Anna Maria Gambaro

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Academic Positions

Assistant Professor of Mathematical Finance
Università del Piemonte Orientale — *September 2018 - Now*

Post-Doctoral Fellow
Università del Piemonte Orientale — *December 2016– August 2018*
Research project: Interest rate and credit models applied to finance and insurance
Supervisor: Prof. G. Fusai

Education

PhD in Mathematical Finance
Università degli Studi di Milano Bicocca — *April 2014- April 2017*
Dissertation: Interest rate and credit risk models applied to finance and actuarial science.
Supervisor: Prof. G. Fusai

Master Degree in Physics
Università degli studi di Milano — *2010 - 2012*
110/110 cum laude

Visiting Researcher Experience

Tepper School of Business, Operations Management Faculty
Carnegie Mellon University, Pittsburgh, US — *2018*

Bayes Business School, Faculty of Finance
City University, London, UK — *2015*

Publications

- Gambaro, A. M., Fusai, G., Sodhi, M. S., May, C., and Morelli, C. (2023). ICU capacity expansion under uncertainty in the early stages of a pandemic. *PRODUCTION AND OPERATIONS MANAGEMENT*, 00, 1– 20. `https://doi.org/10.1111/poms.13985`
- Gambaro Anna Maria, Secomandi Nicola (2021). A Discussion of Non-Gaussian Price Processes for Energy and Commodity Operations. *PRODUCTION AND OPERATIONS MANAGEMENT*, vol 30 p. 47–67 ISSN: 1059-1478, doi: 10.1111/poms.13250
- Gambaro, Anna Maria, Kyriakou, Ioannis, Fusai, Gianluca (2019). General lattice methods for arithmetic Asian options. *EUROPEAN JOURNAL OF OPERATIONAL RESEARCH*, vol. 282, p. 1185–1199, ISSN: 0377-2217, doi: 10.1016/j.ejor.2019.10.026
- Gambaro A. M., Casalini R., Fusai G., Ghilarducci A. (2019). A market-consistent framework

for the fair evaluation of insurance contracts under Solvency II. *DECISIONS IN ECONOMICS AND FINANCE*, vol. 42, p. 157-187, ISSN: 1593-8883, doi:10.1007/s10203-019-00242-1

- Gambaro, Anna Maria, Casalini, Riccardo, Fusai, Gianluca, Ghilarducci, Alessandro (2018). Quantitative assessment of common practice procedures in the fair evaluation of embedded options in insurance contracts. *INSURANCE MATHEMATICS & ECONOMICS*, vol. 81, p. 117-129, ISSN: 0167-6687, doi: 10.1016/j.insmatheco.2017.10.005
- Gambaro, Anna Maria, Caldana, Ruggero, Fusai, Gianluca (2017). Approximate pricing of swaptions in affine and quadratic models. *QUANTITATIVE FINANCE*, vol. 17, p. 1325-1345, ISSN: 1469-7688, doi: 10.1080/14697688.2017.1292043
- Gambaro Anna Maria, Caldana Ruggero, Fusai Gianluca (2017). Accurate pricing of swaptions via Lower Bound. In: Giorgio Consigli Silvana Stefani Giovanni Zambruno, *Handbook of Recent Advances in Commodity and Financial Modeling.*, vol. 257, p. 183-205, Springer, ISBN: 9783319613208
- Gambaro Anna Maria (2017), Interest rate and credit risk models applied to finance and actuarial science, Doctoral dissertation, Università degli Studi di Milano-Bicocca, Available at `https://boa.unimib.it/retrieve/handle/10281/158366/225673/phd_unimib_787787.pdf`

Working Papers

- A.M. Gambaro, The Capital-on-Capital Cost in Solvency II Risk Margin. `https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4418565`

Direction or Participation to Research Groups

- Scientific direction of the local unit of University of Piemonte Orientale in PRIN-PNRR 2022 project ”Measuring, managing and hedging indirect climate-transition risk.” The project is in collaboration with University of Torino, Polytechnic of Milano and University of Bologna.
- Scientific direction of the research group formed by
  - Anna Maria Gambaro, Università del Piemonte Orientale, DISEI (scientific director) ;
  - Gianluca Fusai, Università del Piemonte Orientale, DISEI;
  - Marina Marena, Università di Torino, Dipartimento di Matematice a Statistica;
  - Patrizia Semeraro, Politecnico di Torino, Dipartimento di Matematica;
  - Francesca Grassetti, Politecnico di Milano, Dipartimento di Matematica.

  The research group is financed by GNAMPA (GRUPPO NAZIONALE PER L'ANALISI MATEMATICA LA PROBABILITÀ E LE LORO APPLICAZIONI) for the year 2020. The title of the research project is ”Dynamic optimization for strategic investments.”
- Participation to the research group formed by: Gianluca Fusai (scientific director), Francesca Centrone and Anna Maria Gambaro, Università del Piemonte Orientale, DISEI. The research group was financed by FAR. The title of the research project is ”Insurance capital requirement under Solvency II: models and applications”.

Teaching Experience

Università del Piemonte Orientale
Master degree in Management and Finance *2016-now*

- Methods of Operations Managements,
- Fondamenti di Business Analytics,
- Introduction to Python for Data Analysis
- Business Information for Finance (until 2020)

Università Commerciale Luigi Bocconi
Master in Quantitative Finance and Risk Management (MaFinRisk) *2015-now*
Term Structure Modelling.
Teaching language: English

Università degli Studi di Milano Bicocca
Master degree in Economic and Finance *2018-2020*
Advanced Derivatives: module Equity Derivatives.

Università degli Studi di Milano Bicocca
Master degree in Economic and Finance *2013-2018*
Teaching Assinstant, Quantitative Finance: module Derivatives I.

Organization of Conferences, Workshops and Seminars

46th Annual Meeting of the AMASES
Organization of the special session: Innovations in Finance and Insurance *2022*
Università di Palermo

Afternoon Math Seminars at DISEI
Organization of the Workshop *2021*
Università del Piemonte Orientale

43rd Annual Meeting of the AMASES
Organization of the special session: Models and Methods in Insurance and Finance, *2019*
Università di Perugia

Last attendances in Conferences, Workshops and Seminars

11th General AMaMeF Conference
Presentation, University of Bielefeld, Germany *2023*

POMS 31st Annual Conference
Presentation, Online conference. *2021*

Energy Finance Italia 5
Presentation, Università Roma Tre. *2020*

XXI WORKSHOP ON QUANTITATIVE FINANCE
Presentation, University of Napoli Parthenope *2020*

Bayes Business School, City University
Seminar at Faculty of Actuarial Science and Insurance. *2019*

6th Workshop - Finance and Insurance
Presentation (invited), FRIAS - ALBERT LUDWIGS UNIVERSITÄT, FREIBURG *2019*

23rd Annual International Conference on Real Options
Presentation, King's Business School, King's College London *2019*

23rd IME Conference
Presentation, Technische Universität München *2019*

10th Research Workshop on Energy Markets
Presentation (invited), Universitat de València - Santander Universidades 2019

10th Bachelier World Congress
Presentation, Trinity College, Dublin 2018

8th MAF Conference
Presentation, University Carlos III of Madrid 2018

Politecnico di Milano
Seminar at Faculty of Matematics 2018

Referee Service

Production and Operations Management, Insurance Mathematics and Economics, Energy Economics, Review of Derivatives Research

Professional Experience

Collaboration
Deloitte Consulting srl, Milano 2016–2018
Agreement between Deloitte Consulting srl and DISEI-UPO for collaboration on the research topic: "Evaluation of fair procedures valuation of insurance contracts".

Apprenticeship
PwC Advisory S.p.A, Milano 2012–2014
Analysis and pricing of complex financial products.

Internship
Mediobanca S.p.A, Milano 2011–2012
Financial Engineering group.

IT and Programming Skills

Programming languages:
Advanced knowledge of Matlab and Python.
Knowledge of C++, R and VBA.

Novara, 10 July 2022