Alessandro Gnoatto

Address	University of Verona - Department of Economics via Cantarane, 24 37129 - Verona
E-mail	alessandro.gnoatto@univr.it
Website	www.alessandrognoatto.com
Nationality	Italian
Date of birth	04.04.1983

Work experience

05.2023 - present	Deparment of Economics - University of Verona Position: Full Professor Activities: see the detailed lists below of academic services, teaching and research activities.
03.2018 - 04.2023	Deparment of Economics - University of Verona Position: Associate Professor Activities: see the detailed lists below of academic services, teaching and research activities.
09.2015 - 02.2018	BayernLB Position: assistant vice president - Interest Rate Derivatives Trading and xVA Activities: Computation of xVA for OTC derivatives using hybrid models in a Monte Carlo setting. Responsible for the maintenance and development of the pricing system from a quantitative and an IT perspective. Conceptual studies and initial development of a proprietary analytics library in Java for front office pricing.
03.2012 - 08.2015	Mathematisches Institut der LMU München Position: post-doc researcher Activities: research on advanced asset pricing models based on matrix-valued affine processes. Applications to the valuation of FX options, multiple-curve interest rate models, long-term yield, basket options, volatility products.
09.2011 - 02.2012	Prometeia Spa Position: junior analyst Activities: production of the RiskSize (`www.risksize.com`) variance/covariance matrix, by employing the RiskMetrics methodology. Development of an FFT pricing framework under the Variance Gamma model.
03.2008 - 08.2008	Fondiaria-Sai Spa Position: internship in the derivatives front office. Activities: call overwriting, hedging of equity participations, creation of forward variance swap positions, analysis of index linked products, basis trading (CDS), stock lending. Creation of reports regarding the desk's activity.

Education

27.01.2022	Italian Ministery for Education University and Research Qualification: Habilitation as Full Professor of Mathematical Finance (Mathematical methods for economics and financial and actuarial sciences)
05.04.2017	Italian Ministery for Education University and Research Qualification: Habilitation as Associate Professor of Mathematical Finance (Mathematical methods for economics and financial and actuarial sciences)
01.2009 - 26.11.2012	University of Padua – Department of Pure and Applied Mathematics Qualification: Ph.D in Computational Mathematics Main subjects: research on advanced asset pricing models based on matrix-valued affine processes under the supervision of Prof. M. Grasselli and Prof. W. Runggaldier.
09.2009 - 09.2011	ETH (Swiss Federal Institute of Technology Zurich) – UZH (University of Zurich) Qualification: Master of Science in Quantitative Finance Main subjects: mathematical finance (courses by Prof. M. Schweizer, J. Teichmann, W. Farkas), numerical methods (PDE and Monte Carlo under Prof. C. Schwab), financial engineering (Prof. P. Vanini), credit risk (Prof. D. Coculescu).
2003 - 2008	University of Padua Qualifications: Master in Banking and Finance Main subjects: mathematical finance, computational finance, statistics, microeconomics, macroeconomics.

Computer skills

Operating Systems	Mac OSX and Windows, working knowledge of Linux Debian
Programming	Java (OOP), Matlab/Octave, VBA, C/C++ and Python. Basic knowledge of Unix and MS-Dos shell scripting.
Other	Good knowledge of Numerix CrossAsset, Open Office/Libre Office/MS Office (Spreadsheets, Word Processing, Presentations), LaTeX. Working knowledge of Bloomberg, Thomson Reuters Eikon, HTML, SQL
Software projects	• Member of the team of Finmath, a professional object-oriented Java library for quantitative finance. See `https://www.finmath.net/finmath-lib/team.html` • Matrix functions toolbox: a full Java implementation of the matrix exponential and logarithm. • Several implementations related to my research articles are available here: `https://github.com/AlessandroGnoatto`

Language skills

English	Reading skills: very good - Writing skills: very good - Oral skills: very good
German	Reading skills: very good - Writing skills: very good - Oral skills: good
Spanish	Reading skills: very good - Writing skills: basic - Oral skills: basic

Special courses

22.08.2011 - 29.08.2011	Summer school in financial mathematics in Ljublijana Faculty: Prof. N. H. Bingham, Prof. A. Lipton, Prof. D. B. Madan, Prof. M. R. Pistorius, M. Urusov Main subjects: Lévy Processes, stochastic volatility models, financial modeling with jumps, SDE's.
21.05.2009 - 22.05.2009	Spring school in finance in Bologna Faculty: Prof. E. Eberlein – Prof. P. Tankov Main subjects: crash courses on financial modelling with jump processes.
2001 - 2002	Goethe Institut Qualification: B1 international certificate for the German language
2001 - 2002	Trinity college Qualification: Level 9 international certificate for the English language

Theses

Title	Wishart processes: theory and applications in mathematical finance
Type	Ph.D Thesis
Supervisors	Prof. M. Grasselli and Prof. W. Runggaldier
Title	Yield-curve shapes for affine processes on S_d^+
Type	Master thesis
Supervisor	Prof. J. Teichmann
Title	Calibration of the Heston model using variance swaps
Type	Master thesis
Supervisor	Prof. M. Grasselli

Visiting

1)	Univ. Paris Diderot - Mathematical Institute- 30.05./02.06.2018: guest of C. Fontana - PhD Project of Guillaume Szulda on CBI processes.
2)	LMU Universität München - Mathematisches Institut - 17.09./21.09.2018: guest of F. Biagini - Project on BSDEs for xVA.
3)	Oxford University - Mathematical Institute - 29.07./16.08.2019 and 13.01/24.01.2020: guest of C. Reisinger - Machine Learning for xVA computations.
4)	University of Vienna - Mathematical Institute - 03.09./06.09.2024: guest of C. Cuchiero - Machine Learning for HJM models.
.	

Peer reviewed publications	Citations: 272 total citations by 205 documents. h-index: 10. Co-authors: 20 Source - Scopus author page: https://www.scopus.com/authid/detail.uri?authorId=55524308700
24)	A Deep solver for BSDEs with jumps (with K. Andersson M. Patacca and A. Picarelli) SIAM Journal on Financial Mathematics (2025) 16(3), 875-911 https://doi.org/10.1137/23M1615048
23)	Deep Quadratic Hedging (with S. Lavagnini and A. Picarelli) *Online first at Mathematics of Operations Research* https://doi.org/10.1287/moor.2023.0213
22)	A change of measure formula for recursive conditional expectations (with L. Di Persio and M. Patacca) International Journal of Theoretical and Applied Finance (2024) 27(02), 2450008 https://doi.org/10.1142/S0219024924500080
21)	Quantization of stochastic volatility models: numerical tests and an open source implementation (with A. Fina and A. Picarelli) Mathematics and Computers in Simulation (2024) 225, November 2024, 29-51 https://doi.org/10.1016/j.matcom.2024.04.030
20)	CBI-time-changed Lévy processes (with C. Fontana and G. Szulda) Stochastic Processes and Their Applications (2023) 163, 323-34 https://doi.org/10.1016/j.spa.2023.06.005
19)	Deep xVA solver - A neural network based counterparty credit risk management framework (with A. Picarelli and C. Reisinger) SIAM Journal on Financial Mathematics (2023) 14(1), 314-352 https://arxiv.org/abs/2005.02633
18)	A fully Quantization-Based scheme for FBSDEs (with G. Callegaro and M. Grasselli) Applied Mathematics and Computation (2023) 441, 127666 https://doi.org/10.1016/j.amc.2022.127666
17)	Calibration to FX Triangles of the 4/2 Model Under the Benchmark Approach, (with M. Grasselli and E. Platen), Decisions in Economics and Finance. (2022) 15(3), 579–610 https://doi.org/10.1007/s10203-021-00330-1
16)	CBI-time-changed Lévy processes for multi-currency modeling (with C. Fontana and G. Szulda) Annals of Operations Research (2022) https://doi.org/10.1007/s10479-022-04982-z
15)	A unified approach to xVA with CSA discounting and initial margin, (with F. Biagini and I. Oliva), SIAM Journal on Financial Mathematics (2021) 12(3), 1013–1053 https://doi.org/10.1137/20M1332153
14)	Cross Currency Valuation and Hedging in the Multiple Curve Framework, (with N. Seiffert), SIAM Journal on Financial Mathematics (2021) 12(3), 967–1012 https://doi.org/10.1137/20M1324375
13)	Multiple yield curve modelling with CBI processes, (with C. Fontana and G. Szulda), Mathematics and Financial Economics. (2021) 15(3), 579-610 https://doi.org/10.1007/s11579-020-00289-4
12)	General analysis of long-term interest rates, (with F. Biagini and M. Härtel), International Journal of Theoretical and Applied Finance, 23(01) (2020) 2050002 https://doi.org/10.1142/S0219024920500028
11)	Affine multiple yield curve models, (with C. Cuchiero and C. Fontana), Mathematical Finance 29(2) (2019) 568-611 https://doi.org/10.1111/mafi.12183
10)	Long-term yield in an affine HJM framework on S_d^+, (with F. Biagini and M. Härtel), Applied Mathematics and Optimization, (2018) 77(3) 405-441 http://dx.doi.org/10.1007/s00245-016-9379-8
9)	Coherent foreign exchange market models, International Journal of Theoretical and Applied Finance, 20(01) (2017) 1750007 http://dx.doi.org/10.1142/S0219024917500078
8)	A general HJM framework for multiple yield curve modelling, (with C. Cuchiero and C. Fontana), Finance and Stochastics, 20(2) (2016) 267-320 http://dx.doi.org/10.1007/s00780-016-0291-5

Peer reviewed publications (cont.)

7) General closed form basket option pricing bounds, (with R. Caldana, G. Fusai and M. Grasselli), Quantitative Finance, 16(4) (2015) 535-554
http://dx.doi.org/10.1080/14697688.2015.1073854

6) Analytic pricing of volatility-equity option within Wishart-based stochastic volatility models, (with J. Da Fonseca and M. Grasselli), Operations Research Letters, (43) (2015) 601-607
http://dx.doi.org/10.1016/j.orl.2015.09.006

5) An affine multicurrency model with stochastic volatility and stochastic interest rates, (with M. Grasselli), SIAM Journal on Financial Mathematics, 5(1) (2014) 493-531
http://dx.doi.org/10.1137/130922902

4) The explicit Laplace transform for the Wishart process, (with M. Grasselli), Journal of Applied Probability 51(3) (2014) 640-656
http://dx.doi.org/10.1239/jap/1409932664

3) Smiles all around: FX joint calibration in a multi-Heston model, (with A. De Col and M. Grasselli), Journal of Banking and Finance 37(10) (2013) 3799–3818
http://dx.doi.org/10.1016/j.jbankfin.2013.05.031

2) A flexible matrix Libor model with smiles, (with J. Da Fonseca and M. Grasselli), Journal of Economic Dynamics and Control 37(4) (2013) 774-793
http://dx.doi.org/10.1016/j.jedc.2012.11.006

1) The Wishart short rate model, International Journal of Theoretical and Applied Finance 15(08) (2012) 1250056
http://dx.doi.org/10.1142/S0219024912500562

Other publications

Book Review: Mathematical Modeling and Computation in Finance: With Exercises and Python and Matlab Computer Codes (with B. Horvath) Quantitative Finance 22(11) 1971-1972
https://doi.org/10.1080/14697688.2022.2117641

Working papers

25) Cross-Currency Heath-Jarrow-Morton Framework in the Multiple-Curve Setting (with S. Lavagnini)
https://arxiv.org/abs/2312.13057

26) Convergence of a Deep BSDE solver with jumps (with K. Oberpriller and A. Picarelli)
https://arxiv.org/abs/2501.09727

27) When defaults cannot be hedged: an actuarial approach to XVA calculations via Local Risk-Minimization. (with. F. Biagini and K. Oberpriller)
https://arxiv.org/abs/2502.12774

28) Multi-Layer Deep xVA: Structural Credit Models, Measure Changes and Convergence Analysis (with K. Andersson)
https://arxiv.org/abs/2502.14766

29) A deep solver for backward stochastic Volterra integral equations (with K. Andersson and C. Garcia Trillos)
https://arxiv.org/abs/2505.18297

30) Deep Learning HJM models (with C. Cuchiero and C. Fontana) (26 pages)

Work in Progress and future projects	
31)	Deep Hedging under Gamma constraints (with K. Andersson, J. P. Ngalamo and A. Pallavicini)
32)	Signatures and Stochastic Control (with K. Andersson, C. Cuchiero, P. Hager and S. Svaluto-Ferro)
33)	Optimal load following in a hybrid nuclear-renewable energy system. (with F. Baschetti and A. Picarelli)
34)	Local risk minimization for xVA under non-linear market models (with F. Biagini, A. Mazzon and K. Oberpriller)
35)	Value for Money optimization for Insurance-Finance product (with L. Bonisoli and C. Munari)
36)	Path Dependent Volatility for Inflation market models (with K. Andersson, L. Bonisoli and C. Munari)

Talks

When defaults cannot be hedged: an actuarial approach to XVA calculations via Local Risk-Minimization. March 2025 - Brown Bag Seminar - Verona
April 2025 - XXV Workshop on Quantitative Finance

Cross-Currency Heath-Jarrow-Morton Framework in the Multiple-Curve Setting
January 2024 - Oberseminar Finanz- und Versicherunsmathematik - TU/LMU Munich (Invited Talk)
March 2024 - Prometeia Spa - Bologna (Invited Talk)
April 2024 - XXIV Workshop on Quantitative Finance

A Fully Quantization-based Scheme for FBSDEs
April 2022 - XXII Workshop on Quantitative Finance - Rome Tor Vergata

Deep xVA Solver
September 2022 - World Seminar Series on Machine Learning in Finance - online (Invited Talk) `https://www.youtube.com/watch?v=FqES52C2894&t=0s`
March 2022 - Advanced Stochastic Modelling Seminar - University of Vienna (Invited Talk)
September 2021 - Next Generation Models of Financial Data - Munich Technical University (Invited Talk)
Febrary 2021 - Cass Business School - Financial Engineering Workshop (Invited Talk)
April 2020 - FIS - PRMIA Thought Leadership Webinar
`https://empower1.fisglobal.com/ai-and-machine-learning-in-risk` (Invited Talk)

Cross currency valuation and hedging in the multiple curve framework
April 2021 - 2nd Spring Colloquium in Probability and Finance - Padova (Invited Talk)
June 2021 - SIAM Conference on Financial Mathematics and Engineering - (online) `https://www.youtube.com/watch?v=IohsdChsU8A`
January 2020 - XXI Workshop on Quantitative Finance - Naples

A Unified approach to xVA with CSA discounting and initial margin. .
January 2020 - Mathematical Institute - Oxford University (Invited Talk)
June 2019 - SIAM Conference on Financial Mathematics and Engineering - Toronto

BSDEs of xVA: a quantization approach
July 2019 - ICIAM 2019 - Valencia

Calibration of the 4/2 model to FX triangles under the benchmark approach (Invited Talk)
Maggio 2018 - Dep. Mathematics - Univ Paris Diderot

Affine Multiple Yield Curve Models
October 2017 - Politecnico di Milano - QFinLab (Invited Talk)
June 2017 - Prometeia - Bologna (Invited Talk)
February 2017 - Financial Engineering Workshops - Cass Business School - (Invited Talk)

PDE Vs Expectations for CVA computation.
June 2016 - Numerix Quant of the Year Lecture Series - Frankfurt

Bewertung von Derivaten nach der Finanzkrise - Eine Einführung
April 2016 - Finanzsymposium - Mannheim

Hybrid FX-Interest rate models: a tale of two risks
September 2015 - Amamef Swissquote Conference - EPFL Lausanne

Talks (cont.)

Spread modeling in a general multiple-curve HJM framework
April 2015 - Challenges in Derivatives Markets - TU Munich

Interest rate modelling after the financial crisis
January 2015 - Nicola Bruti Liberati Quantitative Finance Lab - Politecnico di Milano. (Invited Talk)
November 2014 - Prometeia SpA - Bologna (Invited Talk)

Coherent foreign exchange market models.
January 2014 - University of Florence - XV Workshop on Quantitative Finance.
April 2013 - ETH Zurich - Talks in financial and insurance mathematics. (Invited Talk)

An analytic multi-currency model with stochastic volatility and stochastic interest rates
September 2013 - Munich - CEQURA conference

The Explicit Laplace Transform for the Wishart process
November 2011 - München. (Invited Talk)
October 2011 - Padova - Seminario dottorato

A Multifactor Libor Market Model
July 2012 - Minneapolis - Siam Conference on Financial Mathematics and Engineering. (Invited Talk)
June 2012 - München - Oberseminar Finanz und Versicherungsmathematik
June 2012 - Technische Universität Berlin. (Invited Talk)
September 2011 - Pisa - Convegno Amases
August 2011 - Ljubljana - Workshop on stochastic methods in financial markets
July 2011 - Istanbul - International conference on mathematical finance and economics 2011
June 2011 - Padova - Seminari di calcolo delle probabilità

Teaching

Financial Mathematics
Summer Semester 2025 - University of Verona - MSc in Banking and Finance

Derivatives
Winter Semester 2023/2024, 2024/2025, 2025/2026 - University of Verona - MSc in Banking and Finance

Mathematical Finance in discrete time
Winter Semester 2019/2020, 2020/2021, 2021/2022, 2022/2023, 2023/2024 - University of Verona - BSc in Applied Mathematics

Financial Risk Management
Summer Semester 2018, 2019, 2020, 2021, 2022, 2023 - University of Verona - MSc in Banking and Finance

Introduction to Java programming
Summer Semester 2019, 2020, 2021, 2022, 2023 - University of Verona - MSc in Banking and Finance

Teaching (cont.)

Stochastic calculus, FX and interest rate modeling (Quantitative Models for Business Management)
Winter Semester 2018/2019 - University of Verona - MA in International Economics and Business Management

Introduction to actuarial Mathematics
February 2019 - University of Verona

Seminar on Credit Risk Modeling
Winter Semester 2017/2018 - München

Seminar on counterparty credit risk and funding
Summer Semester 2017 - München

Computational finance
Summer Semester 2012, 2013, 2014 and 2015 - München

Introduction to object oriented programming in Java for financial engineers
Summer Semester 2015 - München
Winter Semester 2013/2014 - München

Exercises for the lecture "Numerical methods for financial mathematics"
Summer Semester 2015 - München
Winter Semester 2012/2013 - München

Interest rate modeling in the multiple curve framework - PhD course
March 2015 - Politecnico di Milano

Exercises for the lecture "Applied mathematical finance and its object-oriented implementation"
Winter Semester 2014/2015 - München

Workshop on stochastic volatility and multi-curves (joint with J. Kienitz and C. Fries)
Summer Semester 2014 - München

Term structure models (Finanzmathematik 3)
Winter Semester 2013/2014 - München

Exercises for the lecture "Introduction to the LIBOR market model for the valuation of interest rate derivatives"
February/March 2013 - München

Lévy and affine processes
Winter Semester 2012/2013 - München

Exercises for the lecture "Applied mathematical finance: interest rate models"
Summer Semester 2012 - München

Matlab classes for "Matematica per l'economia e la finanza 2"
December 2011 - Padova

Overview of the teaching activity in Verona

	Financial Risk Manag.	Quant. Models For Bus. Manag.	Math. Finance	Insurance Math.	Java Prog.	Deriv.	PhD Math Finance	Total Hours
2017-2018	54							54
2018-2019	54	54		10	20			138
2019-2020	54		96		20			170
2020-2021	54		72		20			146
2021-2022	54		84		20			158
2022-2023	54		84		20			158
2023-2024			84			54	20	158
2024-2025			54			54	12	120
2025-2026			54			54	20	128

Research funding & Research programs

2024	PhD Scholarship - 96000 EUR. Funding provided by the private firm Fairmat for a research project on hybrid insurance finance products.
2023	Ricerca Base - 43000 EUR. Funding for a research project on deep learning for BSDEs-PIDEs in risk management.
2022	Cooperint Verona - inbound mobility: 2000 EUR to fund the visiting period of Prof. Nils Detering (Univ. California Santa Barbara) for a research project on HJM models for energy markets with Silvia Lavagnini.
2019	Cooperint Verona - outbound mobility: 3000 EUR to fund visiting periods at the Mathematical Institute of the University of Oxford (Prof. Christoph Reisinger). Project on numerical methods for BSDEs of counterparty risk.
2019	Cooperint Verona - inbound mobility: 3990 EUR to fund the visiting period of Mr. Guillaume Szulda (Univ. Paris Diderot) for a research project on multiple curve interest rate models.
2008	Prin 2008 - Member of the Padova Unit - "Probability and Finance" under the supervision of Prof. W. J. Runggaldier (Principal Investigator Prof. Marco Frittelli).

Awards

April 2017	Europlace Institute of Finance (Institut Louis Bachelier) and Fédération Bancaire Française. EIF prize 2017 for the best paper in finance http://www.louisbachelier.org/risk-forum-2017-fintech-favorisent-linnovation-financiere/

Refereeing activity

Finance and Stochastics
Mathematical Finance
SIAM Journal on Financial Mathematics
Quantitative Finance
Journal of Banking and Finance
European Journal of Operational Research
Annals of Operations Research
Methodology and Computing in Applied Probability
Applied Mathematical Finance
Review of Derivatives Research
Asia-Pacific Financial Markets
Applied Mathematics and Computation
International Journal of Theoretical and Applied Finance
Decisions in Economics and Finance
Journal of Computational Finance
Stochastic Models
European Actuarial Journal

Supervision

Bachelor Theses

1. Carolin Vöckler - Mean-Variance Analysis with an Implementation on DAX Data - LMU München - 2012
2. Valentin von Trotha - FFT Network Model For Option Pricing - A Numerical Example - LMU München - 2018
3. Davide Roznowicz - Development and implementation of a statistical arbitrage model for a portfolio of US stocks - University of Verona - 2020
4. Camilla Borasca - The Hull-White short rate model - University of Verona - 2020
5. Davide Adamo - Deep learning based methods for FBSDEs - University of Verona - 2020
6. Marco Quanilli - Deep backward schemes for high-dimensional nonlinear PDEs - University of Verona - 2021
7. Michele Porcelli - Life Insurance Mathematics - University of Verona - 2022
8. Ilaria Lanaro - Weather derivatives - University of Verona - 2023
9. Alessandra De Benedetti - Implementation of Tree methods - University of Verona - 2023
10. Filippo Vicentini - CDS valuation in finmath - University of Verona - 2023
11. Nicola Angeloni - Reinforcement learning - University of Verona - 2023
12. Mariarosaria Perrotta - Axiomatic Theory of risk measures - A comparison of VaR and ES - University of Verona - 2023
13. Tommaso Melotti - Inflation Market Model - Analysis and Improvement of the implementation - 2023
14. Isabella Podavini - Expected Utility maximization - Foundations and applications - University of Verona - 2023.
15. Anna Bicelli - Markov Chains for non-life insurance mathematics - University of Verona - 2023.
16. Simone Ferrarini - Valutazione equa di claim ibridi assicurativi-finanziari: approccio a due stadi - University of Verona - University of Verona - 2024.
17. Maddalena Stringari - Assicurazioni ramo vita: il calcolo dei premi e la gestione del rischio - University of Verona - University of Verona - 2024.

Master Theses

1. Marco Gasperini - The Heston model: Derivation and Implementation - LMU München - 2012
2. Hakki Dogan Dalai - Wishart Multifactor Stochastic Volatility, Implementation and Financial Interpretation - LMU München - 2013
3. Edoardo Cetraro - Risk Management of Basket Options in the Presence of Stochastic Correlations -LMU München - 2013
4. Gaia Laura Talone - Lévy-driven HJM models before and after the financial crisis- LMU München - 2014
5. Dominik Milewski - Interest Rate Modelling in a Negative Rate Environment - LMU München and BayernLB - 2017
6. Anton Sporrer - Credit Valuation Adjustment Incorporating Wrong Way Risk and their Object Oriented Implementation for Hybrid Interest Rate Models - LMU München and BayernLB - 2017
7. Nicolas Röchner - Numerical methods for backward stochastic differential equations - LMU München - 2018
8. Nicole Seiffert - Collateralized Markets in a multi-currency Environment - LMU München - 2018

Supervision

Master Theses (continued)

9. Carla Delfini - The Valuation of Credit Default Swaps - University of Verona - 2018
10. Marta Busato - Stochastic Optimal Control and Dynamic Portfolio Optimization- University of Verona - 2019
11. Alessandro Fina - Quantization methods in Stochastic Volatility models - University of Verona - 2019
12. Francesco Maria Marchetti - Implementation of the CIR model in the Finmath Java library - University of Verona -2020
13. Martina Prà - Comparison of the xVA frameworks of Brigo and Crépey - University of Verona - 2020
14. Pierferdinando Generoso - BSDE approach to hedging - University of Verona - 2020
15. Arianna Sasso - Polynomial chaos expansion: theory and applications in finance - University of Verona - 2020
16. Michela Sandrini - Trading in the presence of initial margin: central counterparties: MVA, ISDA SIMM, AAD - University of Verona - 2020
17. Davide Serpelloni - Neural Networks for CVA computation - University of Verona - 2020
18. Enrico De Vecchi - Finite Difference Methods for American Options - University of Verona - 2021
19. Andrea Andolfatto- Multi Level Deep BSDE Solver - University of Verona - 2021
20. Michele Del Moro - Funding Value Adjustment - University of Verona - 2021
21. Martina Bertoli - Deep Quadratic Hedging - University of Verona - 2023.
22. Nicola Aperti - Interest rate benchmark reform - University of Verona - ongoing.
23. Giovanni Ambrosini - Portfolio Credit Risk Models - University of Verona - 2023.
24. Pietro Zanoni - Inflation Market Models - University of Verona - 2023.
25. Stefano Zalla - Interest rate benchmark reform - University of Verona - 2024.
26. Andrei Gabriel Vanghel - Deep Hedging - University of Verona - 2023.
27. Alessio Bettoli - Pricing di derivati sulle precipitazioni - University of Verona - 2023.
28. Simone Perotti - Pricing and calibration under the COS method - University of Verona - 2023.
29. Leonardo Verin - The valuation of inflation derivatives - The model of Jarrow and Yildirim - University of Verona - 2023.
30. Elenia Favellato - Analysis of reduced form credit risk models - University of Verona - 2024.
31. Alex Formici - The CreditRisk+ model - University of Verona - 2024.
32. Michele Pizzolato - Stochastic models for optimal execution - University of Verona - 2024.
33. Laura Bonisoli - The intricancies of xVA - University of Verona - 2024.
34. Maria Chiara Leone - Calibration of the Heston model - University of Verona - 2024.
35. Arianna Adami - Affine models with piecewise constant parameters - University of Verona - 2024.
36. Andrea Biasi - Metodi di Deep Learning per il calcolo del CVA - University of Verona - 2024.
37. Mattia Bombieri - HJM models for energy markets - University of Verona - 2025.
38. Simone Salvatelli - Quantitative aspects of risk management in insurance - University of Verona - 2025.
39. Edoardo Ferretto
40. Kevin Gravelli

Supervision

PhD Theses

1. I collaborated to/co-supervised two out of three chapters of the thesis of Dr. Maximilian Härtel "The asymptotic behavior of the term structure of interest rates" supervised by Prof. F. Biagini at LMU München.
2. I collaborated to/co-supervised the PhD project of Dr. Guillaume Szulda supervised by Prof. C. Fontana at University of Paris-Diderot (now Univ. of Paris).
3. Junior Parfait Ngalamo (ongoing)
4. Laura Bonisoli (ongoing)

Academic Services

2024 - present	Deputy Head of the Department of Economics
2023 - present	President of the Master Degree in Banking and Finance
2023	Secretary of the selection committee for an Associate Professor position - 13/D4 - Univ. of Verona - Department of Economics
2022	Collaboration to the organization of the lecture *Machine learning and quantum computing with some applications in mathematical finance*: the lecture was jointly organized with the LMU Munich Mathematics Department and offered online to students from Verona and Munich. Lectures by Christian Fries (LMU), Alexander Del Toro Barba, Daniel Wagner (Google)
2021	Member of the Ph.D. Jury for the final exam of Dr. Guillaume Szulda - Univ. Paris Diderot.
2021	Member of the Ph.D. Admission Selection Committee - Univ. of Verona - Department of Economics
2021	Member of the Selection Committee for a Post-Doc Grant on the Job Market - Univ. of Verona - Department of Economics
2021 - 2024	Member of the Organizing Committee (Commissione Seminari) of the Department of Economics Seminar Series - Univ. of Verona.
2020 - 2024	Member of the Quality Assurance Commission (Commissione Assicurazione Qualità) of the Bachelor Degree in Applied Mathematics - Univ. of Verona.
2019 - onward	Member of the steering committee (Collegio Docenti) of the PhD program at the Department of Economics (first for the program *Economics and Management* later for the program *Economics and Finance*)
2019	Secretary of the commission for an RTDB position - 13/D4 - Univ. of Verona - Department of Economics
2018	Member of the commission for an RTDA position - 13/D4 - Univ. of Padova - Department of Mathematics
2018	Secretary of the commission: State Exam of Tax Advisors (Esame di Stato Dottori Commercialisti e Revisori Contabili) - Univ. of Verona - Department of Economics

Organizer of	
June 2025	General AMaMeF Conference https://sites.google.com/view/amamef2025/ University of Verona
December 2022	Verona Workshop in Financial Mathematics http://linux2.dse.univr.it/vwfm/ University of Verona Featured talks by: A. Kolokolov (Univ. of Manchester), C. Fontana (Univ of Padova), C. Cuchiero (Univ. Vienna), C. Munari (Univ. of Zurich), C. Reisinger (Univ. of Oxford)
June 2022	Member of the Program Committee of the 2022 ACM International Conference on AI in Finance (ICAIF)in New York on Nov 2-4 https://ai-finance.org/
June 2021	Mini-symposium organizer: Recent Developments in Multiple Curve Models SIAM conference on Financial Mathematics and Engineering - Philadelphia - (Virtual Event) Featured talks by: A. Macrina (UC London), G. Szulda (Univ. of Paris), Z. Grbac(Univ. Paris Diderot) https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=71155
January 2021	XXII Workshop on Quantitative Finance University of Verona Online Workshop dedicated to PhD students http://dse.univr.it/qfw2021
October 2019	Autumn School in Financial Mathematics University of Verona Featured Lectures by: Andrea Pallavicini (Banca IMI and Imperial College) on xVA and Christian Fries (DZ Bank and LMU München) on Computational Finance (AAD - MVA) http://dse.univr.it/asfm
July 2019	Mini-symposium organizer: Post-Crisis Financial Mathematics: Counterparty Risk, Funding and Central Counterparties SIAM conference on Financial Mathematics and Engineering - Toronto - CA Featured talks by: S. Crépey (University of Evry), Daniele Marazzina (Politecnico of Milan), Ryan Ferguson (Riskfuel) https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=66814
October 2018	DEM Workshop in Financial Mathematics University of Verona Featured talks by: G. Callegaro (University of Padova), Daniele Marazzina (Politecnico of Milan), Andrea Pallavicini (Banca IMI and Imperial College) and Christa Cuchiero (University of Vienna) http://dse.univr.it/demwfm/

Academic Societies	
	Bachelier Finance Society SIAM - Society for Industrial and Applied Mathematics - Financial Mathematics Activity Group. SIMAI - Società Italiana di Matematica Applicata e Industriale.

Third Mission	
Since 2014	Open source software: as a member of the team of Finmath, we offer to the wide public a free (Apache License Version 2.0) professional object-oriented Java library for quantitative finance. See `https://www.finmath.net/finmath-lib/team.html`

Professional Projects	
01.07.2017- 28.02.2018	Compatibl xVA Activity as quantitative analyst in the context of a platform upgrade from Numerix CVA to Compatibl xVA at BayernLB. The project followed an Agile style. Main Tasks: • Responsible for the definition of the hybrid model for exposure generation. • Default probability methodology definition. • Collaboration in the definition of the set of requirements from the front office perspective. • Theoretical research on valuation adjustments (CVA, DVA, FVA, ColVA, KVA). • Analysis of pricing equations for contingent claims in the presence of collateral in different currencies. • Software testing in an Agile framework (User/Business side perspective).
01.07.2016- 30.09.2016	Proof of Concept - New xVA software Activity as assistant project leader (Stellvertreter Projektleiter) for the proof of concept for the new software solution for the XVA Desk of BayernLB, providing coordination between: external software provider, external consultants, internal IT, risk management and front office.
01.2016-04.2016	Compatibl Numerix CVA v3.5.2 As a Quant analyst working on the xVA Desk of BayernLB I was mainly responsible for the test phase and introduction of a new version of the main pricing software. Innovations included: • a better support for negative interest rates. • shifted lognormal swaption volatilities. Tasks included: • Modification of the data model in order to account for new volatility quoting mechanism and more flexibility in the specification of the term structure of default probabilities. • Review of model calibration quality. • Benchmark of the main figures produced by the front office system (PV, CVA, FVA) against the results produced by the risk management team for accounting on a test portfolio.