

XXXVII Meeting of the Italian Association for Mathematics Applied to Economic and Social Sciences (AMASES)

PROGRAMME

Stream:

-  Mathematical finance
-  Decision Theory
-  Mathematical Economics
-  Actuarial Mathematics
-  Game Theory
-  Optimization
-  Plenary

Each speaker will have 20 minutes for presentation (introduction and questions).

The rooms are equipped with notebook, video projector and flipchart. *We recommend you bring back-up copies of your presentation on USB stick (power point or pdf)*

Thursday, September 5 – morning

9.00 Registration starts at La Palma Hotel – Sala Camino			
10.00-11.20 Parallel sessions	Actuarial Mathematics Sala Gardenia Chair: D. Scolozzi	Mathematical economics Sala Meridiana 2 Chair: B. Venturi	Mathematical finance Sala Meridiana 1 Chair: G. Weinrich
	G.P. Clemente , Catholic University of Milan; N. Savelli, Catholic University of Milan; D. Zappa, Catholic University of Milan. <i>Modelling Premium Risk for Solvency II: from empirical data to risk capital evaluation</i>	P. Falbo , University of Brescia; J. Hinz, University of Technology - Sydney; Cristian Pelizzari, University of Brescia. <i>Design of efficient cap-and-trade systems: An equilibrium analysis.</i>	L. Bellenzier , University of Milan Bicocca; J. V. Andersen University of Paris Pantheon-Sorbonne CNRS; G. Rotundo, Sapienza University of Rome. <i>Dynamics in World Stock Exchange Network.</i>
	M. Costabile , University of Calabria. <i>Analytical valuation of periodical premiums for equity-linked policies with minimum guarantee</i>	G. Oggioni , University of Brescia; F. H. Murphy, Temple University, Philadelphia; Y. Smeers, Université catholique de Louvain, Belgium. <i>Comparing Nodal Pricing and Market Coupling in Presence of Wind Penetration.</i>	E. Laghi, Sapienza University of Rome; M. Di Marcantonio , Sapienza University of Rome; E. D'Amico, Roma Tre University. <i>Estimating Credit Default Swap Prices Using Market Data, Balance Sheet Information and Credit Ratings: the European Banks Case.</i>
	G.P. Clemente , Catholic University of Milan; G. Spedicato, Catholic University of Milan. <i>Claims Reserving using GAMLS</i>	C. Anedda, University of Cagliari; B. Venturi , University of Cagliari. <i>Hopf bifurcations and periodic solutions in non linear economic models</i>	C. Nielsen, Catholic University of Milan; G. Weinrich , Catholic University of Milan. <i>Bank Regulation when both Deposit Rate Control and Capital Requirements are Socially Costly</i>
	A. Congedo, University of Salento; L. Romano, University of Salento; D. Scolozzi , University of Salento; M. Sozzo, University of Salento. <i>Una forma ottimale di assicurazione in presenza di una funzione di utilità non necessariamente regolare</i>	M. Bertocchi , University of Bergamo; P. Pisciella, University of Bergamo; M.T. Vespucci, University of Bergamo; S. Zigrino, University of Bergamo. <i>A risk averse three-stage stochastic mixed integer optimization model for power generation capacity expansion</i>	A. Meucci; M. Nicolosi , University of Perugia. <i>Dynamical Flexible Views with Multiple Horizons Allocation</i>

11.20- 11.40	
11.40- 12.10	<p style="text-align: center;">Coffee Break</p> <p style="text-align: center;">Welcome – opening</p> <p style="text-align: center;">Sala Gardenia</p>
12.10- 13.10	<p>Plenary session: Best paper by young researchers</p> <p>Sala Gardenia</p> <p>Chair: A. Basso</p> <p>R. Caldana, University of Piemonte orientale; G. Fusai, University of Piemonte Orientale and Cass Business School <i>A general closed-form spread option pricing formula</i></p> <p>T. De Angelis, University of Manchester, UK; G. Ferrari, Bielefeld University, Germany. <i>A Stochastic Reversible Investment Problem on a Finite-Time Horizon: Free Boundary Analysis</i></p> <p>D. Radi, University of Urbino and University of Bergamo; F. Dercole, Polytechnic of Milan. <i>Does the “uptick rule” stabilize the stock market? Insights from adaptive rational equilibrium dynamics</i></p>

Thursday, September 5 – afternoon

14.40-15.40 Plenary session Sala Gardenia Chair: A. Basile Hans Föllmer – University of Berlin, Germany. <i>Bubbles, Risk, and Knightian Uncertainty: On the Role of Probability in Finance</i>			
Optimization Sala Gardenia Chair: S. Scotti F. Bonacina , University of Milan Bicocca. <i>Optimal portfolio for electricity generation: the italian case.</i> G. Consigli , University of Bergamo. <i>Optimal long-term management of a P&C insurance portfolio with endogenous risk control</i> A. Cornaro , Catholic University of Milan; G.P. Clemente, Catholic University of Milan. <i>A numerical procedure for computing lower bounds for the Kirchhoff Index</i> S. Scotti , Université Paris Diderot. <i>Optimal liquidation of an illiquid asset under stochastic liquidity and regime shifting”</i> C. Schrage University of Valle d'Aosta, G.P. Crespi, University of Valle d'Aosta: <i>Variational inequalities in set optimization</i>	Mathematical economics Sala Meridiana 1 Chair: F. Privileggi M. D'Errico , University of Milan Bicocca; S. Stefani, University of Milan Bicocca <i>A Time – Dependent Network Approach for Opinion Dynamics in Finance</i> F. Privileggi , University of Piemonte Orientale <i>Takeoff vs. Stagnation in Endogenous Recombinant Growth Models</i> R. Riccardi , University of Brescia; E. Allevi, University of Brescia; A.J. Conejo, University of Castilla - La Mancha; G. Oggioni, University of Brescia <i>Strategic gaming analysis for cement industry: a bilevel approach</i> A.L.Wirkierman , Catholic University of Milan; N. Garbellini, University of Pavia <i>Community Structure in Input-Output Networks: An algorithm based on the spectral bisection method.</i> G. Di Biase , University of Chieti. <i>Decomposition of the Dynamic Theil's Entropy and its Application to four European Countries</i>	Mathematical finance Sala Meridiana 2 Chair: F. Bellini Michele Longo, Catholic University of Milan; A. Mainini , Catholic University of Milan. <i>Portfolio Comparison with Complete and Partial Observation for a HARA investor</i> F. Bellini , University of Milan Bicocca; B. Klar, Karlsruher Institut für Technologie (KIT); A. Müller, University of Siegen; E. Rosazza Gianin. University of Milan Bicocca. <i>Expectiles as risk measures.</i> E. Barucci, Polytechnic of Milan; E. Biffis, Imperial College - London; D. Marazzina , Polytechnic of Milan. <i>Regime Switching, Labor Income and Optimal Retirement.</i> A. Nassigh , UniCredit Spa and Bocconi University of Milano; S. Marmi, Scuola Normale Superiore of Pisa. <i>Market Implied Ratings Changes for Sovereign Issuers</i>	
15.40-17.20 Parallel Sessions			

17.20- 17.40	Coffee break		
17.40-19.20 Parallel Sessions	Actuarial Mathematics Sala Meridiana 2 Chair: E. Vannucci <p>A. Andreoli, Università Politecnica delle Marche; L.V. Ballestra, University of Naples; G. Pacelli, Università Politecnica delle Marche. <i>From insurance risk to credit portfolio management: a new approach to pricing CDOs</i></p> <p>F. Mauceri, Sapienza University of Rome; M. Caputi, Sapienza University of Rome. <i>Solvency II: The Impact of "Counter-cyclical Premium" and "Matching Adjustment" measures in a Least Squares Monte Carlo approach for life insurance reserving risk.</i></p> <p>E. Luciano, University of Turin, Collegio Carlo Alberto and ICER; L. Regis, University of Turin. <i>Demographic risk transfer with longevity risk: is it worth for annuity providers?</i></p> <p>A. Congedo, University of Salento; L. Romano, University of Salento; D. Scolozzi, University of Salento; M. Sozzo, University of Salento. <i>Una forma ottimale di gestione del patrimonio comune nel caso delle reti di impresa rispetto al rischio di tasso.</i></p> <p>E. Vannucci, University of Pisa; M. Galeotti, University of Florence. <i>The evaluation of the sum of dependent risks: a geometric-combinatorial approach.</i></p>	Decision Theory Sala Gardenia Chair: R. A. Marques Pereira <p>S. Angilella, University of Catania; S. Mazzù, University of Catania. <i>The Financing of Innovative SMEs: a multicriteria credit rating model.</i></p> <p>M. Fedrizzi, University of Trento. <i>Obtaining non-dominated weights from preference relations through norm-induced distances</i></p> <p>A. Giarlotta, University of Catania; S. Watson, York University, Toronto. <i>The pseudo-transitivity of preference relations: strict and weak \$(m,n)\$-Ferrers properties</i></p> <p>F. Lamperti, Sant'Anna School of Advanced Studies of Pisa; M. Ferrara, University of Reggio Calabria. <i>Evaluating Multi-Nature Performances of Science Parks: an application of Choquet Integration.</i></p> <p>R. A. Marques Pereira, University of Trento; S. Bortot, University of Trento. <i>The Gini inequality index and the k-additive decomposition of OWA functions</i></p>	Mathematical finance Sala Meridiana 1 Chair: G.L. Tassinari, <p>G. Callegaro, University of Padua; S. Scotti, Université Diderot - Paris. <i>Optimal investment in a shot-noise market model under partial information.</i></p> <p>C. Fontana, INRIA Paris; R. M. Jeanblanc, University of EvryShiqi Song. <i>Insider trading, arbitrage profits and honest times</i></p> <p>A. L. Martire, Ph.D.; Emilio Russo, University of Calabria. <i>A lattice model for valuing options on asset with discrete dividends</i></p> <p>G.L. Tassinari, University of Bologna; Michele Leonardo Bianchi, Bank of Italy. <i>Calibrating the smile with multivariate time-changed Brownian motion and the Esscher transform</i></p> <p>A. Staino, University of Calabria; A. Consiglio, University of Palermo; E. Russo, University of Calabria. <i>Scenario generator based on the monomial method</i></p>

Friday, September 6 - morning

	Mathematical finance	Decision theory	Game theory
	Sala Gardenia	Sala Meridiana 1	Sala Meridiana 2
	Chair: F. Mariani F. Angelini , University of Perugia. <i>The True Story of XS01 - VaR Estimates of a Corporate Bon</i> L. Fatone , University of Camerino; F. Mariani, University of Verona; M.C. Recchioni, Università Politecnica delle Marche; F. Zirilli, Sapienza University of Rome. <i>Closed form formulae for the moments of the lognormal SABR model variables and their use to solve two calibration problems</i> F. Mariani , University of Verona; L. Fatone, University of Camerino; M.C. Recchioni, Università Politecnica delle Marche; F. Zirilli, Sapienza University of Rome. <i>Trading execution strategies: a mathematical model</i>	Chair: A. Giarlotta S. Angilella , University of Catania; S. Corrente, University of Catania; S. Greco, University of Catania and University of Portsmouth; R. Slowinski, Poznań University of Technology. <i>Robust Ordinal Regression and SMAA in Multiple Criteria Hierarchy Process for the Choquet Integral</i> A. Baillon Erasmus School of Economics, Rotterdam; H. Bleichrodt, Erasmus School of Economics, Rotterdam; A. Cillo , Bocconi University of Milan. <i>A Tailor-Made Test of Intransitive Choice</i> A. Giarlotta , University of Catania. <i>A genesis of interval orders and semiorders: transitive NaP-preferences</i>	Chair: L. Pusillo A. Buratto , University of Padua; L. Grosset, University of Padua; G. Zaccour, GERAD, HEC Montréal, Canada. <i>Commercial piracy as a differential game</i> F. Centrone , University of Piemonte Orientale; A. Martellotti, University of Perugia. <i>A mesh-based derivative for TU games as an Aumann-Shapley value on a subspace of AC</i> L. Pusillo , University of Genoa. <i>Environmental models and partial cooperative games</i>
9.00-10.00 Parallel Sessions			
10.00-10.30	Coffee break		
10.30-11.30	Plenary session Sala Gardenia Chair: B. Viscolani Marcello Galeotti – University of Florence, Italy <i>Geometric algorithms in finance and insurance computations</i>		

Actuarial Mathematics	Mathematical economics	Game Theory
Sala Gardenia	Sala Meridiana 2	Sala Meridiana 1
Chair: R. Manca	Chair: M.G. Graziano	Chair: F. Pressacco
F. Menoncin, University of Brescia; E. Vigna , University of Turin and Collegio Carlo Alberto. <i>Mean-variance optimization in DC plan with stochastic interest rate</i> E. Coratti , University of Rome; F. Di Gregorio, Sapienza University of Rome; R. Marchese, Sapienza University of Rome. <i>Evaluating the solvency capital requirement for market risk in solvency ii via replicating portfolio approach.</i> M. Piccinini , Sapienza University of Rome; T. Androshchuk PhD, KPMG LLP. <i>Measuring (risk-adjusted) performance of insurance business: current practices and potential developments</i> R. Manca , Sapienza University of Rome; F. Gismondi, University "Guglielmo Marconi"; J.Janssen, Université Libre de Bruxelles. <i>Non-homogeneous renewal processes and their applications in motorcar insurance</i> A.Trombetta , Sapienza University of Rome. <i>Forecasting mortality considering the global convergence in longevity trends</i>	A. Antoci, University of Sassari; L. Gori, University of Genoa; M. Sodini , University of Pisa. <i>Nonlinear dynamics and global indeterminacy in an overlapping generations model with environmental externalities.</i> G.I. Bischi , University of Urbino; A. K. Naimzada, University of Milan Bicocca. <i>A kaleckian model of abnormal propensity to invest with memory effects.</i> M.Ferrara , University of Reggio Calabria; C. Bianca, Polytechnic of Turin; L. Guerrini, Università Politecnica delle Marche. <i>Hopf bifurcations in a Delayed-Energy-Based Model of Capital Accumulation.</i> M.G. Graziano , University of Naples; N. C. Yannelis, University of Iowa and University of Manchester; C. Meo, University of Naples. <i>Stable sets for asymmetric information economies</i>	F. Carreras , Technical University of Catalonia; J. M. Alonso-Mejide, University of Santiago de Compostela; J. Costa, University of Coruña, Spain; I. G.-Jurado, University of Coruña, Spain. <i>The proportional partitional Shapley value</i> M. LiCalzi , University of Venice; N. Maali, Université Paris Sorbonne. <i>Bargaining over a common conceptual space</i> L. Mallozzi , University of Naples; P. De Paolis, University of Naples; G. Di Francesco, Second University of Naples; A. d'Argenio, University of Naples. <i>A game theoretical approach to design of experiments</i> A. Palestini , Sapienza University of Rome; L. Lambertini, University of Bologna. <i>On the Feedback Solutions of Differential Oligopoly Games with Hyperbolic Demand Curve and Capacity Accumulation.</i> F. Pressacco , University of Udine; G. Plazzotta, Imperial College London. <i>Symmetry in parsimonious games</i>

Friday, September 6 - afternoon

14.40- 15.40	Plenary session Sala Gardenia Chair: G. I. Bischi <i>R. Lucchetti, Polytechnic of Milan. Concepts of similarity among agents</i>
15.40- 17.10	Plenary session – Online learning Sala Gardenia Chair: M. Li Calzi A. Gnudi , University of Bergamo. <i>Una metodologia collaborativa per l'insegnamento della matematica in ambiente elearning</i> E. Moretto , University of Insubria; Guido Osimo Bocconi University of Milan. <i>Insegnare con il tablet pc</i> P. Pellizzari , University of Venice. <i>Academic-related activity on Facebook and students' performance</i>
17.10- 17.30	Coffee break
17.30- 19.30	Members meeting Sala Gardenia
20.00- 20.45	Pre-dinner drink Hotel La Palma
20.45	Dinner Hotel La Palma

Saturday, September 7

<p>9.30-10.30</p> <p>Plenary session Sala Gardenia Chair: G. Giorgi N. Popovici – University of Cluj-Napoca, Romania <i>On the relationship between efficiency and weak efficiency in vector optimization</i></p>			
<p>10.30-10.50</p> <p style="text-align: center;">Coffee Break</p>			
<p>10.50-11.50 Parallel Sessions</p> <p>Mathematical finance Sala Gardenina Chair: A. Cretarola E. Appolloni, Sapienza University of Rome; L. Caramellino, University of Roma Tor Vergata; A. Zanette, University of Udine. <i>A robust tree method for pricing American options with CIR stochastic interest rate.</i></p> <p>K. Colaneri, University of Chieti-Pescara; Claudia Ceci, University of Chieti-Pescara; A. Cretarola, University of Perugia. <i>A Benchmark Approach to Risk-Minimization under Partial Information.</i></p> <p>C. Ceci, University of Chieti-Pescara; A. Cretarola, University of Perugia; F. Russo, Ecole Nationale Supérieure des Techniques Avancées-Paris. <i>BSDEs under partial information and application to local risk-minimization</i></p>	<p>Mathematical Economics Sala Meridiana 1 Chair: N. Angelini E. Michetti, University of Macerata; S. Brianzoni, Università Politecnica delle Marche; C. Mammana, University of Macerata. <i>Local and global dynamics in a growth model with non concave production function and endogenous population growth rate</i></p> <p>E. Sartori, University of Venice; M. LiCalzi University of Venice; M. Tolotti, University of Venice. <i>Monopolistic pricing on the edge of a technological change</i></p> <p>N. Angelini, University of Bologna and Università Degli Stranieri of Reggio Calabria; M. Ferrara, University of Reggio Calabria; F. Nardini, University of Bologna. <i>Price shocks and contagion transmission.</i></p>	<p>Mathematical finance Sala Meridiana 2 Chair: M.C. Recchioni E. Moretto, University of Insubria; B. Trivellato, Polytechnic of Turin; S. Pasquali, CNR-IMATI, Milan. <i>Option pricing under k-Gaussian distributions</i></p> <p>C. Prosdocimi, LUISS University of Rome. <i>Asset allocation and optimal retirement with sticky wages</i></p> <p>L. Fatone, University of Camerino; F. Mariani , University of Verona; M. C. Recchioni, Università Politecnica delle Marche; F. Zirilli, Sapienza University of Rome. <i>Mathematical analysis and differential geometry in the study of SABR model</i></p>	

	Mathematical finance Sala Gardenia Chair: S. Muzzioli G.D'Amico, University of Chieti-Pescara; F. Petroni, University of Cagliari. <i>ISMC model for high-frequency financial data.</i> Rroji Edit, University of Milan Bicocca; M. Marchioro , StatPro Italia Srl. <i>Risk decomposition using multifactor models.</i> S. Muzzioli, University of Modena and Reggio Emilia. <i>The Forecasting Performance of Corridor Implied Volatility: from Calm to Turmoil Periods</i>	Decision Theory Sala Meridiana 1 Chair: A. Capotorti A. Giarlotta, University of Catania. <i>Completeness v/s antisymmetry of binary relations: normalized and strict NaP-preferences</i> A. Capotorti, University of Perugia; G. Figà-Talamanca, University of Perugia. <i>Implicit binary merging of different volatility estimates elicited through fuzzy numbers</i> Hao Wang, Sapienza University of Rome, F. Durante, Free University of Bozen; E. Foscolo, Free University of Bozen; R. Pappadà, University of Padua. <i>Clustering methods for financial time series with application to portfolio selection</i>	Mathematical finance Sala Meridiana 2 Chair: P. Novi Inverardi G. Salvi, Sapienza University of Rome <i>On Bivariate Markov Chains</i> P. Stucchi, University of Udine. <i>A Unified Approach to Portfolio Selection with Additional Constraints on Risk</i> P. Novi Inverardi, University of Trento; H. Gzyl, IESA Caracas Venezuela; M. Milev, Plovdiv University; A. Tagliani, University of Trento. <i>Recovering a distribution from its translated moments</i>
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