Short bio’s of the lecturers of the programme

Professor Sergei Levendorskiĭ

http://www2.le.ac.uk/departments/mathematics/extranet/staff-material/staff-profiles/sl278

Professor Sergei Levendorskiĭ is Director of the Distance Learning program Financial Engineering and Risk Management Chair in Financial Mathematics and Actuarial Sciences, Department of Mathematics; Deputy Director of Institute of Finance, University of Leicester. Prof. Levendorskiĭ has a PhD in Mathematics from the Department of Mathematics, Rostov State University, Rostov-on-Don, USSR (1981), and Doctor of Sciences in spectral theory of differential operators from Kiev Institute of Mathematics, of the Ukraine Academy of Sciences (1989). Prof. Levendorskiĭ is a Fulbright grantee. He has published several monographs in Mathematics, Economics and Mathematical Finance. He has publications in leading journals in Mathematics (Spectral Theory, pseudodifferential operators, degenerate elliptic operators), Mathematical Physics (Schrödinger operators with polynomial fields and perturbed periodic potentials), Algebra (quantum groups), Applied Probability, Economics and Mathematical Finance. The new methods of efficient numerical Fourier and Laplace inversion and Wiener-Hopf factorization are of interest for Numerical Analysis in general, as well as pricing theory. Dr Svetlana Boyarchenko and Prof Levendorskiĭ were the first to derive the pricing formula for barrier options in jump-diffusion models and the generalization of the Black-Scholes equation in jump-diffusion models. In 1999, S. Boyarchenko and S. Levendorskiĭ constructed the generalization of Koponen’s family of pure jump processes. A subclass of this generalized family is popular in Mathematical Finance under the name CGMY model. They developed a new efficient approach to optimal stopping problems with infinite time horizon. Problems of this sort arise in many situations in economics, and, in finance, the results for perpetual options are the main building block for efficient pricing of American options with finite time horizon (Carr’s randomization). Prof. Levendorskiĭ established a number of qualitatively new results for options in financial markets, under jump-diffusion uncertainty, e.g., existence of a gap between the early exercise boundary and strike when in the pure diffusion case there is none; non-trivial asymptotics of prices of barrier options near the barrier. In June 2009, Prof Levendorskii was the principal organizer of a large workshop at Leicester (co-organizers Terry Lyons and Martijn Pistorius) with the participation of several leading specialists in quantitative finance, mathematics of insurance, and economics, including Claudio Albanese, Peter Carr, John Crosby, Alexander Eydeland, Damir Filipovic, Martino Grasselli, Roger Lee, Alex Lipton, Dilip Madan, Artur Sepp and recent Nobel Laureate Lars Hansen.

Dr. Svetlana Boyarchenko

http://www.utexas.edu/cola/depts/economics/faculty/sb3412

Dr. Svetlana Boyarchenko has a Ph.D. in Mathematics from Rostov State University, Rostov-on-Don, Russia. She was an Associate Professor of the Theoretical Mechanics Department at the Don State
Technical University, Rostov-on-Don, Russia. Dr. Boyarchenko’s research interests were bifurcations in non-linear elastic bodies with thin periodical structure (several publications, including 2 in one of the leading USSR journals: Izvestia AN SSSR. Later, Dr. Boyarchenko published several papers in leading journals in mathematical physics.

Dr. Boyarchenko also has a Ph.D. in Economics from the University of Pennsylvania, U.S.A. Upon completion of her Ph.D. in Economics in 2001, Dr. Boyarchenko co-authored a novel approach to optimal stopping problems that works for wide classes of Lévy processes with regime shifts and random walks, and general payoff functions. This method is more efficient than the standard technique even in the case of Gaussian processes, and provides solutions in a more meaningful form. The results were published in two monographs and a number of papers in peer-reviewed journals, American Economic Review, one of the two leading journals in Economics including. In 1999, together with S. Levendorskiï Dr. Boyarchenko extended Koponen’s family. Later, a subclass of this family was labeled KoBoL, and, still narrower subclass, CGMY model. Dr. Boyarchenko's current research interests are efficient option pricing methods, optimal stopping problems under risk and uncertainty and stopping time games.

Dr. Boyarchenko has been teaching at the Department of Economics of the University of Texas at Austin U.S.A. since 2001; first as an Assistant Professor, and then as an Associate Professor (since Fall 2007). She taught PhD level courses (Micro Economics and Advanced Microeconomic Analysis), MA level courses (Game Theory), and undergraduate courses (Financial Economics, Micro Economic Theory, Probability and Statistics).

Dr. Alex Levin

https://www.linkedin.com/pub/alex-levin/15/164/129

Iain Clark is managing director and founder of Efficient Frontier Consulting Ltd., a London based quantitative analytics consultancy. He holds a PhD in applied mathematics from the University of Queensland and a MSc in financial mathematics from the Universities of Edinburgh and Heriot-Watt. He was former Head of FX and Commodities Quantitative Analysis at Standard Bank, Head of FX Quantitative Analysis at UniCredit and Dresdner Kleinwort, and has worked at Lehman Brothers, BNP Paribas and JP Morgan. Iain is the author of Foreign Exchange Option Pricing: A Practitioner's Guide (Wiley, 2011) and Commodity Option Pricing: A Practitioner's Guide (Wiley, 2014). He is a Chartered Mathematician, Chartered Physicist and Chartered Statistician, as well as member of various other professional societies, and frequent reviewer for peer reviewed academic journals and invited speaker at conferences.
Dr. Alex Levin has Ph.D. in Applied Mathematics from Dniepropetrovsk State University, Ukraine. He was an Associated Professor of the Computer Science Department at the Donbass Institute of Technology, Ukraine. Dr. Levin's research interests were numerical solution of Partial Differential and Integral Equations, Tikhonov regularization, inverse problems in Heat Transfer and Elasticity Theory. Upon arrival to Canada in 1996, Dr. Levin worked as Research Associate of RiskLab at the University of Toronto, and from 1997 he headed quantitative risk groups in two leading Canadian banks: Bank of Montreal (1997-2002) and Toronto Dominion Bank (2002-2004), where he developed and implemented in production one of the first Monte Carlo Value-at-Risk systems with jumps and heavy-tailed distributions of risk factors, Counterparty Credit Risk systems, commodity credit models including a new class of commodity futures models with bounded prices. He obtained new results in jump processes (derived the well-known Variance Gamma model from the Maximum Entropy Principle, independently investigated and implemented in production a Stochastic Volatility model later known as Barndorff-Nielsen and Shephard model). In 2004-2007 Dr. Levin was executive Managing Director of Risk Analytics at Wachovia Bank (then the fourth largest US bank based on total assets) where he developed and implemented various VaR, Specific Risk, and Counterparty Credit Risk models. In 2007-2009 Dr. Levin worked as a Principal Financial Engineer at Algorithmics Inc., Toronto. Since 2009 he is Director of Risk Methodology in Market and Trading Credit Risk at Royal Bank of Canada.

Simultaneously with the work in Financial Institutions, Dr. Levin has been teaching various Quantitative Finance and Risk Management courses at the Master of Mathematical Finance programs at the University of Toronto (1999-2005), the University of North Carolina at Charlotte (2006), Leicester University (2007), McMaster University (2013-2014). Dr. Levin is Adjunct Associate Professor at McMaster University.

Dr Andrea Cangiani

http://www2.le.ac.uk/departments/mathematics/extranet/staff-material/staff-profiles/ac433

Dr Andrea Cangiani has a D.Phil. in Numerical Analysis from the University of Oxford. He is a Lecturer at the Department of Mathematics of the University of Leicester since 2010. He has an established research track record in the area of numerical solution of Partial Differential Equations (PDEs) and mathematical modelling with PDEs. Dr Cangiani's research has been disseminated in world-leading numerical analysis, engineering, and biology journals. He has been an invited speaker in international Numerical Analysis and Applied Mathematics conferences. Dr Cangiani has held visiting positions at the University of Leicester (before joining its faculty), the Archimedes Centre for Modelling, Analysis and Computation in Heraklion (Greece), McGill University in Montreal (Canada), and the Los Alamos National Laboratory (USA).

Dr Cangiani has over ten years of experience teaching applied mathematics in a number of institutions. In particular, in the last two years he taught computational PDEs both at undergraduate level and for the M.Sc. in Financial Mathematics and Computation at the University of Leicester and has supervised a number of M.Sc. students for the same M.Sc.
programme. Previous to this, he has lead courses on mathematical methods and computational PDEs at the University of Rome Tor Vergata, Italy.

Dr Alexandra Dias

http://www2.le.ac.uk/departments/management/people/adias

Dr Alexandra Dias holds a Ph.D. in Mathematics - Financial Risk Management from ETH Zurich, an M.Sc. in Actuarial Science and Financial Risk Management from the Universidade Técnica de Lisboa, Portugal and a Licenciatura in Mathematics - Actuarial Science from the Universidade Nova de Lisboa, Portugal. Dr Alexandra Dias is a student of Prof Paul Embrechts, a prominent specialist in Risk Management.

Alexandra Dias joined the School of Management, University of Leicester, in September 2011. Previously she was a lecturer at Warwick Business School, credit analyst at Credit Suisse (Zurich) and research associate at RiskLab, ETH-Zurich.

Dr Emmanuil (Manolis) Georgoulis

http://www2.le.ac.uk/departments/mathematics/extranet/staff-material/staff-profiles/eg64

Dr Emmanuil H. Georgoulis, D.Phil, University of Oxford, Computing Laboratory, is a Reader at the Department of Mathematics of the University of Leicester, having previously been a Lecturer (2004-'08) and a Senior Lecturer (2008-'10) at the same department. Dr Georgoulis has an established research record in numerical methods for PDEs. He is internationally known for his work on Discontinuous Galerkin methods for various classes of PDEs and the design of novel adaptive algorithms based on rigorous a posteriori error bounds. He has been a keynote speaker at two international conferences and an invited speaker at 5 international conferences and workshops. Dr Georgoulis has held a Visiting Professorship at the Institute of Applied Calculus of CNR, Rome, Italy, and Visiting Researcher positions at the Hausdorff Institute of Mathematics in Bonn, Germany, at the Archimedes Center for Modelling, Analysis and Computation, University of Crete, Greece and at the Institute of Mathematics, University of Coimbra, Portugal. Previously, Dr Georgoulis was the Chair of the Organising Committee for the European Numerical Mathematics and Advanced Applications Conference (ENUMATH) held at Leicester in 2011.

Dr Georgoulis has been actively involved in teaching numerical methods for the M.Sc. in Financial Mathematics and Computation during the last 7 years and has instructed numerous students in M.Sc. projects in Finance, many of who currently work in the finance industry.

Prof Sergey Utev

http://www2.le.ac.uk/departments/mathematics/extranet/staff-material/staff-profiles/sergey-utev
Prof Utev has PhD and Doctor of Sciences in Probability Theory from the Sobolev Institute of Mathematics, Novosibirsk University, Russia. He is a student of Prof. A.A. Borovkov, a prominent specialist in probability. Prof Utev worked at Novosibirsk University, La Trobe University (Melbourne), Australian National University (Canberra), Nottingham University and currently he is a professor at the Department of Mathematics, Leicester University, Director of The MSc program Financial Mathematics and Computation. He had numerous visiting positions at Universite Libre de Bruxelles, Zurich University, University of Groningen, University of Cincinnati, Singapore University. His theoretical research focuses on Analytic Methods in Probability Theory. He is also heavily involved in Stochastic modelling with applications to Finance, Actuarial Sciences and Epidemics. Many of his former MSc and PhD students work in the Financial and Actuarial Sectors.