MARINA MARENA

ACADEMIC POSITION

POSITION	Assistant Professor
AFFILIATION	Dept. of Economics and Statistics, Università degli Studi di Torino (Italy)

ACADEMIC EXPERIENCE

- Assistant Professor at Dept. of Mathematics and Statistics, Università of Torino, Italy, since 2004.
- Member of the Board of Directors, Università del Piemonte Orientale, 2002-2004.
- Assistant Professor at Dept. SEMEQ, Faculty of Economics, Università del Piemonte Orientale, Novara, Italy, 1994-2003.
- Visiting Scholar, Cass Business School, City University, London, May-June 2004.
- Teaching Assistant in Principles of Microeconomics, Department of Economics, University of Southern California, Los Angeles (1999-2000).

EDUCATION

- Ph.D in "Mathematics Applied to Economic and Social Problems", Dept. of Applied Mathematics De Finetti, University of Trieste, 1996. Thesis Topic: Turnpike results for continuous-time, infinite-horizon optimization models with positive discounting. Supervisor: L. Montrucchio.
- Laurea cum laude, Faculty of Economics, University of Turin, 1990. Dissertation: An evaluation method of life insurance portfolios. Supervisor: L. Peccati.

RESEARCH INTERESTS

Mathematical Finance, Computational Finance, Insurance

TEACHING

Undergraduate Level

- Quantitative Methods for Financial Markets, Università di Torino, 2005-2014.
- Calculus, Università di Torino, 2009-2011.
- Probability, Università di Torino, 2004.
- Modern Portfolio Theory, Università del Piemonte Orientale, 2002.
- Calculus, Università del Piemonte Orientale, 1993-2004.
- Financial Computing, Università del Piemonte Orientale, 1993-2000.
- Calculus, SAA Business School, Università di Torino, 1991-1994, 1996, 2002, 2003.

Graduate Level

- Mathematics for finance, Università di Torino, since 2016.
- Financial Mathematics, Università di Torino, 2015.
- Statistics Applied to Law, IEL PhD Programme, Collegio Carlo Alberto, 2013.
- Fixed income, Università di Torino, since 2011.
- Mathematical Finance, Università di Torino, 2005-2008.
- Stochastic calculus, Università di Torino, 2004.
- Analysis, Università di Torino, 2004.

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Master Level

- Credit Risk, Master in Finance, Insurance and Risk-Management, Collegio Carlo Alberto, 2014-2018.
- Fixed Income Securities (SMM269), MSc in Financial Mathematics and MSc in Quantitative Finance, Cass Business School, London, UK, 2012.
- Transform methods, 3rd unit, Master MIP, Politecnico di Milano-School of Management, Corso di Alta Formazione in Finanza Quantitativa, since 2011.
- Exotic derivatives, Master in Quantitative Finance, Università Bocconi, since 2009.
- Lab classes in Fixed Income, Master in Finance, Insurance and Risk-Management, Collegio Carlo Alberto, 2002-2018.
- Risk Managemenent, Master MEGIF, Faculty of Economics, Novara, 2003-2010.
- Quantitative Finance, Master in Entrepreneurial Economy, Faculty of Economics, Podgorica, Montenegro, 2005 and 2007.
- Principles of finance, Master in Quantitave Finance, Department of Physics, Università di Milano, 2004.
- Risk Managemenent in Non-Financial Companies, Master in Marketing, Università di Torino, 2004.

Executive Level

- Quantitative methods, Master in Banking and Risk Management, Biverbanca, Banca Sella and Faculty of Economics, Turin, 2009.
- Quantitative methods, 3rd unit, Master Unicredit Private Banking and Faculty of Economics, Turin, 2006, 2008 and 2011.

GRANTS

- Project SmartFASI, Regione Piemonte and European Regional Development Fund, 2014. Group member.
- Italian MURST-Cofin Research project, Credit Risk, 2006-2008, Group member.
- Grant by CRT Foundation for a Project on Technological Innovation in Finance, 2012. Group member.
- Italian MURST-Cofin Research project, Modelli strutturali e modellizzazione della dipendenza tra fallimenti, 2007-2009, protocollo 2006132713_001. Group member.
- Italian MURST-Cofin Research project, Fondamenti decisionisti e matematici del modello robusto di scelta, 2004-2006, protocollo 2004137977_003. Group member.
- Italian MURST-Cofin Research project, Tecniche analitiche e computazionali per la gestione del rischio in ambito finanziario, 2003-2005, protocollo 2003133037_005. Group member.
- Italian MURST-Cofin Research project, Dinamiche Economiche di Equilibrio, 2000-2002, protocollo MM13212394_005. Group member.
- Italian MURST-Cofin Research project, Dinamiche Deterministiche e Stocastiche nei Modelli Economici, 1998-2000, protocollo 9813108980_004. Group member.

PUBLICATIONS

Articles in Refereed Journals and Books

- M. Marena, A. Romeo, P. Semeraro (2018). Multivariate factor-based processes with Sato margins, INTERNATIONAL JOURNAL OF THEORETICAL AND APPLIED FINANCE, in print.
- M. Marena, A. Romeo, P. Semeraro (2018). Pricing multibarrier reverse convertibles with factor-based subordinators, JOURNAL OF COMPUTATIONAL FINANCE, in print.
- P. Jevtic, M. Marena, P. Semeraro (2017). Multivariate marked Poisson processes and market related multidimensional information flows, submitted.

- P. Jevtic, M. Marena, P. Semeraro (2017). A note on Marked Point Processes and multivariate subordination, STATISTICS AND PROBABILITY LETTERS, ISSN: 0167-7152.
- Fusai G., L. Ballotta, M. Marena (2016), 'Introduction to Default Risk and Counterparty Credit Modelling' in Vincent Kaminsky (ed.), Managing Energy Price Risk (by invitation), ed. 4th , RISK BOOKS, ISBN 9781782722090; keywords: Energy risk, Credit risk in commodity markets.
- E. Luciano, M. Marena, P. Semeraro (2016). Dependence Calibration and Portfolio Fit with FactorBased Time Changes, QUANTITATIVE FINANCE, ISSN: 1469-7688.
- G. Fusai, M. Marena, G. Longo (2015). Asian options in commodity markets: structuring, pricing and hedging. HANDBOOK OF MULTI-COMMODITY MARKETS AND PRODUCTS: Structuring, Trading and Risk Management, WILEY FINANCE SERIES, ISBN: 9780470745243.
- G. Fusai, M. Marena, C. Quaglini (2015). Pricing Commodity Swaps with Counterparty Credit Risk: The Case of Credit Value Adjustment. HANDBOOK OF MULTI-COMMODITY MARKETS AND PRODUCTS: Structuring, Trading and Risk Management, WILEY FINANCE SERIES, ISBN: 9780470745243.
- G. Fusai, M. Marena, A. Roncoroni (2013). Asian options with jumps. In New Frontiers in Practical Risk Management, Issue N.1, ARGO NEWSLETTER.
- G. Fusai, D. Marazzina, M. Marena (2011). Pricing Discretely Monitored Asian Options by Maturity Randomization. SIAM JOURNAL ON FINANCIAL MATHEMATICS, vol. 2, p. 383-403, ISSN: 1945-497X, doi: 10.1137/09076115X.
- G. Fusai, D. Marazzina, M. Marena, M. Ng (2011). Z-Transform and Preconditioning Techniques for Option Pricing. QUANTITATIVE FINANCE, vol. iFirst, p. 1-14, ISSN: 1469-7688, doi: 10.1080/ 14697688.2010.538074.
- G. Fusai, D. Marazzina, M. Marena (2010). Option Pricing, Maturity Randomization and Distributed Computing. PARALLEL COMPUTING, vol. 36-7, p. 403-414, ISSN: 0167-8191.
- G. Fusai, G. Longo, M. Marena, M.C. Recchioni (2009). Lévy processes and option pricing by recursive quadrature. In: C. W. Hurlington. Economic Dynamics: theory, games and empirical studies, p. 31-57, New York: NOVA SCIENCE PUBLISHERS, Inc, ISBN: 9781604569117.
- G. Fusai, M. Marena, A. Roncoroni (2008). Analytical pricing of discretely monitored Asian-style options: theory and application to commodity markets. JOURNAL OF BANKING & FINANCE, vol. 32, Issue 10, p. 2033-2045, ISSN: 0378-4266.
- G. Fusai, M. Marena (2008). The Laplace transform. In: G. Fusai, A. Roncoroni. Implementing models in Quantitative Finance: methods and cases, p. 213-230, Heidelberg: Springer-Verlag, SPRINGER FINANCE SERIES, ISBN: 9783540223481.
- G. Fusai, D. Marazzina, M. Marena (2008). Option pricing, maturity randomization and grid computing. In: PARALLEL AND DISTRIBUTED PROCESSING (IPDPS 2008). Miami, Florida, 15/04/2008, p. 1-8, Piscataway, NJ :IEEE, ISBN: 9781424416943, doi: 10.1109/IPDPS.2008.4536458.
- E. Luciano, M. Marena (2002). Portfolio Value at Risk Bounds. INTERNATIONAL TRANSACTIONS IN OPERATIONAL RESEARCH, vol. 9 (5), p. 629-42, ISSN: 0969-6016.
- E. Luciano, M. Marena (2002). Copulae as a New Tool in Financial Modelling. OPERATIONAL RESEARCH, vol. 2, p. 139-155, ISSN: 0030-364X.
- E. Luciano, M. Marena (2002). Value at Risk Bounds for Portfolios of non-normal Returns. In: Zopounidis. NEW TRENDS IN BANKING MANAGEMENT, p. 207-222, Berlin: Physica-Verlag HD. ISBN: 9783790814880.
- M. Marena, L. Montrucchio (1999). Neighborhood Turnpike Theorem for Continuous-Time Optimization Models. JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS, vol. 101, p. 651-676, ISSN: 0022-3239.
- M.L. Gota, M. Marena (1995). TAEG and fee structure under budget constraints. AIRO, ISSN: 0871-6595.
- R. Camillo, M. Marena (1994). Un metodo di valutazione di un portafoglio assicurativo vita. RIVISTA DI MATEMATICA PER LE SCIENZE ECONOMICHE E SOCIALI, ISSN: 1127-1035.

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Other publications

- G. Fusai, L. Longo, M. Marena (2006). Calcolo del VaR, CHARTAGEOS, n. 1, May 2006.
- S. Bosco, M. L. Gota, M. Marena, L. Peccati (1993). Tassi trasparenti. AMMINISTRAZIONE & FINANZA, vol. 4, p. 224-226, ISSN: 1971-5013.
- M. Marena (1990). Sulla valutazione dei crediti a scopo di cessione. IL RISPARMIO, vol. 6, p. 1377-1385, ISSN: 0035-5615

Conference proceedings

- G. Fusai, R. Chinelli, D. De Martini, G. Longo, M. Marena, L. Mariano, R. Cappuccio, R. Sgherri, L. Regini, W. Chierici, E. Coccia (2006). Grid based full portfolio revaluation for VaR computation. In: PoS(GRID2006)010. p. 153/1-153/18, Trieste: Sissa , Palermo, 03/02/06.
- G. Fusai, G. Longo, M. Marena, A. Vulcano (2002). Probabilistic techniques for contingent claims evalution. In: Basso A., Corazza M., Finanza quantitativa. ATTI DELLA SCUOLA ESTIVA 2002- Auronzo di Cadore, p. 1-38, Venezia: Dipartimento di Matematica Applicata - Universitï¿½ Ca' Foscari Venezia , ISBN: 8888037039, Auronzo di Cadore, 30 maggio 2002.
- M.L. Gota, M. Marena (1994). TAEG e commissioni. In: ATTI DEL XVIII CONVEGNO AMASES, p. 1-12, Milano: Amases, Modena, 5-7 settembre 1994.
- M. Marena (1991). L'indicizzazione finanziaria in contratti di vendita rateale a sconto commerciale. In: ATTI DEL XV CONVEGNO AMASES, p. 393-400, Milano: Amases, Grado, 26-29 settembre 1991.

Conference presentations

- "Analysis of Estimation Risk for Exotic Options through a Resampling Technique ", with G. Fusai, *41st Amases Meeting*, Cagliari, 2017.
- "Multivariate factor-based processes with Sato margins", *Recent Developments in Dependence Modelling with Applications in Finance and Insurance, 4th edition*, with A. Romeo and P. Semeraro, Aegina, Greece, May 22-23, 2017.
- "Analysis of Estimation Risk for Exotic Options through a Resampling Technique", *XVIII Workshop on Quantitative Finance*, Milan, January 26-27, 2017.
- "Analysis of Estimation Risk for Exotic Options through a Resampling Technique", *COLLOQUE MAF*, Paris March 30-31 and April 1, 2016.
- "Factor-Based Time Changes", with E. Luciano and P. Semeraro, *XV Workshop on Quantitative Finance*, Firenze, January 23-24, 2014.
- "Tips for Hybrid Models", with G. Fusai, *XXXV Convegno AMASES,* Pisa, September 15-17, 2011.
- "Control variates for discretely monitored Asia-style options under stochastic volatility and jumps markets", with G. Fusai and A. Roncoroni, Quant Risk USA, Post Congress Workshop, New York, July 2009 and 3rd Risk Management Conference, RMI, National University of Singapore, July 2009.
- "Option Pricing, Maturity Randomization and Grid Computing", with G. Fusai and D. Marazzina, in: *Proceedings of the 22nd IEEE International Parallel and Distributed Processing Symposium* (IPDPS 2008), 14-18 Aprile 2008, Miami, USA, ISBN: 978-1-4244-1694-3/08.
- "Pricing of exotic options under Lévy processes by a Wiener-Hopf approach", with G. Fusai, D. Marazzina, and M. Ng, Bachelier Conference, London, 2008.
- "Commodity Asian Options: A Closed-Form Formula", with G. Fusai and A. Roncoroni, 2008 EFA Meetings, Athens.
- "Grid Based Full Portfolio Revaluation for VaR Computation", with G. Fusai et alii, *Proceedings of Science*, 1st International Workshop on Grid Technology for Financial Modeling and Simulation, Palermo, 2006.
- "A Copula Based Lattice Method for AssetReturns", with N. Webber, *XXXV Convegno AMASES,* Cagliari, September 3-6, 2003.

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- “Probabilistic techniques for contingent claims evalution”, with G. Fusai, G. Longo and A. Vulcano, *Proceedings of Conference on Computational Finance*, Auronzo, 2002.
- “TAEG and fees”, with M.L. Gota, *Proceedings of the XVI Amases* Meeting, Modena, 1992.
- “L’indicizzazione finanziaria in contratti di vendita rateale a sconto commerciale”, in *Proceedings of the XV Amases* Meeting, Grado, 1991.
- “Pricing of exotic options under Lévy processes”, with G. Fusai and G. Longo, *Proceedings of the XXIX Amases* Meeting, Palermo, 2005.
- “A copula based lattice method for asset returns”, with N. Webber, *Proceedings of the XXVII Amases* Meeting, Cagliari, 2003.
- “On the financial appraisal of projects”, XI Conference of the EURO Working Group on Financial Modelling, Cogne, 1992.
- “The decomposition of NPV in non-life Insurance”, X Conference of the EURO Working Group on Financial Modelling, London, 1991.
- “The decomposition of NPV in Insurance”, IX Conference of the EURO Working Group on Financial Modelling, Curacao, 1991.

AD HOC REFEREEING

Academic Press, Review of Finance, Operational Research, Parallel computing, European Journal of Operational Research, European Financial Management.

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