan.

Peter van Kleef, Partner, LAKEVIEW CAPITAL MARKET SERVICES

Bio available on pg. 8

11.40

A Diffusion Model Of The Limit-Order Book

- Poisson arrivals determined by the state of the book
- Scaling order volume and time
- Brownian motion description of the limiting limit-order book

Steven Shreve, Professor Of Mathematics, CARNEGIE MELLON UNIVERSITY

Steven E. Shreve co-founded the CMU Master's degree in Computational Finance, now in its 19th year, with campuses in New York and Pittsburgh. He has also been a faculty member of the University of California at Berkeley and Massachusetts Institute of Technology. Shreve's book "Stochastic Calculus For Finance" won the 2004 Wilmott award for "Best New Book in Quantitative Finance." Shreve is co-author of the associate edition of the "SIAM Journal on Financial Mathematics," advisory editor of "Finance and Stochastics," and past-President of the Bachelor Finance Society. He has published over forty articles in scientific journals on stochastic calculus, stochastic control, and the application of these subjects to finance, including the effect of transaction costs on option pricing, the effect of unknown volatility on option prices, pricing and hedging of exotic options, and models of credit risk.

12.20

Lunch + Meet The Speaker Lunch Tables

13.50

Optimal Limit Order Execution In A Simple Model For Market Microstructure Dynamics

Market participants that have a task to acquire a certain position in a listed security at a predetermined price on behalf of a third party can optimize the profitability of their trading strategy in order to accomplish this task. Authors propose a simple model of market microstructure in which an unobservable continuous stochastic process, the microprice, drives the dynamics of limit and market orders. We derive a closed-form analytical solution for the optimal inventory profile which is remarkably simple and intuitive.

Thursday November 21, 2013 Main Conference Day Two

Yuri Burlakov, *Head Of Commodities Financial Engineering*

CHICAGO TRADING COMPANY

Yuri Burlakov heads Commodities Financial Engineering at Chicago Trading Company focusing on options market making. Prior to this, Yuri held positions focusing on commodities and interest rates derivatives at Goldman Sachs, Morgan Stanley, and Lehman Brothers. Yuri holds a PhD degree in Mathematics from University of California Berkeley.

14.30

Advanced High-Frequency Trading Techniques For Determining Flash Crashes & Other Rare Events

- Latest techniques for identification of crashes
- Comparative performance of the measures
- Risk-managing flash crashes



Irene Aldridge, *Managing Partner*
ABLE ALPHA TRADING

Irene Aldridge is the author of "High-Frequency Trading: A Practical Guide to Algorithmic Strategies and Trading Systems." (Wiley). In addition, she is presently serving on the technology and high-frequency trading subcommittee of the CFTC. Aldridge is currently a Managing Partner and Quantitative Portfolio Manager at ABLE Alpha Trading, LTD. Prior to this, Aldridge worked for various institutions on Wall Street and in Toronto, including Goldman Sachs and CIBC. She also taught finance at the University of Toronto. Over the years, Aldridge has been called to contribute to numerous government regulatory panels, including the U.K. Government Committee for Future of Computer Trading. She is also a frequent contributor to numerous media publications, including the Journal of Trading, Futures Magazine, Reuters HedgeWorld and Advanced Trading. Aldridge often appears on major television networks, including BBC, CNBC, FOX Business and BNN.

15.10

Afternoon Tea

Exploratory Trading

Discovering How High Frequency Traders Could Parlay Their Speed Into Valuable Information

Speaker tbc

16.20

Portfolio Trading In The Presence Of Intraday Risk

Michael Sotiropoulos, *Global Head Of Algorithmic Trading Quantitative*

Research, **BANK OF AMERICA MERRILL LYNCH**
Bio available to the left

17.00

High Frequency Market Making Strategies

- A brief view of market making business
- Major factors of market making
- Market making modeling
- Market making strategies
- Optimal strategies of market making

Donggong Gong, *Co-founder, MQT INVESTMENTS LLC*

Before co-founding of MQT Investments LLC, Donggong Gong worked as Head Quant of the Automated Market Making group at Bank of America Merrill Lynch. Prior to joining Bank of America, he worked as Director of the Financial Engineering group at Peak 6 Investments and as Senior VP of modelling at Stark Investments. Donggong started his industry career at ABN AMRO bank where he worked from 2001-2006 as First VP and chief quant researcher. Before this he worked in the math department of the University of Chicago as a faculty member for three years, and at two well-known math research institutes as a postdoctoral fellow and visiting professor. He holds a Ph.D in math and has written 75 papers and documents about derivatives modeling and trading strategies.

17.40

Chairman's Closing Remarks

17.45

End Of Main Conference

Stream D: Regulation & Risk Management

11.00

Liquidity Modeling & Risk Margin Calculations For OTC Derivatives



Marco Avellaneda, *Professor Of Mathematics, COURANT INSTITUTE OF MATHEMATICAL SCIENCES, NEW YORK UNIVERSITY & Partner, FINANCE CONCEPTS*

Marco Avellaneda has previously worked at Banque Indosuez as consultant in FX derivatives, in fixed-income research at Morgan Stanley, as quant strategist at Gargoloy Strategic Investments, as Head of Volatility Arbitrage at Capital Fund Management where he created the Nimbus Fund, and as Portfolio Manager for quant trading at the Gallion Group. He is known in academic finance as the inventor of the Uncertain Volatility model, for developing model-calibration algorithms using Weighted Monte Carlo/Max Entropy, for the theory behind dispersion trading, and for his more recent works on statistical arbitrage, high-frequency trading and price forecasting. He is a faculty member at the Courant Institute and is in the editorial boards of Communications on Pure and Applied Mathematics, the International Journal for Theoretical and Applied Finance and Quantitative Finance, among others and authored the textbook "Quantitative Modeling of Derivative Securities".

11.40

Examining The Impact Of New Collateral Requirements On The Market

- Types of Margin and margin requirement under new regulations
- Expected initial margin requirements for uncleared OTC derivatives
- Acceptable collateral and impact on market



Alanas Goranov, *Managing Director, Derivatives Risk Officer*
GUARDIAN LIFE

Alanas Goranov leads the derivatives risk group and his responsibilities include overseeing the firm's derivatives hedging strategies, processes and trading activities. He also manages liquidity and counterparty risk and certain hedge fund investments. Alanas has nearly 20 years of investment industry experience. Prior to joining Guardian he served as Vice President, Risk Management at GE Asset Management. In this role, he led the investment risk team for nearly \$180 billion in fixed income and public equities and built risk management infrastructure. His assignments at GE also included acquisitions and dispositions of banks, asset management firms and insurance companies. Prior to GE, Alanas worked for the World Bank. Alanas received an M.B.A. from the American University in Washington DC.

12.20

Lunch + Meet The Speaker Lunch Tables

13.50

Regulatory Capital Optimization

Optimizing Portfolio To Achieve Regulatory Capital Efficiency

- Post-crisis regulatory reforms and new metrics of regulatory capital
- Capital transparency tools – why they are so important
- Eliminating capital inefficiencies
- Active capital optimization



Arthur Maghakian, *Head Of Market Risk Strategy*,
GOLDMAN SACHS

Arthur Maghakian is the Head of Market Risk Strategy at Goldman Sachs where he is responsible for front office market risk analytics and for market risk related regulatory capital analysis. Prior to this role he was the Head of Front Office Risk Management at Natixis NA where he was responsible for managing the risk of structured credit, fixed income and equity derivatives desks. Arthur is an author of more than 50 publications in physics, statistics and finance, and an author of 5 US and 2 EU patents granted for developing novel Monte Carlo technique integrating risk-neutral and historical simulation.

14.30

Exploring New Advances In Developing Model Free Estimation Techniques For Valuing Derivatives

Speaker tbc

15.10

Afternoon Tea

15.40

Adjoints In Finite Difference Methods

- Adjoint PDE formulation for pricing European options
- Discrete adjoints for explicit and implicit time-marching
- Computing Greeks for American options
- Local volatility example
- How to avoid potential loss of accuracy for some Greeks

Mike Giles, *Professor Of Scientific Computing*

OXFORD UNIVERSITY MATHEMATICAL INSTITUTE

Bio available on pg. 2

16.20

Adjoint Algorithmic Differentiation For Computational Finance

First-order greeks of financial instruments can be computed at a computational cost that is independent of the number of free parameters by a technique known as Adjoint Algorithmic Differentiation. Operator overloading techniques (e.g. in C++) have been proposed for the implementation of software tools that support the semi-automatic generation of adjoint versions of the underlying pricing code. We illustrate effectiveness, robustness, and efficiency – both in terms of development time and run time – of this approach using various relevant case studies.

Uwe Naumann, *Professor Of Computer Science*

RWTH AACHEN UNIVERSITY

Bio available on pg. 2

17.00

Systemic Risk

Techniques For Using Options Prices As Systemic Risk Indicators

Speaker tbc

17.40

Chairman's Closing Remarks

17.45

End Of Main Conference

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- **Workshops: November 22, 2013**

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	Dates	Register By Sept 13, 2013	SAVE	Register By Oct 11, 2013	SAVE	Register After Oct 11, 2013	SAVE
<input type="checkbox"/> 4-DAY PACKAGE: Conference + Summit + Workshop (Please select below)	Nov 19-22, 2013	\$5097	\$900	\$5297	\$700	\$5497	\$500
<input type="checkbox"/> 3-DAY PACKAGE: Conference + Summit	Nov 19-21, 2013	\$3898	\$600	\$4098	\$400	\$4298	\$200
<input type="checkbox"/> 3-DAY PACKAGE: Conference + 1 Workshop (Please select below)	Nov 20-22, 2013	\$3898	\$600	\$4098	\$400	\$4298	\$200
<input type="checkbox"/> 2-DAY PACKAGE: Conference Only	Nov 20-21, 2013	\$2599	\$400	\$2799	\$200	\$2999	-
<input type="checkbox"/> 1-DAY PACKAGE: Portfolio Optimization & Quant Invest Summit Only	Nov 19, 2013	\$1499	-	\$1499	-	\$1499	-
<input type="checkbox"/> 1-DAY PACKAGE: 1 Workshop Only (Please select below)	Nov 22, 2013	\$1499	-	\$1499	-	\$1499	-

Please select which workshop you'd like to attend: Credit Derivatives Valuation Volatility & Correlation Modelling & Trading Option Pricing Using PDEs & SDEs Lévy, Sato & Hunt Processes In Capital Allocation & Risk Management

The VAT rate is subject to change and may differ from the advertised rate. The amount you are charged will be determined when your invoice is raised. Savings include Multiple Package & Early Booking Discounts. All discounts can only be applied at the time of registration and discounts cannot be combined (apart from Early booking discounts which apply to everyone). All discounts are subject to approval. Please note the conference fee does not include travel or hotel accommodation costs. **50% Discount** for third and subsequently registered delegates for any packages that include the main conference. We are happy to accept a replacement delegate for the whole event, however delegate passes cannot be split or shared between delegates under any circumstances. Conference code FKN2366.

PAYMENT DETAILS

Please use this form as our request for payment. Fax and phone bookings should be made with a credit card number, or followed up by a posted registration form. Places are only guaranteed by full payment, which must be received before the conference. I will pay by:

Cheque/bankers draft made payable to ICBI for £.....

Invoice to be sent to my company

Bank transfer - full details of bank transfer options will be given with your invoice on registration.

To make payment by credit card: to ensure we provide the highest level of security for your credit card details we are unable to accept such payments via email or fax which ensures that these details are never stored on our network. To make payment by credit card on-line, please enter your credit card details in our secure payments website that you will use when making your booking via the event website: www.globalderivativesusa.com

Alternatively call our customer service team on +44 (0) 20 7017 7200

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