

Quantitative Methods in Finance 2004 Conference Programme



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Wednesday, 15 December

7:30 am – 8:15 am Registration & Coffee

Ballroom

Chair: Eckhard Platen

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| 8:20 - 8:30 am | Welcome |
| 8:30 - 9:10 am | Rama Cont (Ecole Polytechnique , Paris, France)
<i>Measuring Model Risk</i> |
| 9:10 - 9:50 am | Ludger Overbeck (Universität Giessen, Frankfurt, Germany)
<i>CDO-Modelling and the Granularity of the Underlying Portfolio</i> |
| 9:50 - 10:30 am | Erik Schlögl (University of Technology, Sydney, Australia)
<i>Factor Distributions and Correlations Implied by Market Quotes for Synthetic CDO Tranches</i> |
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Morning Tea

Chair: Carl Chiarella

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| 11:00 - 11:40 am | Marek Rutkowski (University of New South Wales, Sydney, Australia)
<i>Completeness of Credit Risk Models with Discontinuous Asset Prices</i> |
| 11:40 - 12:20 pm | Fabio Mercurio (Banca IMI, Milano, Italy)
<i>Pricing Inflation-Indexed Derivatives</i> |
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Lunch

Chair: Ludger Overbeck

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| 2:00 - 2:20 pm | Lara Cathcart (Imperial College London, United Kingdom)
<i>The Shape of the Credit Spreads Term Structure: An Empirical Investigation</i> |
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- 2:20 - 2:40 pm **Kurt Hess** (University of Waikato , Hamilton, New Zealand)
Bond Relative Value Models and Term Structure of Credit Spreads: A Practitioner's Approach
- 2:40 - 3:00 pm **Xuemin Ren** (Tongji University, Shanghai, China)
A Note on the Longstaff and Schwartz Model
- 3:00 - 3:20 pm **Hardy Hulley** (University of Technology, Sydney, Australia)
Fair Pricing in a Benchmark Model with Jumps
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Afternoon Tea

Chair: Lara Cathcart

- 3:40 - 4:00 pm **Raimondo Manca** (Università di Roma 'La Sapienza', Italy)
The Interest Rate Evolution under the Rating Process: A Non-Homogeneous Semi-Markov Reward Approach
- 4:00 - 4:20 pm **Hoi-Ying Wong** (Chinese University of Hong Kong, China)
Estimating Default Barriers from Market Information
- 4:20 - 4:40 pm **Dmitri Lvov** (University of Reading, United Kingdom)
Pricing Convertible Bonds by Monte Carlo Simulations
- 4:40 - 5:00 pm **Ming Xi Huang** (The Chinese University of Hong Kong, China)
Predictions of Default Probabilities by Models with Dynamic Leverage Ratios
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Cutler Room

Chair: Erik Schlögl

- 2:00 - 2:20 pm **Marina Di Giacinto** (Università degli studi di Cassino, Italy)
Optimal Dynamic Asset Allocation for Pension Funds in the Presence of a Minimum Guarantee
- 2:20 - 2:40 pm **Thomas McWalter** (University of the Witwatersrand , Johannesburg, South Africa)
Stochastic Optimal Control for Option Pricing with Scrip Borrowing Costs
- 2:40 - 3:00 pm **Chih-Ying Hsiao** (University of Bielefeld , Germany)
Intertemporal Asset Allocation under Inflation
- 3:00 - 3:20 pm **Andrew Jia-Yuh Yeh** (University of Waikato, Hamilton, New Zealand)
Empirical Evidence on Capital Investment, Firm Characteristics, and Equity Returns
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Afternoon Tea

Chair: David Heath

- 3:40 - 4:00 pm **Igor Geninson** (University of Sydney, Australia)
Volatility Explosion and its Impact on Pricing Derivative Securities
- 4:00 - 4:20 pm **Christopher Potter** (Oxford University, United Kingdom)
Completing Stochastic Volatility Models with Variance Swaps
- 4:20 - 4:40 pm **Pascale Marie-France Valéry** (HEC Montréal, Canada)
Finite and Large Sample Inference for a Stochastic Volatility Model
- 4:40 - 5:00 pm **Serge Hayward** (Ecole Supérieure de Commerce de Dijon, France)
Pre-processing and Post-processing for Financial Time Series Data Mining with an Evolutionary Artificial Neural Network
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Barton Room

Chair: Tony He

- 2:00 - 2:20 pm **Machiel F. Kruger** (North-West University, Potchefstroom, South Africa)
A Risk-Controlled Active Portfolio Strategy including Transaction Costs
- 2:20 - 2:40 pm **Hendrik Kläver** (University of Cologne, Köln, Germany)
Testing Stochastic Dominance Using Circular Block Methods
- 2:40 - 3:00 pm **Prasad Bidarkota** (Florida International University, Miami, USA)
The Impact of Fat Tails on Equilibrium Rates of Return and Term Premia
- 3:00 - 3:20 pm **Yaw-Huei Wang** (Lancaster University, Management School, U.K.)
The Euro and European Financial Market Integration
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Afternoon Tea

Chair: Shane Miller

- 3:40 - 4:00 pm **Anurag Gupta** (Case Western Reserve University, Cleveland, USA)
Liquidity Effects and Volatility Smiles in Interest Rate Option Markets
- 4:00 - 4:20 pm **Petko Kalev** (Monash University, Melbourne, Australia)
Functional Forecasting of the Yield Curve
- 4:20 - 4:40 pm **Jorgen Haug** (Norwegian School of Economics, Bergen, Norway)
Endogenous Regime Changes in the Real Term Structure of Interest Rates
- 4:40 - 5:00 pm **Sandy Suardi** (University of Melbourne, Australia)
Testing for a Level Effect in Short-term Interest Rates

Thursday, 16 December

8:00 am – 8:25 am Registration & Coffee

Ballroom

Chair: Rama Cont

- 8:30 - 9:10 am **Wolfgang Schmidt** (Hochschule für Bankwirtschaft, Frankfurt, Germany)
An Analytical Approach to Hedging and Pricing Credit Baskets
- 9:10 - 9:50 am **Claudio Albanese** (Imperial College, London, United Kingdom.)
Discrete Credit Barrier Models
- 9:50 - 10:30 am **Eckhard Platen** (University of Technology, Sydney, Australia)
A Benchmark Approach to Finance

Morning Tea

Chair: John van der Hoek

- 11:00 - 11:40 am **Frank Milne** (Queen's University, Kingston, Canada)
The Trader's Dilemma: Trading Strategies and Endogenous Pricing in an Illiquid Market
- 11:40 - 12:20 pm **Carl Chiarella** (University of Technology, Sydney, Australia)
Mean Variance Preferences, Expectations Formation, and the Dynamics of Random Asset Prices

Lunch

Chair: Masaaki Kijima

- 2:00 - 2:20 pm **Mahmoud Hamada** (Energy Australia, Sydney, Australia)
Fair Pricing of Energy Derivatives - A Comparative Study
- 2:20 - 2:40 pm **Sten Endter** (RWTH Aachen University, Germany)
Valuing Options on the Spot Price of Electrical Energy Using Simulated Spot and Futures Prices
- 2:40 - 3:00 pm **Alun Pope** (St. George Bank, Sydney, Australia)
VaR with Confidence
- 3:00 - 3:20 pm **Wei-Han Liu** (National Defense Management College, Taipei, Taiwan)
A Study on Portfolio Value-at-Risk

Afternoon Tea

Chair: Peter Buchen

- 3:40 - 4:00 pm **Thierry Ané** (IESEG, Lille, France)
Does Trading Volume Really Explain Stock Return Volatility?
- 4:00 - 4:20 pm **Leah Kelly** (Colonial First State Investments, Sydney, Australia)
Intraday Empirical Analysis of a Diversified World Stock Index in Different Currency Denominations
- 4:20 - 4:40 pm **Bian Baojun** (Tongji University, Shanghai, China)
A Fixed Rate Mortgage Valuation Model and Its Mathematical and Numerical Analysis
- 4:40 - 5:00 pm **Otto Konstandatos** (The University of Sydney, Australia)
Maximising your Payoff
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Cutler Room

Chair: Hardy Hulley

- 2:00 - 2:20 pm **Hsing-Hua Huang** (National Chengchi University, Taipei, Taiwan)
Analyzing Convertible Bonds: Valuation, Optimal Strategies and Asset Substitution
- 2:20 - 2:40 pm **Gerald Cheang** (Nanyang Technological University, Singapore)
Pricing Exchange Options with Discontinuous Stock Prices
- 2:40 - 3:00 pm **Ji-Wook Jang** (University of New South Wales, Sydney, Australia)
The Laplace Transform of the Distribution of the Cox Process with Shot Noise Intensity and its Application to Reinsurance and Operational Risk
- 3:00 - 3:20 pm **Motoh Tsujimura** (Kyoto University, Japan)
Stock Repurchase Policy with Transaction Costs under Jump Risks
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Afternoon Tea

Chair: Claudio Albanese

- 3:40 - 4:00 pm **Andrew Ziogas** (University of Technology, Sydney, Australia)
Pricing American Options on Jump-Diffusion Processes: Analytical Results and Numerical Methods
- 4:00 - 4:20 pm **Kevin Ho-Shon** (University of Sydney, Australia)
A Lookback at Real Estate Leases
- 4:20 - 4:40 pm **Takashi Shibata** (Yokohama National University, Japan)
The Impacts of Fragmented Volatilities by Learning about Predictability in the Real Options Approach

4:40 - 5:00 pm **Sean Randell** (University of the Witwatersrand, Johannesburg, South Africa) *A Comparison of Numerical Techniques for Solving an Integral Representation of the American Put Option*

Barton Room

Chair: Michael McCrae

2:00 - 2:20 pm **John Owens** (Victoria University of Wellington, New Zealand)
Microstructure Noise and Efficient Realized Volatility Estimators

2:20 - 2:40 pm **Martin Young** (College of Business, Massey University, Palmerston, New Zealand)
Pre-open and Post-close Stock Market Trading Routines and Intra-day Stock Price Volatility

2:40 - 3:00 pm **Walter Distaso** (University of Exeter, United Kingdom)
Testing and Modelling Market Microstructure Effects with an Application to the Dow Jones Industrial Average

3:00 - 3:20 pm **James McCulloch** (University of Technology, Sydney, Australia)
Relative Intra-day Volume on the NYSE Modelled as a Doubly Stochastic Marked Binomial Point Process

Afternoon Tea

Chair: James McCulloch

3:40 - 4:00 pm **Tony He** (University of Technology, Sydney, Australia)
A Dynamic Analysis of Moving Average Rules

4:00 - 4:20 pm **Florian Heitger** (University of Kiel, Germany)
Asset Price and Wealth Dynamics in a Discrete-Time Stationary Model under Walrasian and Market Maker Scenarios

4:20 - 4:40 pm **Leping Wang** (Singapore Management University, Singapore)
On the Intertemporal Risk-Return Relation: A Bayesian Model Comparison Perspective

4:40 - 5:00 pm **Bernard Wong** (The University of New South Wales, Sydney, Australia)
On the Martingale Property of Stochastic Exponentials

7:30 pm Conference Dinner at the Manly Pier Restaurant for delegates who have registered for the dinner

Friday, 17 December

8:00 am – 8:25 am Registration & Coffee

Ballroom

Chair: Frank Milne

- 8:30 - 9:10 am **Rene Carmona** (Princeton University, USA)
Hedging Derivatives Written on Non-tradable Instruments in the Presence of Non-observable Factors
- 9:10 - 9:50 am **Vicky Henderson** (Princeton University, USA)
Valuing the Option to Invest in an Incomplete Market
- 9:50 - 10:30 am **Peter Buchen** (University of Sydney, Australia)
Look-Barrier Options
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Morning Tea

Chair: Marek Rutkowski

- 11:00 - 11:40 am **John van der Hoek** (University of Adelaide, Australia)
Pairs Trading
- 11:40 - 12:20 pm **Tomasz Bielecki** (Illinois University of Technology, Chicago, USA)
Replication Issues in Credit Risk Models: Replication Strategies for Credit Derivatives -- Methods and Examples
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Lunch

Chair: Fabio Mercurio

- 2:00 - 2:20 pm **Claudio Tebaldi** (Università di Verona, Italy)
Impulse-Response Analysis and Immunization in Affine Term Structure Models
- 2:20 - 2:40 pm **Martino Grasselli** (University of Verona and ESILV, Italy)
Solvable Affine Term Structure Models
- 2:40 - 3:00 pm **Gianvittorio Mauri** (Banca IMI, Milano, Italy)
A Shifted Lognormal LIBOR Model with Uncertain Parameters
- 3:00 - 3:20 pm **Eymen Errais** (Stanford University, Palo Alto, USA)
Pricing Bonds with Embedded Options: A Neuro-dynamic Approach
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Afternoon Tea

Chair: Tom Bielecki

- 3:40 - 4:00 pm **Lionel Martellini** (EDHEC, Lille, France)
The Alpha and Omega of Hedge Fund Performance Measurement
- 4:00 - 4:20 pm **Daniel Gabay** (EHESS and ESILV, Paris, France) *Volatility Pumping: Optimal Growth Portfolios Revisited*
- 4:20 - 4:40 pm **Tai-Ho Wang** (National Chung Cheng University, Chia-Yi, Taiwan)
Static-Arbitrage Optimal Subreplicating Strategies for Basket Options
- 4:40 - 5:00 pm **Gordon Dash** (University of Rhode Island, Kingston, USA)
Hedge Fund Index Return Asymmetries, Optimal Change-of-Direction Forecasting and Radial Basis Function Neural Networks
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Cutler Room

Chair: Otto Konstandatos

- 2:00 - 2:20 pm **Yoshihiko Uchida** (Bank of Japan, Tokyo, Japan)
New Acceleration Schemes with the Asymptotic Expansion
- 2:20 - 2:40 pm **Nicola Bruti Liberati** (University of Technology, Sydney, Australia)
Random Bits Generators for Monte Carlo Simulation in Finance
- 2:40 - 3:00 pm **Antti Kanto** (Helsinki School of Economics, Finland)
Calculating Conditional Value-at-Risk with Thick Tails
- 3:00 - 3:20 pm **Boris Choy** (University of Technology, Sydney, Australia)
Bayesian Analysis of Fractional Brownian Motion of One-Factor Interest Rate Models
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Afternoon Tea

Chair: Boris Choy

- 3:40 - 4:00 pm **Charles Cao** (Penn State University, University Park, USA)
Risk-Neutral Kurtosis, Jumps, and Option Pricing: Evidence from 100 Most Actively Traded Firms on the CBOE
- 4:00 - 4:20 pm **Kevin Fergusson** (University of Technology, Sydney, Australia)
On the Distributional Characterisation of Specific and General Market Risk for Equities
- 4:20 - 4:40 pm **Kam Fong Chan** (University of Queensland, Brisbane, Australia)
Discrete-time Stochastic Volatility and Jumps in Short-term Interest Rates: International Evidence
- 4:40 - 5:00 pm **Shane Miller** (University of Technology, Sydney, Australia)
A Two-Factor Model for Low Interest Rate Regimes

Barton Room

Chair: Paul Kofmann

- 2:00 - 2:20 pm **Michael McCrae** (Wollongong University, Australia)
Optimal Hedge Ratio Estimation in the Presence of Conditional Moments: A GARCH-X Approach
- 2:20 - 2:40 pm **David Heath** (University of Technology, Sydney, Australia)
Understanding the Implied Volatility Surface for Options on a Diversified Index
- 2:40 - 3:00 pm **Jan Koserski** (Otto-von-Guericke University, Magdeburg, Germany)
Modelling and Visualisation of Dynamic Volatility Surfaces with Artificial Neural Networks
- 3:00 - 3:20 pm **Aymeric Kalife** (Université Paris Dauphine , France)
Portfolio Insurance Strategies by a Large Trader
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Afternoon Tea

Chair: Andrew Ziogas

- 3:40 - 4:00 pm **Stéphane Crépey** (Université d'Evry, Val d'Esonne , France)
Delta-Hedging Vega Risk?
- 4:00 - 4:20 pm **Samson Assefa** (University of Technology, Sydney, Australia)
Quanto Pricing in a Reduced Form Model

Ballet Evening at the Sydney Opera House for delegates who have registered for this event. Performance starts at 7:30 pm

Saturday, 18 December

8:00 – 8:25 am Registration & Coffee

Ballroom

Chair: Robert Elliott

8:30 - 9:10 am **Chris Heyde** (Australian National University, Canberra, Australia)
On the Controversy over the Distribution of Risky Asset Returns and the Implications for Modelling

9:10 - 9:50 am **Svetlozar Rachev** (University of California Santa Barbara, USA)
Statistical Considerations in Financial Risk Management

9:50 - 10:30 am **Paul Kofman** (University of Melbourne, Australia)
Structurally Sound Dynamic Index Futures Hedging

Morning Tea

Chair: Wolfgang Schmidt

11:00 - 11:40 am **Robert Elliott** (University of Calgary, Canada)
Option Pricing for Pure Jump Processes with Markov Switching Compensators

11:40 - 12:20 pm **Masaaki Kijima** (Kyoto University, Japan)
A Markov Model for Valuing Asset Prices in a Dynamic Bargaining Market

Lunch
