The 3rd Symposium on
Quantitative Finance and Risk Analysis (QFRA 2017)
15th – 16th June 2017,
Corfu, Greece

Organized by

University of Liverpool, UK

University of Glasgow, UK

City, University of London, UK

# SCHEDULE

Sponsored by

EPSRC and ESRC Centre for Doctoral Training (CDT) on Quantification and Management of Risk & Uncertainty in Complex Systems & Environments within the Institute for Risk and Uncertainty, UoL

# Thursday 15th June 2017

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| 9.00 – 9.15 | Welcome talk<br>Athanasios Pantelous, University of Liverpool, UK |
| **9.15 – 10. 15** | **Chair: Ioannis Kyriakou**, City, University of London, UK<br>**Invited talk**<br>**Steven Kou**, National University of Singapore, Singapore<br>***"EM Algorithm and Stochastic Control"*** |
| 10.15 – 10.30 | **small break** |
| **10.30 – 11.50** | **Parallel Session A.1:** **Financial Engineering**<br>**Chair:** Steven Kou, National University of Singapore, Singapore |
| T1: 10.30 – 10.50 | Yi Hong, Xi'an Jiaotong-Liverpool University, China<br>**Xing Jin**, University of Warwick, UK<br>"***Dynamic Portfolio Choice in Multi-Asset Jump-Diffusion Models and Optimal Variance Swap Investments***" |
| T2: 10.50 – 11.10 | **Massimiliano Kaucic**, University of Trieste, Italy<br>Gianni Bossi, University of Trieste, Italy<br>Magali Zuanon, University of Brescia, Italy<br>"***Robust portfolio selection under loss aversion from a set-valued optimization perspective***" |
| T3: 11.10 – 11.30 | **Nikos Kavallaris**, University of Chester, UK<br>Athanasios A. Pantelous, University of Liverpool, UK<br>***"Optimal portfolio and Consumption allocation: Under A Disappointment Aversion Type Utility Function"*** |
| T4: 11.30 – 11.50 | **Vasileios Kontosakos**, University of Liverpool, UK<br>Soosung Hwang, Sungkyunkwan University, Korea<br>Athanasios A. Pantelous, University of Liverpool, UK<br>Vasileios Kallinterakis, University of Liverpool, UK<br>***"Dynamic Asset Allocation under Disappointment Aversion Preferences"*** |
| **11.50 – 12.20** | **Coffee Break** |

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| **10.30 – 11.50** | **Parallel Session A.2:** Operational Risk Modelling<br>**Chair: Hans-Jörg von Mettenheim**, Acanto Research & Leibniz Universität, Hannover, Germany |
| T5: 10.30 – 10.50 | **Jia Shao**, Coventry University, UK<br>Athanasios A. Pantelous, University of Liverpool, UK<br>Bilal M. Ayyub, University of Maryland, USA<br>Stephen Chan, University of Manchester, UK<br>Saralees Nadarajah, University of Manchester, UK<br>"**Nuclear Catastrophe Risk Bonds in a Markov Dependent Environment**" |
| T6: 10.50 – 11.10 | **Shuya Zhong**, National University of Singapore, Singapore<br>Athanasios A. Pantelous, University of Liverpool, UK<br>Mark Goh, National University of Singapore, Singapore<br>Jian Zhou, Shanghai University, China<br>"***Preventive Maintenance Scheduling for Offshore Wind Farms in Fuzzy Environment***" |
| T7: 11.10 – 11.30 | **Dimitris Diamantidis**, Ostbayerische Technische Hochschule, Germany<br>Miroslav Sykora, Czech Technical University in Prague, Czech Republic<br>***"Optimizing investments into safety and resilience of infrastructure projects considering human, economic and environmental risks"*** |
| T8: 11.30 – 11.50 | **Magdalena Ligus**, Wrocław University of Economics, Poland<br>"***Evaluation of economic, social and environmental effects of low-emission energy technologies development in Poland - multi-criteria analysis with application of fuzzy analytic hierarchy process (FAHP)***" |
| 11.50 – 12.20 | **Coffee Break** |

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| **12.20 – 13.40** | **Parallel Session B.1:** Market Efficiency<br>**Chair: Jason Laws,** University of Liverpool, UK |
| T9: 12.20 – 12.40 | **José G. Dias**, Instituto Universitário de Lisboa, Portugal<br>***"Financial technical analysis using hidden Markov models"*** |

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| T10. 12.40 – 13.00 | Christian-Oliver Ewald, University of Glasgow, UK<br>**Yixiao Mao,** University of Glasgow, UK<br>**“Inflation Forecasting through Commodity Futures and Options”** |
| T11. 13.00 – 13.20 | **Ioannis Psaradellis,** University of Liverpool, UK<br>Jason Laws, University of Liverpool, UK<br>Athanasios A. Pantelous, University of Liverpool, UK<br>Georgios Sermpinis, University of Glasgow, UK<br>***“Pairs trading and Technical Analysis: Is Mean Reversion Still Profitable?”*** |
| T12. 13.20 – 13.40 | **Yurun Yang**, Xi'an Jiaotong-Liverpool University, China<br>Ahmet Göncü, Xi'an Jiaotong-Liverpool University, China<br>Athanasios A. Pantelous, University of Liverpool, UK<br>***“Momentum and reversal trading strategies in Chinese commodity futures markets”*** |
| 13.40 –15.00 | **Lunch break** |

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| **12.20 – 13.40** | **Parallel Session B.2:** **Derivatives Pricing and Hedging I**<br>**Chair: Xing Jin**, University of Warwick, UK |
| T13: 12.20 – 12.40 | **Neofytos Rodosthenous**, Queen Mary University of London, UK<br>Hongzhong Zhang, Columbia University, USA<br>***“Beating the Omega clock: Optimal strategies for nervous and impatient investors”*** |
| T14. 12.40 – 13.00 | **Sang-Hyeok Lee**, Ajou University, Korea<br>Hyeong-Ohk Bae, Ajou University, Korea<br>“***Pricing European option under dynamic Markov process via perturbation method***” |
| T15. 13.00 – 13.20 | Bogdan Grechuk, University of Leicester, UK<br>**Andrzej Palczewski**, University of Warsaw, Poland<br>Jan Palczewski, University of Leeds, UK<br>***“Optimal portfolio problem with discrete distributions: is the solution unique?”*** |

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| T16. 13.20 – 13.40 | **Otto Konstandatos**, University of Technology Sydney, Australia<br>***"A Novel Analytical Approach for Reset ESO Valuation Incorporating Voluntary Early Exercise and Attrition"*** |
| **13.40 –15.00** | **Lunch break** |

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| **15.00 - 16.00** | **Chair: Damiano Brigo**, Imperial College London, UK<br>**Invited Talk**<br>**Gianluca Fusai**, Università del Piemonte Orientale, Italy and City, University of London, UK<br>***"Integrated Structural Approach to Counterparty Credit Risk with Dependent Jumps"*** |
| 16.00 - 16.30 | **coffee break** |
| **16.30 – 17.50** | **Parallel Session C.1: Financial Risk Management I**<br>**Chair: Neofytos Rodosthenous**, Queen Mary University of London, UK |
| T17: 16:30 – 16:50 | **Ding Chen**, University of Sussex, UK<br>Biao Guo, Renmin University, China<br>David Newton, University of Bath, UK<br>Xiaoxiang Zhang, University of Sussex, UK<br>***"The Role of Credit Risk in Asset Pricing and the Price of Irrationality"*** |
| T18: 16:50 – 17:10 | **Filipa Fernandes**, Coventry University, UK<br>Charalampos Stasinakis, University of Glasgow, UK<br>Valeriya Bardarova, University of Glasgow, UK<br>***"Bank efficiency in the euro area: New evidence from a two stage dea analysis"*** |
| T19: 17:10 – 17:30 | **Yuxin Xie**, Southwestern University of Finance and Economics, China<br>Fan,Zhang, Southwestern University of Finance and Economics, China<br>Xiaomeng Lu, Southwestern University of Finance and Economics, China<br>***"Narrow framing and household portfolio choices"*** |

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| T20: 17:30 – 17:50 | **Xiaoxiang Zhang**, University of Sussex, UK<br>Ding Chen, University of Sussex, UK<br>***"Sources of private information risk and asset pricing: A comparison between NYSE and HKEX"*** |
| 20.00 - 23.00 | **Conference Dinner** |

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| 16.00 - 16.30 | **coffee break** |
| **16.30 – 17.50** | **Parallel Session C.2:** Financial Networks **and Applications**<br>**Chair: Georgios Sermpinis**, University of Glasgow, UK |
| T21: 16:30 – 16:50 | **Abdullah AlShelahi**, University of Michigan, USA<br>Romesh Saigal, University of Michigan, USA<br>***"Macroscopic Look at the Equity Market"*** |
| T22: 16:50 – 17:10 | **Michail Vamvakaris**, University of Liverpool, UK<br>Athanasios A. Pantelous, University of Liverpool, UK<br>Konstantin Zuev, California Institute of Technology, USA<br>***"Investors' Behavior on S&P 500 Index during Periods of Market Crashes: A Visibility Graph Approach"*** |
| T23: 17:10 – 17:30 | Laura Ballota, City, University of London, UK<br>Gianluca Fusai, Università del Piemonte Orientale, Italy and City, University of London, UK<br>**Ioannis Kyriakou**, City, University of London, UK<br>Nikos C. Papapostolou, City, University of London, UK<br>Panos K. Pouliasis, City, University of London, UK<br>***"Non-parametric and semi-parametric modelling of weather variables and cost-revenue analysis of ski resort establishments"*** |
| T24: 17:30 – 17:50 | Georgios Sermpinis, University of Glasgow, UK<br>**Arman Hassanniakalager,** University of Glasgow, UK<br>Charalampos Stasinakis, University of Glasgow, UK<br>Thanos Verousis, Newcastle University, UK<br>***"Conditional Fuzzy Inference: Beating the Bookie"*** |
| 20.00 - 23.00 | **Conference Dinner** |

# Friday 16th June 2017

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| **9.00 - 10.00** | **Chair: Athanasios Pantelous**, University of Liverpool, UK<br>**Invited talk**<br>**Damiano Brigo**, Imperial College London, UK<br>***"The science and art of valuation"*** |
| 10.00 – 10.15 | **small break** |

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| **10.15 – 11.35** | **Parallel Session D.1: Derivatives Pricing and Hedging II**<br>**Gianluca Fusai**, Università del Piemonte Orientale, Italy and City, University of London, UK |
| T25: 10.15 – 10.35 | Sergio Ortobelli, University of Bergamo, Italy<br>Filomena Petronio, University of Ostrava, Czech Republic<br>Tomas Tichy, University of Ostrava, Czech Republic<br>**Sebastiano Vitali**, Charles University in Prague, Czech Republic<br>***"Timing and hedging portfolio strategies with derivatives"*** |
| T26: 10.35 – 10.55 | Pilar Abad, Universidad Rey Juan Carlos, Spain<br>**Rodrigo Ferreras**, Santalucía, Spain<br>M. Dolores Robles, Universidad Complutense de Madrid and Instituto Complutense de Análisis Económico, Spain<br>***"Credit rating news and stock return synchronicity: Informational effects of regulation reforms"*** |
| T27: 10.55 – 11.15 | **Conrad Spanaus**, Technische Universität Kaiserslautern, Germany<br>***"Portfolio Selection Using Downside Risk of Returns"*** |
| T28: 11.15 – 11.35 | **Yedidiah Solowiejczyk**, New York University, USA<br>***"Accelerated Method for Calculating European Options Using Binomial Trees"*** |
| **11.35 – 12.05** | **Coffee Break** |

| **10.15 – 11.35** | **Parallel Session D.2:** Actuarial Science<br>**Chair: Colin O'Hare**, Monash University, Australia |
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| T29: 10.15 – 10.35 | **Luis Portugal**, University of Liverpool, UK<br>Athanasios A. Pantelous, University of Liverpool, UK<br>Hirbod Assa, University of Liverpool, UK<br>***"Multivariate claims reserving with generalized link ratios"*** |
| T30: 10.35 – 10.55 | **Malgorzata Seklecka,** University of Liverpool, UK<br>Athanasios A. Pantelous, University of Liverpool, UK<br>Colin O'Hare, Monash University, Australia<br>***"Insurance Pricing and Reserving with the Temperature-Related Mortality Model"*** |
| T31: 10.55 – 11.15 | Malgorzata Seklecka, University of Liverpool, UK<br>**Norazliani Md Lazam**, University of Liverpool, UK<br>Athanasios A. Pantelous, University of Liverpool, UK<br>Colin O'Hare, Monash University, Australia<br>***"Mortality Effect of Economic Fluctuations in the selected Eurozone Countries"*** |
| T32: 11.15 – 11.35 | **Colin O'Hare**, Monash University, Australia<br>Bonsoo Koo, Monash University, Australia<br>Andrew Reeson, CSIRO, Melbourne Australia<br>Alec Stephenson, CSIRO, Melbourne Australia<br>Thomas Sneddon, CSIRO, Melbourne Australia<br>Zili Zhu, CSIRO, Melbourne Australia<br>***"Some Insights into retirement planning and superannuation draw-down behaviour"*** |
| **11.35 – 12.05** | **Coffee Break** |

| **12.05 – 13.25** | **Parallel Session E.1:** Financial Risk Management II<br>**Chair: Panos Pouliasis,** City, University of London, UK |
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| T33: 12.05 – 12.25 | Fei Liu, University of Liverpool, UK<br>Athanasios A. Pantelous, University of Liverpool, UK |

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| | **Hans-Jörg von Mettenheim**, Acanto Research and Leibniz University of Hanover, Germany<br>***"Realized Volatiliy with High Frequency Data: Model, Analysis and Trading Systems"*** |
| T34: 12.25 – 12.45 | Sergio Albeverio Universitaet Bonn, Germany<br>**Victoria Steblovskaya**, Bentley University, USA<br>Kai Wallbaum, Allianz Global Investors GmbH, Germany<br>***"Volatility Target Mechanism and Structured Investment Products with Capital Protection"*** |
| T35: 12.45 – 13.05 | Diego Amaya, Wilfrid Laurier University, Canada<br>Jean-François Bégin, British Columbia, Canada<br>**Geneviève Gauthier**, HEC Montréal, Canada<br>***"Extracting Latent States from High Frequency Option Prices"*** |
| T36: 13.05 – 13.25 | **Yixiu Zhao**, *Swansea University, UK*<br>Vineet Upreti, *Swansea University, UK*<br>Yuzhi Cai, *Swansea University, UK*<br>***"Forecasting Aggregate Stock Market Volatility by Quantile Regression"*** |
| **13.25 –15.00** | **Lunch break** |

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| **12.05 – 13.25** | **Parallel Session E.2:** Financial Econometrics<br>**Chair: Athanasios Pantelous,** University of Liverpool, UK |
| T37: 12.05 – 12.25 | Ai Han, Chinese Academy of Sciences, China<br>**Yong Fang**, Chinese Academy of Sciences, China<br>***"Multi-period Black-Litterman Model based on Scenario Tree"*** |
| T38: 12.25 – 12.45 | **Ai Han**, Chinese Academy of Sciences, China<br>Athanasios A. Pantelous, University of Liverpool, UK<br>***"Time-Varying cointegration of market indices under different exchange rates"*** |
| T39: 12.45 – 13.05 | **Stavros Stavroglou**, University of Liverpool, UK<br>Athanasios A. Pantelous, University of Liverpool, UK<br>Konstantin Zuev, California Institute of Technology, USA |

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| | ***"Dynamic Pattern Causality: Into the hidden nature of causal relationships"*** |
| T40: 13.05 – 13.25 | Hirbod Assa, University of Liverpool, UK<br>**Tianyuan Ni**, University of Liverpool, UK<br>***"Machine Learning Approach to Modeling Financial Derivatives"*** |
| **13.25 –15.00** | **Lunch break** |

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| **15.00 - 16.00** | **Chair: Geneviève Gauthier**, HEC Montréal, Canada<br>**Invited Talk**<br>**Hans-Jörg von Mettenheim**, Acanto Research & Leibniz Universität, Hannover, Germany<br>***"An Introduction to Quantitative Asset and Risk Management: How Simple Strategies Can Make You Better Returns?"*** |
| **16.00 - 16.30** | **coffee break** |
| **16.30 – 17.30** | **Parallel Session F.1: Financial Risk Management III**<br>**Chair: Victoria Steblovskaya**, Bentley University, USA |
| T41: 16.30 – 16.50 | Thomas Noe, University of Oxford, UK<br>**Nir Vulkan**, University of Oxford, UK<br>***"Naked Aggression: Personality and portfolio manager performance"*** |
| T42: 16.50 – 17.10 | **Gabriele Torri**, University of Bergamo, Italy<br>Rosella Giacometti, University of Bergamo, Italy<br>Sandra Paterlini, EBS Universität für Wirtschaft und Recht, Germany<br>***"Precision Matrix Regularization for Minimum Variance Portfolios"*** |
| T43: 17.10 – 17.30 | **Antoine Noël**, HEC Montréal, Canada<br>"***Informed Trading across Strikes***" |

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| **16.00 - 16.30** | **coffee break** |
| **16.30 – 17.30** | **Parallel Session F.2: Derivatives Pricing and Hedging III**<br>**Chair: Andrzej Palczewski**, University of Warsaw, Poland |

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| T44: 16.30 – 16.50 | **Francesca Centrone**, Universita degli Studi del Piemonte Orientale, Italy<br>Emanuela Rosazzza Gianin, Universita degli Studi Milano-Bicocca, Italy<br>***"Capital Allocation a la Aumann and Shapley for non differentiable risk measures"*** |
| T45: 16.50 – 17.10 | **Maryam Hasannasab**, University of Auckland, New Zealand<br>Dimitrios Margaritis, University of Auckland, New Zealand<br>***"Pricing Inputs and Outputs in Banking: A Profit Maximisation Approach"*** |
| T46: 17.10 – 17.30 | Alexandra Dias, University of Leicester, UK<br>**Isaudin Ismail**, University of Leicester, UK and University Tun Hussein Onn, Malaysia<br>Aihua Zhang, University of Leicester, UK<br>"***Risk aggregation using a mixture of copulas***" |
| T47: 17.30 – 17.50 | **Svetlana Zenchenko,** North-Caucasian Federal University, Russia<br>**Hassan Obeid,** European Business School-Paris, France<br>**Kseniya Bagmet,** Russian State Social University, Russia<br>"***International standards of risk management in credit organization: Russian practice***" |