Ioannis Kyriakou

Work Experience

2015– **Senior Lecturer in Actuarial Finance**, Faculty of Actuarial Science & Insurance, Cass Business School, City, University of London

2011–15 **Lecturer in Actuarial Finance**, Faculty of Actuarial Science & Insurance, Cass Business School, City, University of London

2018– **Affiliated Faculty**, Cyprus International Institute of Management

2016– **Visiting Professor**, Dipartimento di Studi per l'Economia e l'Impresa, Università del Piemonte Orientale

2010–11 **Lloyd's Investment Risk Model project analyst**, Lloyd's Treasury and Investment Management, London

2007–10 **Visiting teaching staff**, Cass Business School, City, University of London

Education

Qualifications Achieved

2016 **Diploma in Actuarial Techniques**, Institute and Faculty of Actuaries, United Kingdom

2006–10 **PhD Finance: 'Efficient valuation of exotic derivatives with path-dependence and early-exercise features'**, Cass Business School, City, University of London

2009 **Introductory Certificate in Teaching in Higher Education**, City, University of London

2005–06 **MSc Risk and Stochastics (with Distinction)**, London School of Economics and Political Science

2002–05 **BSc (Hons) Actuarial Science (First Class)**, Cass Business School, City, University of London

Membership of Professional Bodies

2016– Affiliate member of the Institute and Faculty of Actuaries, United Kingdom

2013–16 Student member of the Institute and Faculty of Actuaries, United Kingdom

2009– Associate Fellow of the Higher Education Academy, United Kingdom

Research

Refereed Publications

Communication and personal selection of pension saver's financial risk (2019), with Gerrard R., Hiabu, M., and Nielsen J. P., *European Journal of Operational Research*, 274(3), 1102–1111

A general framework for pricing Asian options under stochastic volatility on parallel architectures (2019), with Corsaro S., Marazzina D., and Marino Z., *European Journal of Operational Research*, 272(3), 1082–1095

Self-selection and risk sharing in a modern world of life-long annuities (2018), with Gerrard R., Hiabu M., and Nielsen J. P., *British Actuarial Journal*, 23, e30

Self-selection and risk sharing in a modern world of lifelong annuities - Abstract of the London Discussion (2018), with Gerrard R., Hiabu M., and Nielsen J. P., *British Actuarial Journal*, 23, e29

Shipping equity risk behavior and portfolio management (2018), with Pouliasis P. K., Papapostolou N. C., and Visvikis I. D., *Transportation Research Part A: Policy and Practice*, 116, 178–200

Income uncertainty and the decision to invest in bulk shipping (2018), with Pouliasis P. K., Papapostolou N. C., and Nomikos N. K., *European Financial Management*, 24(3), 387–417

On equity risk prediction and tail spillovers (2017), with Pouliasis P. K., and Papapostolou N. C., *International Journal of Finance & Economics*, 22(4), 379–393

Freight derivatives pricing for decoupled mean-reverting diffusion and jumps (2017), with Pouliasis P. K., Papapostolou N. C., and Andriosopoulos K., *Transportation Research Part E: Logistics and Transportation Review*, 108, 80–96

Herd behavior in the drybulk market: an empirical analysis of the decision to invest in new and retire existing fleet capacity (2017), with Papapostolou N. C., and Pouliasis P. K., *Transportation Research Part E: Logistics and Transportation Review*, 104, 36–51

Hedging of Asian options under exponential Lévy models: computation and performance (2017), with Ballotta L., and Gerrard R., *The European Journal of Finance*, 23(4), 297–323

Shipping investor sentiment and international stock return predictability (2016), with Papapostolou N. C., Pouliasis P. K., and Nomikos N. K., *Transportation Research Part E: Logistics and Transportation Review*, 96, 81–94

Jumps and stochastic volatility in crude oil prices and advances in average option pricing (2016), with Pouliasis P. K., and Papapostolou N. C., *Quantitative Finance*, 16(12), 1859–1873

Affine-structure models and the pricing of energy commodity derivatives (2016), with Nomikos N. K., Papapostolou N. C., and Pouliasis P. K., *European Financial Management*, 22(5), 853–881

General optimized lower and upper bounds for discrete and continuous arithmetic Asian options (2016), with Fusai G., *Mathematics of Operations Research*, 41(2), 531–559

Convertible bonds valuation in a jump diffusion setting with stochastic interest rates (2015), with Ballotta L., *Quantitative Finance*, 15(1), 115–129

Monte Carlo simulation of the CGMY process and option pricing (2014), with Ballotta L., *Journal of Futures Markets*, 34(12), 1095–1121

Investor Sentiment for Real Assets: The Case of Dry-Bulk Shipping Market (2014), with Papapostolou N. C., Nomikos N. K., and Pouliasis P. K., *Review of Finance*, 18(4), 1507–1539

Freight options: Price modelling and empirical analysis (2013), with Nomikos N. K., Papapostolou N. C., and Pouliasis P. K., *Transportation Research Part E: Logistics and Transportation Review*, 51, 82–94

An improved convolution algorithm for discretely sampled Asian options (2011), with Černý A., *Quantitative Finance*, 11(3), 381–389

Papers under Review

General Markov chain methods for arithmetic Asian options with possible early exercise, with Gambaro A. M., and Fusai G.

Forecasting benchmarks of long-term stock returns via machine learning, with Mousavi P., Nielsen J. P., and Scholz M.

Risk management of climate impact for tourism operators: An empirical analysis on ski resorts, with Ballotta L., Fusai G., Papapostolou N. C., and Pouliasis P. K.

Books

Introduction to Probability and Statistics, ed. 2015-16 (New York: McGraw-Hill Education, 2014)

Other Publications (Practitioner Magazines/Articles)

Time for a new financial system? (2018), by Ioannis Kyriakou, *The Actuary*, May issue

Making wellness and insurance rewarding (2017), by Ioannis Kyriakou, *The Actuary*, November issue

Surviving the journey from student to actuary (2017), by Ioannis Kyriakou, *The Actuary*, May issue

Number crunching (July/August 2015), with ICAEW Finance and Management Faculty, *Finance & Management Magazine*, Issue 234

Sail of the century (2013), with Papapostolou N. C., Nomikos N. K., and Pouliasis P. K., *InBusiness*, Issue 19

Sentiment index guides asset play (2013), with Papapostolou N. C., Nomikos N. K., and Pouliasis P. K., *Lloyd's List*, 7 June

Option pricing: a new model for freight (2012), with Nomikos N. K., Papapostolou N. C., and Pouliasis P. K., *The Baltic*, Think Publishing

Major Conference Presentations (last three years)

2019 **Workshop on Advances in Computational Finance (invited speaker)**, Departamento de Economía, Universidad de La Laguna, Tenerife

2019 **King's Business School research seminars (invited speaker)**, King's College London, United Kingdom

2019 **Research seminars (invited speaker)**, Department of Economics, Universität Graz, Austria

2018 **10th World Congress of the Bachelier Finance Society**, Trinity College, Dublin

2018 **4th Symposium on Quantitative Finance and Risk Analysis**, Mykonos, Greece

2018 **Matlab Computational Finance Conference 2018 (invited speaker)**, London

2018 **9th Research Workshop on Energy Markets (invited speaker)**, Valencia, Spain

2018 **XIX Quantitative Finance Workshop**, Rome, Italy

2017 **2nd International Conference on Computational Finance**, Lisbon, Portugal

2017 **3rd Symposium on Quantitative Finance and Risk Analysis**, Corfu, Greece

2017 **Finance and Stochastics seminar series (invited speaker)**, University of Sussex

2017 **XVIII Workshop on Quantitative Finance**, Università degli Studi di Milano-Bicocca

2017 **5th NUS Workshop on Risk and Regulation (invited speaker)**, National University of Singapore

2016 **Regular Seminar Series (invited speaker)**, Dipartimento di Matematica, Politecnico di Milano

2016 **9th World Congress of the Bachelier Finance Society**, New York

2016 **2nd Symposium on Quantitative Finance and Risk Analysis**, Rhodes, Greece

2016 **Spring 2016 Conference of the Multinational Finance Society**, Lemesos, Cyprus

Teaching Experience

2018– **Quantitative Methods & Statistical Analysis**, *MSc Business Intelligence & Data Analytics*, Cyprus International Institute of Management

2017– **Computational Finance & Financial Modelling**, *Cass London Summer School*, Cass Business School, City, University of London

2016– **Quantitative Finance: Monte Carlo Simulation in Finance**, *MSc Management & Finance*, Dipartimento di Studi per l'Economia e l'Impresa, Università del Piemonte Orientale

2014– **Derivatives**, *BSc Banking & International Finance*, Cass Business School, City, University of London

2012–16 **Introduction to Probability and Statistics**, *BSc Mathematics*, School of Engineering and Mathematical Sciences, City, University of London

2011– **Numerical Methods: Applications**, *MSc Financial Mathematics & MSc Quantitative Finance*, Cass Business School, City, University of London

2011–12 **Derivatives 1**, *MSc Mathematical Trading & Finance*, Cass Business School, City, University of London

2009–10 **Statistics and Probabilistic Modelling for Insurance**, *BSc Actuarial Science*, Cass Business School, City, University of London

Teaching assistantship, Cass Business School, City, University of London: Financial and Investment Mathematics (Undergraduate, 2008–2010), Numerical Methods 2: Applications in Finance (MATLAB-based Labs) (Postgraduate, 2008–2009), Probability and Statistics 2 (Undergraduate, 2007–2009), Advanced Mathematics (Postgraduate, 2007–2008)

Contributions to Administration / Academic Leadership

2018– **Director**, *Cass Summer School*, Cass Business School, City, University of London

2017 **Regular member of electoral committee**, Department of Financial and Management Engineering, School of Business, University of the Aegean

2017 **Member of The Bachelier Finance Society**

2016– **Course Director**, *MSc Actuarial Science*, Cass Business School, City, University of London

2017– **Member of scientific committee of Insurance Data Science conference**

2016– **Co-chair committee of Symposium on Quantitative Finance and Risk Analysis (QFRA)**

2016 **Member of management chair committee of 2nd Symposium on Quantitative Finance and Risk Analysis (QFRA 2016)**, Rhodes, Greece

2016 **Founding Member of the Hellenic Academics Association of Great Britain**

2014– **Admissions Tutor**, *MSc Actuarial Science*, Cass Business School, City, University of London

2013– **TANC (The Actuarial Network at Cass) Executive Advisor**, Cass Business School, City, University of London

2013 **External reporting to programme modifications approval**, *BSc Mathematics with Finance*, University of Liverpool

2013 **Member of organising committee for Cass seminar – Investor Sentiment for Real Assets: The Case of Dry-Bulk Shipping Market**, Cass Business School, City, University of London

2012– **Library Faculty Representative**, Cass Business School, City, University of London

Other

Grants

2018 Cass Knowledge Exchange and Impact Fund, *with Fusai G.*

2018 Education Enhancement Grant (Graduate School, Università Commerciale Luigi Bocconi), *with Fusai G.*

2017– Erasmus+

2016 Cass Business School Pump Priming Grant, *with Ballotta L., Fusai G., Papapostolou N. C., Pouliasis P. K.*

2008 Cass Business School-EPSRC Doctoral Training Award

Honours and Prizes

2014 Cass Business School Prize for Excellence in Teaching and Learning

2009 Dimitris N. Chorafas Foundation Prize 2009 for Outstanding PhD Research Work

Editorial and Refereeing Activity

Special co-editor, Risks (2018): *Machine Learning in Insurance*
Special co-editor, International Journal of Finance & Economics (2018): *Innovations in Finance, Economics, Risk Management & Policy*
Special co-editor, Annals of Operations Research (2017): *Application of Operations Research to Financial Markets*
Special co-editor, International Journal of Financial Engineering and Risk Management (2013): *New Facets of Old Risk: A Quantitative Approach*

Refereeing: Journal of Risk and Financial Management (2019–), Applied Economics Letters (2019–), Annals of Actuarial Science (2019–), Aviation (2019–), Future Business Journal (2019–), Journal of Futures Markets (2019–), Journal of Statistical Computation and Simulation (2018–), CRC Press/Taylor & Francis Group (2018–), International Journal of Finance & Economics (2018–), Risks (2018–), International Journal of Markets and Business Systems (2018–), International Journal of Financial Studies (2018–), Energy Economics (2018–), Transportation Research Part E: Logistics and Transportation Review (2017–), Economies (2017–), Maritime Policy & Management (2017–), Journal of Industrial and Management Optimization (2017–), European Financial Management (2017–), Financial Innovation (2017–), INFORMS Journal on Computing (2017–), Finance Research Letters (2016–), Annals of Operations Research (2016–), European Journal of Operational Research (2016–), Financial Analysts Journal (2016–), Operations Research (2016–), Applied Mathematics and Computation (2016–), Journal of Systems Science and Systems Engineering (2015–), Mathematics of Operations Research (2015–), Quantitative Finance (2015–), International Symposium on Mathematical Sciences and Computing (2015), Journal of Banking and Finance (2014–), Journal of Risk Finance (2014–), Palgrave Macmillan Higher Education (2014–), The Engineering Economist (2013–), International Journal of Financial Engineering and Risk Management (2012–), Applied Mathematical Finance (2012–), Review of Derivatives Research (2012–), SIAM Journal on Financial Mathematics (2012–), Journal of Computational Finance (2010–).

External Examinership

2019 **Research proposal reviewer**, Executive government agency of National Science Centre, Poland

2017– **External Examiner**, *Bachelor of Business Actuarial Science*, Nanyang Business School, Nanyang Technological University

2016– **External Examiner**, *BSc Actuarial Science and Mathematics*, School of Mathematics, The University of Manchester

2016– **Independent Examiner**, Institute and Faculty of Actuaries

2013–18 **Marking Reviewer**, *Subject CT1 Financial Mathematics*, Institute and Faculty of Actuaries

Consultancy Work

2014 **Periodic product and processes review under the Solvency II Directive**, Lloyd's Treasury and Investment Management

2012–13 **Periodic product and processes review under the Solvency II Directive**, Lloyd's Treasury and Investment Management

Research Students

2017– **Riccardo Brignone**, *PhD Statistics and Mathematical Finance: 'Application of moment-matching techniques for arithmetic averages under non-standard dynamics'*, Università degli Studi di Milano-Bicocca

2017– **Parastoo Mousavi**, *PhD Actuarial Science: 'Machine learning and back-testing techniques in the financial econometrics of long-term stock returns'*, Cass Business School, City, University of London