

Curriculum Vitae et Studiorum

Daniele Marazzina

PERSONAL INFORMATION

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Member of the Italian Association of Mathematics Applied to Economic and Social Sciences - AMASES

Member of the Italian Society for Chaos and Complexity - SICC

Member of the National Institute for Advanced Mathematics - Indam

CURRENT ACADEMIC POSITION

September 2023 - present. Full Professor of “Mathematical Methods of Economy and Actuarial and Financial Sciences” (Italian Disciplinary Sector SECS-S/06 - Competition Sector 13/D4) at the Department of Mathematics, Politecnico di Milano.

PAST ACADEMIC POSITION

December 2017 - September 2023. Associate Professor of “Mathematical Methods of Economy and Actuarial and Financial Sciences” (Italian Disciplinary Sector SECS-S/06 - Competition Sector 13/D4) at the Department of Mathematics, Politecnico di Milano.

December 2008 - December 2017. Assistant Professor of “Mathematical Methods of Economy and Actuarial and Financial Sciences” (Italian Disciplinary Sector SECS-S/06 - Competition Sector 13/D4) at the Department of Mathematics, Politecnico di Milano.

December 2006 - December 2008. Postdoctoral fellow (Italian Disciplinary Sector SECS-S/06) at the SEMeQ (Economic Science and Quantitative Methods) Department of the Università degli Studi del Piemonte Orientale A. Avogadro, Novara (Italy). Supervisor: Prof. Gianluca Fusai.

November 1, 2003 - October 31, 2006. PhD student (with an Italian government scholarship) at the Department of Mathematics F.Casorati, Università degli Studi di Pavia (Italy).

EDUCATION

January 19, 2007. PhD in Mathematics and Statistics, Università degli Studi di Pavia. Title of the thesis: “Stability Properties of Discontinuous Galerkin Methods in Mixed Form” (Advisor: Prof. Ilaria Perugia).

September 20, 2007. Postgraduate “Diploma di Formazione Superiore Post-Laurea”, Scuola Avanzata di Formazione Integrata (SAFI), Istituto Universitario di Studi Superiori IUSS, Pavia.

September 19, 2003. Graduated in Mathematics (Laurea in Matematica - 110/110 cum laude), Università degli Studi di Pavia. Title of the thesis: “Metodo Local Discontinuous Galerkin per Problemi Ellittici” (Advisor: Prof. Ilaria Perugia).

INSTITUTIONAL SERVICES AT POLITECNICO DI MILANO

June 2022. Member of the evaluation committee for an Assistant Professor (RtDA) position in “Mathematical Methods of Economy and Actuarial and Financial Sciences” (renewal).

February 2022. Member of the evaluation committee for the PhD final exam in “Mathematical Models and Methods in Engineering”.

From April 2020. Director of the master in “Finance, Insurance & New Technologies”, Cefriel-Polimi.

From January 2019. Secretary of the Council of Mathematics Engineering.

From January 2019. Member of the Board of Directors of the “International master in fintech, finance and digital innovation”, MIP-Polimi.

From November 2017. Member of the PhD board, PhD in “Mathematical Models and Methods in Engineering”.

From March 2016. In charge of the organization of the graduation committee in Mathematical Engineering (BSc and MSc).

From June 2009. Member of several evaluation committees for research and teaching fellows.

Full list: www.qfinlab.polimi.it/marazzina_cv_annex

INSTITUTIONAL SERVICES AT OTHER UNIVERSITIES

September 2022. Università degli Studi di Verona. Member of the evaluation committee for an Assistant Professor (RtDA) position in “Mathematical Methods of Economy and Actuarial and Financial Sciences” (renewal).

April 2022. Università degli Studi di Trento. Member of the evaluation committee for the final exam for the PhD in Mathematics.

February 2022. University College London. Providing an evaluation of a candidate for promotion to Associate Professor (Teaching).

January 2022. Bayes Business School (London, UK). Member of the evaluation committee for the final exam of the PhD in Actuarial Science.

May-July 2021. Università degli Studi di Parma. Member of the evaluation committee for an Assistant Professor (RtDB - in tenure track) position in “Mathematical Methods of Economy and Actuarial and Financial Sciences”.

April-May 2021. Università Cattolica del Sacro Cuore, Milano. Member of the evaluation committee for an Associate Professor position in “Mathematical Methods of Economy and Actuarial and Financial Sciences”.

February-November 2020. Università degli Studi di Milano Bicocca. Member of the evaluation committee for the final exam for the PhD in Statistics and Mathematics for Finance.

October 2019. Università Cattolica del Sacro Cuore, Milano. Member of the evaluation committee for an Assistant Professor (RtDA) position in “Mathematical Methods of Economy and Actuarial and Financial Sciences” (renewal).

September-October 2019. Università degli Studi di Verona. Member of the evaluation committee for an Assistant Professor (RtDB - in tenure track) position in “Mathematical Methods of Economy and Actuarial and Financial Sciences”.

June-December 2018. Università degli Studi di Pavia. Member of the evaluation committee for an Assistant Professor (RtDA) position in “Mathematical Methods of Economy and Actuarial and Financial Sciences”.

June-July 2018. Università degli Studi del Piemonte Orientale. Member of the evaluation committee for an Assistant Professor (RtDA) position in “Mathematical Methods of Economy and Actuarial and Financial Sciences”.

January 2017. Università degli Studi di Torino. Member of the evaluation committee for the final exam for the PhD in Economics “Vilfredo Pareto”.

May 2010. Università degli Studi del Piemonte Orientale. Member of the evaluation committee for a research fellow (Assegno di Ricerca).

PARTECIPATION TO FINANCED PROJECTS

Caccia al Tesoro Finanziaria (Financial Education Gamification). Project financed by Innexa (2023). Role: project leader. Funding: 10 000 Euro to create an online event for secondary school students on financial education, exploiting gamification.

MUSA - Multilayered Urban Sustainability Action PNRR Project (2022-2025). Role: project participant. MUSA aims to transform the metropolitan area of Milan into an ecosystem of innovation for urban regeneration, intervening in various fields, from the social to the technological one, to become a national and European model.

EMFI - Emergency Finance. Research project proposed by Politecnico di Milano, Cefriel, University of Stirling, financed by the Algorand Foundation (2021-2022). Role: project leader for Politecnico di Milano. Funding: 316 400 USD (62 200 USD to Politecnico di Milano) for research and development of a special purpose digital currency on the Algorand blockchain.

COST Action FinAI - Fintech and Artificial Intelligence (CA19130, 2020-2023). Nominated “Action Management Committee Substitute” in Italy, from June 13, 2020, to November 2, 2021. Scientific Communication co-manager and Core Group member since March 2022. Member of the Virtual Mobility Grant evaluators group (www.fin-ai.eu/vmg) since April 2022. The COST Action will examine the impact of the fintech revolution from three different angles: transparency in fintech, decision support models “transparent” versus “black-box” in the financial sector, and transparency in the performance of investment products for clients.

GNCS - “Advanced numerical methods and machine learning techniques applied to finance” (2020-2021). Role: project leader. Funding: 3 200 Euro. The research group consisted of 8 researchers, from 4 different universities.

BigData Coins. Project financed by Officine Innovazione - Deloitte (2020). Role: project leader (with Professor P.Zunino). Funding: 20 000 Euro to study Decentralized Identity & Verifiable Claims on the Blockchain ecosystem

H2020 - “A FINancial supervision and TECHnology compliance training programme” - FIN-TECH (2019-2021). Role: project participant. Funding: 50 000 Euro for the training of Consob staff on fintech topics (big data, machine learning and blockchain).

Bank of Italy “Contributo liberale”- “IMPACT EDUFIN” (2020-2022). Role: project participant. Funding: 32 300 Euro to provide financial education activities in the Italian secondary schools and an impact analysis aimed at assessing their effectiveness.

Fondazione Cariplo - “EDUFIN@POLIMI” on financial education in the schools (2018-2020). Role: project participant. Funding: 85 000 Euro for the creation of material for financial education and its distribution in secondary schools in Milan.

Insurechain. Project financed by FUEL (2018). Role: project leader (with Professor F.Bruschi). Funding: 20 000 Euro to study the application of Smart Contracts on the insurance sector.

OTHER ACTIVITIES

- Lead Editor of the special issue “Finance, Technologies, and the Society” on Digital Finance (Springer).
- Organizer of the Special Session “New Trends in Machine Learning for Economics and Finance”, Amases 2023 Conference, Milano, 20-22 September 2023. In collaboration with Prof. S.Corsaro and Z.Marini, University of Napoli-Parthenope.
- Participant of the roundtable “Opportunities and risks for a decentralized future”, Economics Department, University of Perugia, December 14, 2022.
- Participant of the roundtable “AI and FinTech in the eyes of Gen Z & Millennials” for the Data Journalism Lab - Doing Journalism with Data, Political Sciences Department, University Federico II, Naples, December 7, 2022.

- Member of the Scientific Committee of the International Fintech Research Conference - Finance, technology, methodologies, Politecnico di Milano, 27-28 October 2022.
- Member of the Scientific Committee of the Fintech Research Network: www.fintechlab.it/network
- Member of the Organizing Committee of the European Alternative Finance Research Conference 2022 “Fintech for the common good”. Utrecht (Holland), 5-7 October 2022.
- Organizer of the Special Session “Investigating Crypto markets”, Amases 2022 Conference, Palermo, 22-24 September 2022. In collaboration with Prof. G.Figà-Talamanca, University of Perugia (Italy).
- Member of the Programme Committee of the International Scientific Conference “Technology, Innovation and Stability: New Directions in Finance” (TINFIN). Zagreb (Croatia), 5-6 May 2022.
- Member of the working group of the fintech channel of www.huffingtonpost.it.
- Organizer of the Special Session “New Trends in Finance Industry” and “Mathematical models and methods for economics and finance”, Conference SIMAI2020-2021, Parma, 30 August- 3 September 2021. In collaboration with Prof. S .Sanfelici, University of Parma.
- Member of the Scientific and Organizing Committee of the summer school “From Network to Neural Network”, Lake of Como School, 10-11 June 2021 (online).
- Member of the Scientific and Organizing Committee of the conference “Big Data and Machine Learning in Finance”, 10-11 June 2021 (online).
- Member of the Programming Committee” of the CAL2020 conference - The 2nd Crypto Asset Lab Conference Program, organized by the University of Milan Bicocca, 27 October 2020.
- Teacher of the Policollege course “First steps in mathematical finance” (2020-2023), organized by the Politecnico di Milano for upper secondary school students.
- Member of the inter-institutional roundtable for the planning and implementation of Financial Education courses in schools, Regione Lombardia School Office.
- Member of the editorial staff of www.finriskalert.it, an editorial project curated by the QFinLab research group in Quantitative Finance of the Mathematics Department of the Milan Polytechnic.
- Organizer of the Special Session “Numerical methods and quantitative finance: new perspectives and applications”, AMASES2018 Conference, Naples, 13-15 September 2018. In collaboration with C.Guardasoni and Prof. S.Sanfelici, University of Parma .
- Member of the Scientific and Organizing Committee of the Polimi Fintech Journey, series of workshops (2017-2018) and a conference (9-10 May 2018) organized by the Quantitative Finance research group QFinLab (www.mate.polimi.it/qfinlab) of the Department of Mathematics of the Politecnico di Milano.
- Member of the editorial board for the Mooc of Financial Education - www.pok.polimi.it. First edition: 18 May 2017.
- Member of the inter-university research group organized by Consob on the topic “The Digitization of Financial Intermediation Processes: Blockchain and Securities Markets”.
- Organizer of the minisymposia “MS-22: Advances in Quantitative Finance - Part I: Recent Perspectives” and “MS-23: Advances in Quantitative Finance - Part II: Numerical Techniques”, SIMAI2016 Conference, Milan, 13- September 16, 2016. In collaboration with C.Guardasoni and Prof. S.Sanfelici, University of Parma.
- Member of the Scientific and Organizing Committee of the QFinColloquia 2011-2014, workshops organized by the research group in Quantitative Finance QFinLab of the Department of Mathematics of the Politecnico di Milano.

AWARDS AND RESEARCH GRANTS

Editorial Board Member of Digital Finance (Springer) since July 2022.

www.springer.com/journal/42521/editors

FFABR 2017 Research Grant from the ‘Fondo per il finanziamento delle attività base di ricerca’ (FFABR).

EJOR Editor’s Choice Article. The article

G.Fusai, G.Germano, D.M. (2016) *Spitzer Identity, Wiener-Hopf Factorization and Pricing of Discretely Monitored Exotic Options*, European Journal of Operational Research, Vol. 251-1: 124-134 was designated as *Editor’s Choice Article* for the period June 2016-May 2017.

Young Researcher Grant 2009, 2012, 2013, 2015 and 2016. Dipartimento di Matematica, Politecnico di Milano.

Research Grant 2011. Principal Project Investigator “Programma Giovani Ricercatori 2011” - Gruppo Nazionale di Calcolo Scientifico (GNCS). Subject of the research: Numerical Methods for Option Pricing and Optimal Consumption-Investment Analysis.

Research Grant 2009. Principal Project Investigator “Programma Giovani Ricercatori 2009” - Gruppo Nazionale di Calcolo Scientifico (GNCS). Subject of the research: Finite Element Methods in Option Pricing.

Research Grant 2008. Principal Project Investigator “Programma Giovani Ricercatori 2008” - Gruppo Nazionale di Calcolo Scientifico (GNCS). Subject of the research: Grid Computing Applications in Finance.

Best Thesis Prize 2004. Winner of the prize “Proff. Silvio Cinquini and Maria Cinquini Cibrario” for the best thesis (ex aequo) in Mathematics of the years 2001-2002 and 2002-2003.

VISITING

July 25-29, 2011. MATHFI, Inria-Rocquencourt, Paris, France.

February 23-27, 2011. Cermics, Ecole des Ponts ParisTech, Paris, France.

February 5-26, 2010. SAM - Seminar for Applied Mathematics, Department of Mathematics, ETH, Zuerich, Switzerland.

November 11-14, 2009. Department of Statistics and Mathematics for Economic Research, Università degli Studi di Napoli Parthenope, Napoli, Italy.

November 7-16, 2005. Fachbereich Mathematik und Informatik, Johannes Gutenberg-Universität, Mainz, Germany.

CONFERENCE TALKS

April 20-22, 2023. Quantitative Finance Workshop 2023, Gaeta, Italy. “Counting jumps: an analysis of different waiting time distributions”.

September 22-24, 2022 AMASES Conference 2022, Palermo, Italy. “A deep dive into crypto-markets: we cannot compare oranges with apples”.

July 3-6, 2022 32nd European Conference on Operational Research (EURO 2022), Espoo, Finland. “A machine learning model for lapse prediction in life insurance contracts”.

October 15, 2021 Scotland Fintech Festival, Webconference. “Emfi - Emergency Finance”

September 1, 2021 SIMAI 2020-2021 Conference, Parma, Italia. “Machine Learning model in the Insurance sector”

March 12, 2021. 1st International Conference on Economics and FinTech, Athens, Greece, Webconference. “A Machine Learning model for lapse prediction in life insurance contracts”.

December 18, 2020. Machine Learning for Finance, Ca’ Foscari Venice Webconference. “A Machine Learning model for lapse prediction in life insurance contracts”.

- January 29-31, 2020.** XXI Workshop on Quantitative Finance, Napoli, Italy. “On the Design of Sovereign Bond-Backed Securities”.
- June 4-7, 2019.** SIAM Conference on Financial Mathematics & Engineering, Toronto, Canada. “Integrated structural approach to counterparty credit risk with dependent jumps”.
- October 31, 2018.** DEM Workshop in Financial Mathematics, Verona, Italy. “Integrated structural approach to credit value adjustment” (invited).
- October 5, 2018.** FraudNet: Cross-border fraud and Asset Recovery, Milano, Italy. Round Table “Asset recovery and Crypto Currencies”.
- September 13-15, 2018.** AMASES Conference 2018, Napoli, Italy. “A general framework for pricing Asian options under stochastic volatility on parallel architectures”.
- July 8-11, 2018.** 29th European Conference on Operational Research - Euro 2018, Valencia, Spain. “Optimal investment strategies with stochastic interest rate and minimum performance constraint”.
- September 4-8, 2017.** International Conference on Computational Finance - ICCF 2017, Lisbon, Portugal. “Integrated structural approach to Counterparty Credit Risk with dependent jumps”.
- January 25-27, 2017.** XVIII Workshop on Quantitative Finance, Milano, Italy. “Integrated structural approach to Counterparty Credit Risk with dependent jumps”.
- September 13-16, 2016.** SIMAI 2016 Conference, Milano, Italy. “Spitzer Identity, Wiener-Hopf Factorization and Pricing of Discretely Monitored Exotic Options”.
- July 15-19, 2016.** 9th World Congress of the Bachelier Finance Society, New York, USA. “Health Insurance, Portfolio Choice, and Retirement Incentives”.
- January 28-29, 2016.** XVII Workshop on Quantitative Finance, Pisa, Italy. “Flow of funds, High Water Mark and asset allocation”.
- September 10-12, 2015.** XXXIX AMASES Conference (Italian Association of Mathematics Applied to Economic and Social Sciences), Padova, Italy. “Counterparty credit risk measurement: dependence effects, mitigating clauses and gap risk”.
- January 29-30, 2015.** XVI Workshop on Quantitative Finance, Parma, Italy. “Health Insurance, Portfolio Choice, and Retirement Incentives”.
- May 29 - June 1, 2014.** 8th Conference in Actuarial Science and Finance, Samos, Greece. “Health Insurance and Retirement Incentives”.
- January 23-24, 2014.** XV Workshop on Quantitative Finance, Firenze, Italy. “Risk seeking, non convex remuneration and regime switching”.
- September 5-7, 2013.** XXXVII AMASES Conference (Italian Association of Mathematics Applied to Economic and Social Sciences), Stresa, Italy. “Regime Switching, Labor Income and Optimal Retirement”.
- May 3-5, 2012.** 50th meeting of Euro Working Group for Financial Modeling, Rome, Italy. “Portfolio optimization over a finite horizon with fixed and proportional transaction costs”.
- January 26-27, 2012.** XIII Workshop on Quantitative Finance, L’Aquila, Italy. “hp-DGFEM for Kolmogorov-Fokker-Planck Equations of Multivariate Lévy Processes”.
- June 8-10, 2011.** 3rd International Conference on Numerical Methods for Finance, Limerick, Ireland. “Pricing Discretely Monitored Options in a Wiener-Hopf Framework”.
- January 27-28, 2011.** XII Workshop on Quantitative Finance, Padova, Italy. “Optimal Investment, Stochastic Labor Income and Retirement”.
- September 1-4, 2010.** AMASES 2010 Conference, Macerata, Italy. “Fast Option Pricing Methods in a Wiener-Hopf Framework”.

- August 30, 2010.** Euro-Par 2010, Ischia, Italy. Session: Workshop on High-performance Computing Applied to Finance (HPCF 2010). “Wavelet Techniques for Option Pricing on Advanced Architectures”.
- January 28-29, 2010.** XI Workshop on Quantitative Finance, Palermo, Italy. “Optimal Investment, Labor Income and Retirement”.
- September 1-4, 2009.** XXXIII AMASES Conference (Italian Association of Mathematics Applied to Economic and Social Sciences), Parma, Italy. “Optimal Investment, Labor Income and Retirement”.
- April 8, 2009.** Mathematical Finance Day, IMATI-CNR, Milano, Italy. “Path-dependent Options and Randomization Techniques”.
- January 29-30, 2009.** X Workshop on Quantitative Finance, Milano, Italy. “Randomization and Preconditioning Techniques for Option Pricing”.
- July 15-19, 2008.** Bachelier Finance Society Fifth World Congress, London, UK. “Option Pricing and Maturity Randomization”.
- April 14-18, 2008.** IPDPS 2008, “22nd IEEE International Parallel and Distributed Processing Symposium”, Miami, Florida, USA. Session: “PDCoF - The First Workshop on Parallel and Distributed Computing in Finance (Computational Finance)”. “Option Pricing, Maturity Randomization and Grid Computing”.
- June 2-3, 2006.** EFEF-4, “The Fourth European Finite Element Fair”, ETH, Zurich, Switzerland. “Mixed Discontinuous Galerkin Methods with Minimal Stabilization for Elliptic Problems”.
- May 22-26, 2006.** SIMAI 2006 Conference (Italian Society for Industrial and Applied Mathematics), Baia Samuele (Ragusa), Italy. “Mixed Discontinuous Galerkin Methods with Minimal Stabilization”.
- July 18-22, 2005.** Enumath 2005, the European Conference on Numerical Mathematics and Advanced Applications, Santiago de Compostela, Spain. “Mixed Discontinuous Galerkin Methods with Minimal Stabilization”.

SEMINARS

- March 31, 2023** “Dynamic adoption of CBDC in a stochastic game”. Bayes Business School, City University, London.
- April 8, 2022** “Efficiency of Cryptocurrencies”. Cost Action WG1 Meetings (webinar).
- December 1, 2021** “An investigation on Volatility Adjustment”. UCL Seminar of the Financial Computing and Analytics Group (webinar).
- November 11, 2021** “Cryptocurrencies and Stablecoins: a high frequency analysis”. Cost Action WG1 Seminars (webinar).
- October 14, 2021** “Fintech - from blockchain to machine learning”. Webinar for the Starting Finance students’ association.
- June 23, 2021** “Crypto Markets” - Consob-Polimi Cryptocurrency and Digital Asset (webinar).
- June 14, 2021** “A Machine Learning Model for Lapse Prediction in Life Insurance Contracts” - Lake of Como School “From Network to Neural Network” (webinar).
- May 14, 21, 28, 2021** “Blockchain and Cryptocurrencies”- Università degli Studi di Novara (webinar).
- May 7, 2021** “Blockchain and Cryptocurrencies”- Università degli Studi di Bologna (webinar).
- March 26, 2020** “Spitzer identity, Wiener-Hopf factorization and pricing of exotic options”. Banca IMI Quant Day, Milano (webinar).
- November 28, 2019** “Blockchain and cryptocurrencies”. “ABB Italy - Innovation Day” - Cefriel, Milano

- May 22, 2019** “Blockchain, Bitcoins & Smart Contracts”. Elective Seminar - Università del Piemonte Orientale.
- May 19, 2018.** “Blockchain: a (technical) introduction”. MIP - “Fintech Academy”.
- May 9, 2018.** “An introduction to DLTs”. Polimi Fintech Journey “From Blockchain&Bitcoin to Distributed Ledger Technologies, Smart Contracts and Cryptocurrencies in Finance” - IT tutorial.
- July 7, 2017** “On relative performance, flow of funds, remuneration and risk taking of asset managers”, Department of Economics, Università degli Studi di Perugia, Italy.
- May 8, 2014.** “Beyond Black&Scholes”, MIP - MSc in Energy Finance “Corso di Alta Formazione in Energia e Finanza” MEF9, Milano, Italy.
- April 4, 2014.** “Fast Pricing of Discretely Monitored Exotic Options by a Numerical Wiener-Hopf Procedure”, Prometeia, Bologna, Italy.
- February 25, 2011.** “Fast Option Pricing Methods in a Wiener-Hopf Framework”, Cermics, Ecole des Ponts ParisTech, Paris, France.
- March 30, 2010.** “Numerical Methods for Pricing Path-Dependent Options”, Department of Mathematics, Università degli Studi di Pavia, Italy.
- November 11, 2009.** “Path-dependent Options and Randomization Techniques”, Department of Statistics and Mathematics for Economic Research, Università degli Studi di Napoli Parthenope, Napoli, Italy.
- December 17, 2008.** “Randomization and Preconditioning Technique for Option Pricing”, Department of Mathematics, Università degli Studi dell’Insubria, Como, Italy.
- July 12, 2006.** “Mixed Discontinuous Galerkin Method with Minimal Stabilization for Elliptic Problems”, Department of Mathematics “F. Casorati”, Università degli Studi di Pavia, Italy.
- November 10, 2005.** “Discontinuous Galerkin Methods for Elliptic Equations”, “Fachbereich Mathematik und Informatik Johannes Gutenberg-Universität”, Mainz, Germany.

TEACHING ACTIVITIES IN PHD COURSES

- 2018-2019: Machine Learning in Finance (code 053492). Politecnico di Milano, PhD in Mathematical Models and Methods in Engineering (Lecturer, in collaboration with R. Baviera, M. Restelli, E. Rroji - Politecnico di Milano).
- 2016-2017: Option Pricing: from Monte Carlo methods to Quantization (code 050245). Politecnico di Milano, PhD in Mathematical Models and Methods in Engineering (Lecturer, in collaboration with G. Callegaro, L. Fiorin - University of Padova).
- 2014-2015: Advanced Topics in Financial Engineering (code 097202). Politecnico di Milano, PhD in Mathematical Models and Methods in Engineering (Course Director. Lecturers: Prof. F.Hubalek, A.Gnoatto).
- 2013-2014, 2014-2015: Computational Finance (code 095832). Politecnico di Milano, PhD in Mathematical Models and Methods in Engineering (Lecturer)

OTHER TEACHING ACTIVITIES

Politecnico di Milano.

- Lecturer. FINTECH. MSc (Laurea Magistrale) in Mathematical Engineering. Academic Year: from 2020-2021 to 2023-2024.
- Lecturer. COMPUTATIONAL FINANCE. MSc (Laurea Magistrale) in Mathematical Engineering. Academic Years: from 2011-2012 to 2023-2024.
- Lecturer. FONDAMENTI DI MATEMATICA E STATISTICA ECONOMICA - “Fondamenti di Matematica” module, Bachelor in Urbanistica. Academic Years: from 2023-2024.

- Lecturer. FONDAMENTI DI MATEMATICA E STATISTICA, Bachelor in Urbanistica. Academic Years: from 2019-2020 to 2022-2023.
- Lecturer. MATHEMATICAL FINANCE II. MSc (Laurea Magistrale) in Mathematical Engineering. Academic Year: 2018-2019.
- Lecturer. MATHEMATICAL MODELS AND METHODS FOR FINANCIAL AND INSURANCE MARKETS. MSc (Laurea Magistrale) in Mathematical Engineering. Academic Year: 2017-2018.
- Lecturer. MATHEMATICAL MODELS AND METHODS FOR FINANCIAL AND INSURANCE MARKETS - “Insurance” module. MSc (Laurea Magistrale) in Mathematical Engineering. Main Lecturer and Course Director: Prof. E.Barucci. Academic Year: 2016-2017.
- Lecturer. MATHEMATICAL MODELS AND METHODS FOR FINANCIAL AND INSURANCE MARKETS - “Energy Markets” module. MSc (Laurea Magistrale) in Mathematical Engineering. Main Lecturer and Course Director: Prof. E.Barucci. Academic Years: 2015-2016.
- Teaching Assistant. MATHEMATICAL FINANCE I. BSc (Laurea di I livello) in Mathematical Engineering. Lecturer: Prof. E.Barucci. Academic Years: 2009-2010, from 2014-2015 to 2017-2018.
- Teaching Assistant. MATHEMATICAL FINANCE II. MSc (Laurea Magistrale) in Mathematical Engineering. Lecturer: Prof. C.Sgarra. Academic Years: 2007-2008, 2008-2009, 2010-2011, 2012-2013, 2013-2014.
- Teaching Assistant. COMPUTATIONAL FINANCE. MSc (Laurea Magistrale) in Mathematical Engineering. Lecturer: Prof. C.Sgarra. Academic Years: 2009-2010, 2010-2011.
- Teaching Assistant. MATHEMATICAL METHODS FOR FINANCE. BSc (Laurea di I livello) in Management Engineering. Lecturer: Prof. C.Sgarra. Academic Year 2008-2009.

MIP - Politecnico di Milano

- Lecturer. BIG DATA AND ARTIFICIAL INTELLIGENCE IN FINANCE, International Master in Fintech, Finance and Digital Innovation. Academic Years: from 2019-2020 to 2022-2023.
- Lecturer. PEER TO PEER PLATFORMS AND CRYPTOCURRENCIES, International Master in Fintech, Finance and Digital Innovation. Academic Years; from 2019-2020 to 2022-2023.
- Lecturer. ASSET ALLOCATION. MSc/Percorso Executive in Quantitative Finance. Academic Years: from 2017-2018 to 2022-2023.
- Lecturer. NUMERICAL METHODS FOR OPTION PRICING. MSc/Percorso Executive in Quantitative Finance. Academic Years: from 2010-2011 to 2022-2023.
- Lecturer. BUSINESS ANALYTICS AND QUANTITATIVE FINANCE, TOPWIN Corporate Master in Fintech. Academic Year 2021-2022.
- Lecturer. NUMERICAL METHODS AND PROGRAMMING TOOLS FOR FINANCE. MSc/Percorso Executive in Quantitative Finance. Academic Years: from 2010-2011 to 2020-2021.
- Lecturer. STOCHASTIC METHODS IN FINANCE. “Percorso Executive in Energia e Finanza”. Academic Year 2014-2015.
- Lecturer. FINANCIAL VALUATION. “Percorso Executive in Energia e Finanza”. Academic Year 2014-2015.
- Lecturer. MODEL IMPLEMENTATION. “Percorso Executive in Energia e Finanza”. Academic Years: from 2008-2009 to 2013-2014.
- Lecturer. MATLAB - BASIC LEVEL. “Corso di Alta Formazione in Gestioni Quantitative del Risparmio”. Academic Year 2007-2008.

Cefriel - Politecnico di Milano

- Lecturer. FUNDAMENTALS OF FINANCE - ASSET ALLOCATION, Master in Finance, Insurance and New Technologies. Academic Year 2022/2023.
- Lecturer. RISK MANAGEMENT IN FINANCE AND INSURANCE, Master in Finance, Insurance and New Technologies. Academic Year 2020-2021.

- Lecturer. FUNDAMENTALS OF FINANCE, Master in Finance, Insurance and New Technologies. Academic Year 2020/2021.
- Lecturer. FUNDAMENTALS OF MATHEMATICS - MONTE CARLO SIMULATION, Master in Finance, Insurance and New Technologies. Academic Year 2019/2020.

Università degli Studi del Piemonte Orientale, Novara.

- Lecturer. Elective Course “Blockchain, Bitcoins & Smart Contracts”. Academic Years: 2018-2019, and from 2020-2021 to 2022-2023.

Bocconi University, Milano.

- Lecturer. NUMERICAL METHODS FOR PRICING DERIVATIVES. MSc in Quantitative Finance and Risk Management (MAFINRISK). Academic Years: from 2008-2009 to 2019-2020.
- Lecturer. ADVANCED DERIVATIVES. BSc (Laurea Magistrale) in Economics. Main Lecturer and Course Director: Prof. C.Tebaldi. Academic Years: from 2010-2011 to 2017-2018.
- Lecturer. INTRODUCTION TO MATLAB (in English). MSc in Quantitative Finance and Risk Management (MAFINRISK). Academic Years: 2007-2008, 2008-2009.

PhD SUPERVISING

July 15, 2021 Guodong Ding, *Optimal Consumption-Portfolio-Leisure Policy in Retirement-Bankruptcy Time Problem with Power Utility Function*, Doctoral Programme in “Mathematical Models and Methods in Engineering”, Politecnico di Milano.

February 9, 2017. Gaetano La Bua, *Three Essays in Mathematical Finance*, Doctoral Programme in “Mathematical Models and Methods in Engineering”, Politecnico di Milano.

BACHELOR/MSc THESIS SUPERVISING

Supervisor of more than 150 MSc degree theses in Mathematical Engineering, and more than 130 final exams for the bachelor in Mathematical Engineering, Politecnico di Milano.

Full list: www.qfinlab.polimi.it/marazzina.cv_annex

REFEREEING ACTIVITY

Annals of Actuarial Science; Annals of Operations Research; Applied Mathematical Finance; Applied Mathematics and Computation; Applied Mathematics Letters; ASTIN Bulletin; Central European Journal of Operational Research; Communications in Nonlinear Science and Numerical Simulation; Computational and Applied Mathematics; Computers & Mathematics with Application; Decisions in Economics and Finance; European Actuarial Journal; European Journal of Operational Research; Finance Research Letters; Financial Innovation; Frontiers in Applied Mathematics and Statistics; Frontiers in Artificial Intelligence; IMA Journal of Management Mathematics; INFORMS Journal on Computing; Insurance: Mathematics and Economics; International Journal of Computer Mathematics; International Journal of Control; International Journal of Financial Studies; International Transactions in Operational Research; Japan Journal of Industrial and Applied Mathematics; Journal of Computational and Applied Mathematics; Journal of Computational Science; Journal of Economic Dynamics and Control; Journal of Difference Equations and Applications; Journal of Futures Market; Journal of Inequalities and Applications; Journal of International Money and Finance; Journal of Optimization Theory and Applications; Mathematics and Computers in Simulation; Mathematical Methods in the Applied Sciences; Mathematical Modelling and Analysis; Operations Research; Operation Research Letters; Optimization Letter; Quantitative Finance; Review of Derivatives Research; Risks; Socio-Economic Planning Sciences; The European Journal of Finance.

Reviewer of two book projects for Springer.

PUBLICATIONS

Journal Articles*

*The asterisk indicates publications in Class A - ANVUR (Italian National Agency for the Evaluation of the University and Research Systems) journals for sector 13/D4

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8. G.Ding, D.M. (2022) *The impact of liquidity constraints and cashflows on the optimal retirement problem*, Finance Research Letters, Vol. 49: 103159.
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12. M.Azzone, E.Barucci, G.Giuffra Moncayo, D.M. (2022), *A machine learning model for lapse prediction in life insurance contracts*, Expert Systems with Applications, Vol. 191: 116261-01–116261-13.
13. G.La Bua, D.M. (2021) *On the Application of Wishart Process to the Pricing of Equity Derivatives: the Multi-asset Case*, Computational Management Science, Vol. 18(2): 149–176.*
14. E.Barucci, D.M., E.Mastrogiacomo, (2021) *Optimal Investment Strategies with a Minimum Performance Constraint*, Annals of Operations Research, Vol. 299: 215–239.*
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16. E.Barucci, T.Colozza, D.M., E.Rroji (2020) *The Determinants of Lapse Rates in the Italian Life Insurance Market*, European Actuarial Journal, Vol.10: 149–178.
17. C.E.Phelan, D.M., G.Germano (2020) *Pricing Methods for α -quantile and Perpetual Early Exercise Options based on Spitzer Identities*, Quantitative Finance, Vol. 20(6): 899–918.*
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21. C.E.Phelan, D.M., G.Fusai, G.Germano (2019) *Hilbert Transform, Spectral Filters and Option Pricing*, Annals of Operations Research, Vol. 282(1–2):273–298.*

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23. C.E.Phelan, D.M., G.Fusai, G.Germano (2018) *Fluctuation identities with continuous monitoring and their application to price barrier options*, European Journal of Operational Research, Vol. 271:210-223.*
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47. E.Barucci, D.M., M.Nencini (2020) *Finanza Matematica - Un'introduzione all'Ingegneria Finanziaria*, EGEA.
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Book Contributions

49. E.Barucci, F.Grassetti, D.M., D.Stocco (2022) Le attività del QFinLab-Politecnico di Milano in tema di educazione finanziaria. In *L'educazione finanziaria in Italia: stato dell'arte, sperimentazioni e prospettive* (editor: T.Agasisti), pp.129-143, Erikson.
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62. D.M. (2022) *Le stablecoin non sono un rifugio sicuro. La lezione del crash di Terra e Luna*, www.huffingtonpost.it
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65. D.M. (2022) *No, con le stablecoin non ci posso ancora pagare un caffè. L'esempio di Tether*, www.huffingtonpost.it
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72. E.Barucci, D.M. (2020) *Sovereign Bond-Backed Securities*, www.finriskalert.it
73. E.Barucci, D.M. (2020) *Il BTP futura non è poi un grande affare*, www.finriskalert.it
74. E.Barucci, D.M. (2020) *Comments on the Consultation paper by EIOPA on the revision of Solvency II*, www.finriskalert.it
75. E.Barucci, D.M. (2018) *Asset management under a minimum guarantee for life insurance products*, www.finriskalert.it
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78. M.Bonollo, D.M. (2014) *Lo Standardized Approach per Credit Counterparty Risk*, www.finriskalert.it
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