Marco Bianchetti Curriculum Vitae et Studiorum - Profile

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Short biography	
Role and affiliation	Head of Market and Counterparty IMA Methodologies, Market and Financial Risk Management, Intesa Sanpaolo, and Adjunct Professor, Department of Statistical Sciences "Paolo Fortunati", Università di Bologna
	Marco holds a M.Sc. in theoretical nuclear physics (1995) and a Ph.D. in theoretical condensed matter physics (2000) from Università degli Studi di Milano. In 2000 he joined the Financial Engineering team of Banca Caboto (now IMI CIB Division of Intesa Sanpaolo), developing pricing models and applications for trading desks. In 2008 he moved to the Financial and Market Risk Management area of Intesa Sanpaolo. In 2015 he was appointed head of Fair Value Policy, developing the global fair/prudent/IPV policies and the valuation risk management framework of Intesa Sanpaolo Group. In 2021 he was appointed head of IMA Market Risk, in charge of regulatory market risk models and RWAs under Basel 2.5 and FRTB. Since Sept. 2024 he is head of Market and Counterparty Risk IMA Methodologies for Intesa Sanpaolo Group. His work covers pricing and risk management of financial instruments, market risk, valuation risk, interest rates, XVAs, quasi-Monte Carlo, financial bubbles and portfolio optimization. He is the author of a few research papers, adjunct professor at Università di Bologna (2015- present) and at Università di Torino (2018-2023), member of Conference/Ph.D/Master Advisory Boards, and a frequent speaker at international conferences. See also the LinkedIn profile.



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Short Profile

Experience, since 2000, in Market Risk Management and Front Office Financial Engineering areas of leading financial institutions. Strong commitment in strategic & innovation projects. Ph.D. in theoretical physics with 6+ years research experience, extensive teaching activity. Empathic and effective professional, able to take initiative and responsibility, propose and lead projects, deliver and report results, manage budget, junior and senior resources. Head of Internal Model Market Risk since Apr. 2021. Adjunct Professor at Univ. of Bologna and Torino.

Job experiences Present Intesa Sanpaolo, Market and Financial Risk Management - Head of Market and Oct. 2024 **Counterparty IMA Methodologies:** responsible of regulatory market and Milan counterparty risk internal models under Basel 2.5 and FRTB and of global fair/prudent/IPV policies of Intesa Sanpaolo Group. Lead a team of 12 people. Sep. 2024 Intesa Sanpaolo, Market and Financial Risk Management – Head of IMA Market Apr. 2021 **Risk:** responsible of regulatory market risk models and RWAs under Basel 2.5 and FRTB Milan and of global fair/prudent/IPV policies of Intesa Sanpaolo Group. Lead a team of 12 people. Apr. 2021 Intesa Sanpaolo, Financial and Market Risk Management – Head of Fair Value **Policy:** responsible of the global fair/prudent/IPV policies of Intesa Sanpaolo Group. Oct. 2015 Milan Focus on valuation risk management, pricing models, portfolio optimization, bubble analysis, Quasi Monte Carlo techniques. Lead a team of 6 people (3-4 people in Milan, 1 in HK, 1 in NY). Oct. 2015 Intesa Sanpaolo, Market Risk Management, Derivatives Management Jan. 2012 Quantitative Risk Manager, Head of Financial Modelling and Validation: lead a Milan horizontal team of quants and risk managers in charge of front office pricing models validation, development of analytics for market and counterparty risk. Focus on interest rate modelling, XVAs, quasi-Monte Carlo, fair/prudent valuation, IPV. Jan. 2012 Intesa Sanpaolo, Market Risk Management, Derivatives Management Quantitative Risk Manager: worked on pricing and risk management of portfolios of Jan. 2008 Milan derivatives (interest rate, equity, inflation), front office pricing model validation, model risk assessment and monitoring, product innovation, fair value policy, fair value adjustments, Markit/Totem data analysis. Caboto Bank (merged IMI Bank Sep. 2007), Front Office Financial Engineering Jan. 2008 May 2002 **area** – **Quant**: designed/developed/delivered pricing models and trading platforms for Milan inflation and interest rate derivatives trading desks. Intesa Bank, Risk Management, Financial Engineering area – Quant: worked on May 2002 Oct. 2000 models and trading platforms for plain vanilla, rendistato, bond coupon stripping, equity Milan baskets derivatives. Oct. 2000 INFM-National Institute for Matter Physics, Project Management, Technology Transfer & Outreach Area: worked on monitor & plan the Institute strategic activities, Jul. 2000 Genoa supported management for area organisation. Jul. 2000 **Physics Department, University of Milan:** Ph.D. research activity on many-body Nov. 1995 problems in nuclear and molecular physics. Short periods in Germany. Assistant lecturer Milan at Polytechnic of Milan, University of Milan and Milan-Bicocca (4 courses, 300+ students). Sep. 1996 SILAQ Italia S.r.l.: consultant on safety, environment and quality services, run new Sep. 1995 local office of start-up company, customizing and marketing technical services, measuring Milan customer satisfaction and developing new business opportunities. 2006 ADI-Italian Ph.D. Association: co-promoter (1997), 1st president (1998-2000) 1996 member of board of directors. Improved working conditions of young researchers and promoted Ph.D. in Italy (<u>www.dottorato.it</u>). Sept. 2015-present: adjunct professor of Advanced Interest Rate Models and Other positions Markets, University of Bologna 2019-2023: adjunct professor of Quantitative Risk Management, University of Torino 2014-present: co-coordinator of AIFIRM working groups. 2011-present: member of the board of directors of Ph.D. and master courses in Quantitative finance. Tutor/Co-tutor of M.Sc. students in physics (6) and finance (11).

Finance:

- Since 2019: Valuation Risk Management: set up the governance framework, coordinated data collections and responses to regulatory requests.
- o Since 2013: **Prudent Valuation**: set up of the methodological and governance framework, coordinator of AIFIRM working group with Prof. U. Cherubini (ca. 25 people).
- o 2013-2016: Funding Valuation Adjustment (FVA): set up of the methodological framework
- o 2012-2015: CCR and CVA: set up of the methodological framework.
- 2010-2012: CSA-Discounting: set up of the methodological framework.
- o 2008-2010: Model Risk: working at the framework for pricing model risk assessment/monitoring and fair value adjustment, analysis of Markit/Totem data.
- 2002-2007: **Inflation**: ready for the very first deal in 2002, I followed the full innovation process, from market understanding, mathematical modelling, full software prototype (7000+ code lines + spreadsheets), RM validation and users training. Front Office reference person for group integration project, coordinating consultant resources and working closely with people from all areas of the Intesa Sanpaolo Group.
- 2005-present, promoted and co-organised two master courses in finance.
- **Non-profit:** ADI Italian PhD Association: promotion of policies, funding, workshops and negotiations with highest university and government authorities. Editorial projects "Cervelli in Gabbia" and "Cervelli in Fuga". Coordination of research projects of Ph.D. quality assessment with major Universities and Government Committees (6 people, 60.000€ budget).

Technical skills

□ Finance (since 2000):

- Pricing plain vanilla and exotic derivatives, XVAs, multiple yield curve construction, SABR, short rate and market models, inflation/seasonality, derivatives on algorithmic indices, model calibration, local and global optimization algorithms.
- Monte Carlo and Quasi Monte Carlo numerical simulation methods, greeks.
- QuantLib developer 2006-2007 (see <u>QuantLib project website</u>).
- Computing (since 1992): developed IT expertise as research and professional tool. Utilised large computing resources on different platforms for numerical simulations.
 - Software: "from scratch" design and development of large codes (15.000+ total lines until 2008).
 - Numerical analysis: Monte Carlo, integration, differentiation, diagonalization, optimization, etc.
 - Languages: various knowledge of C/C++ (beginner), VBA, ELF, Matlab.
 - Architectures: used scalar (PC, workstation), parallel (CRAY) and distributed architectures.
 - Operative Systems: Windows, Unix and OpenVMS platforms.
 - o Networking: intranet, internet and applications, web publishing and administration
 - Applications: various usage of Murex, Applix, RiskWatch, FO systems, MSVisualC++, SVN/CVS/SourceSafe, LaTeX, MSOffice, DreamWeaver, and other Unix and Windows applications.

Education and training

- Ph.D. degree in physics, University of Milan, Jan. 2000. 3 years fellowship after national public trial (15 positions vs. 160+ partecipants). Final defence in front of an international committee.
 - M. Sc. degree ("laurea") in physics, 110/110 cum laude, Univ. of Milan, Jul. 1995.
- **Training**: various trainings and conferences on derivatives pricing, management of technology and computing (see complete list attached).

Publications & conferences (complete list attached)

- □ Author of some research papers in finance and physics, see SSRN, Arxiv and Google Scholar.
- Frequent invited speaker at international conferences and training courses in finance.

Addendum

- Languages: English: good read, written and spoken; TOEFL score 610 (1995). Native Italian.
- Military service: Italian Army, logistics, lance corporal (1994-1995, 12 months).
- COOPI course on international cooperation (2006).
- Team working: daily interaction with management, traders, structurers, quants, IT, Financial & Product Control, Accounting, Organisation, external Auditors, Regulators, industry Associations.
- **Personal characteristics:** effective professional, able to take initiative and responsibility, propose and lead projects, plan, deliver and report. See LinkedIn recommendations.

Milan, June 2025 Marco Bianchetti

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Sources: SSRN, Arxiv and Google Scholar

1) Finance

Books, papers, conference proceedings, etc.

- S. Kucherenko, L. Albieri, M. Bianchetti, and S. Scoleri, "Effective Dimensionality Reduction for Greeks Computation Using Randomized QMC", Wilmott, vol. 2025, issue. 137, 2025, <u>http://dx.doi.org/10.54946/wilm.12142</u>. Available on <u>SSRN</u> and <u>Arxiv</u>.
- M. Bianchetti, G. D'Acunto, G. De Francisci Morales, Y. Kuroki, M. Scaringi, F. Vitale, "*Risk-aware Trading Portfolio Optimization*", available at <u>SSRN</u> and <u>Arxiv</u>.
- R. Aiolfi, N. Moreni, M. Bianchetti, M. Scaringi, Learning Bermudans. Computational Economics (2024). <u>https://doi.org/10.1007/s10614-023-10517-w</u>. Available at <u>SSRN</u> and <u>Arxiv</u>.
- Silotto, L., Scaringi, M. & Bianchetti, M. "XVA modelling: validation, performance and model risk management", Annals of Operations Research (2023). <u>https://doi.org/10.1007/s10479-023-05323-4</u>. Available at <u>SSRN</u> and <u>Arxiv</u>.
- S. Scoleri; M. Bianchetti; S. Kucherenko, "Application of Quasi Monte Carlo and Global Sensitivity Analysis to Option Pricing and Greeks: Finite Differences vs. AAD", Wilmott Journal n. 116 (66-83), 22 Nov. 2021, <u>https://doi.org/10.1002/wilm.10972</u>. Available at <u>SSRN</u>.
- V. Falco, M. Bianchetti, U. Cherubini, "Moving from IBORs to Alternative Risk Free Rates", Risk Management Magazine 16, 2021. Available at <u>SSRN</u>.
- □ M. Scaringi, M. Bianchetti, "No Fear of Discounting: How to Manage the Transition from EONIA to €STR" (September 2, 2020). Available at <u>SSRN</u>.
- Marco Bianchetti; Umberto Cherubini, "From IBORs to RFRs: Impacts on Banks' Processes and Procedures", AIFIRM – Associazione Italiana Financial Industry Risk Managers, 2019, DOI <u>http://dx.doi.org/10.47473/2016ppa00016</u>
- M. Bianchetti, C. Ricci, M. Scaringi, "Forecasting crypto crashes with bubble analysis", Risk Magazine, 1, 2018. Available at <u>SSRN</u>.
- M. Bianchetti, D.E. Galli, C. Ricci, A. Salvatori, M. Scaringi, "Brexit or Bremain? Evidence from Bubble Analysis". Published on <u>CEUR-WS: 29-Dec-2016</u>, Proceedings of the 1st Workshop on MIning DAta for financial applicationS (MIDAS 2016), Riva del Garda, Italy, September 19-23, 2016. Edited by: Ilaria Bordino, Guido Caldarelli, Fabio Fumarola, Francesco Gullo, Tiziano Squartini. Also published in <u>Risk Magazine</u>, 22 June 2016. Available at <u>SSRN</u>.
- M. Bianchetti, U. Cherubini, "Prudent Valuation Guidelines and Sound Practices", published in Newletter AIFIRM anno 11, n. 1, Dec. 2015, <u>http://www.aifirm.it</u>. Available at <u>SSRN</u> 16 Jun. 2016.
- □ A. Antonov, M. Bianchetti and I. Mihai, "*FVA for General Instruments*", Risk Magazine, Nov. 2015. Available at <u>SSRN</u>.
- M. Bianchetti, S. Kucherenko, S. Scoleri, "Pricing and Risk Management With High-Dimensional Quasi Monte Carlo and Global Sensitivity Analysis", Wilmott, 2015: 46–70, Jul. 2015. <u>https://doi.org/10.1002/wilm.10434</u>. Available at <u>SSRN</u> and <u>Arxiv</u>.
- M. Bianchetti, M. Carlicchi, F. Cozzi, L. Recchia, A. Spuntarelli, "ETD vs. OTCD: Counterparty Risk and Capital Requirements for Exchange Traded Derivatives", 24 Sept. 2014. Available at <u>SSRN</u>.
- M. Bianchetti and M. Morini, editors, "Interest rate modelling after the financial crisis", Risk Books, Jun. 2013 (<u>http://riskbooks.com/interest-rate-modelling-after-the-financial-crisis</u>), including the three chapters:
 - M. Bianchetti and M. Carlicchi, "*Evolution of the Markets after the Credit Crunch*", Available at <u>SSRN</u>, 19 Dec. 2012,
 - M. Bianchetti, "Modern Pricing of Interest Rate Derivatives including Funding and Collateral".
 - F. M. Ametrano and M. Bianchetti, "Bootstrapping the Illiquidity: Multiple Yield Curves Construction for Market Coherent Discount and FRA Rates Estimation", Available at <u>SSRN</u>, 2 Apr. 2013.
- Ametrano, Ferdinando M. and Bianchetti, Marco, "Everything You Always Wanted to Know About Multiple Interest Rate Curve Bootstrapping but Were Afraid to Ask", Available at <u>SSRN</u>, 2 Apr. 2013.
- M. Bianchetti, M. Carlicchi, "Interest Rates After the Credit Crunch Multiple Curve Vanilla Derivatives and SABR", published in The Capco Journal of Financial Transformation - Applied Finance n. 32, September 2011. Available at <u>SSRN</u>, 11 Mar. 2011.
- M. Bianchetti, "The Zeeman Effect in Finance", Bloomberg Risk, 5 Aug. 2011, pp. 7-8 (Bloomberg NI RISKBRIEF <GO>). Available at <u>SSRN</u>, 31 Oct. 2011.
- □ M. Bianchetti, "Two Curves, One Price", Risk, August 2010. Available at SSRN, 14 Nov. 2008.

- F. M. Ametrano, M. Bianchetti, "Bootstrapping the Illiquidity: Multiple Yield Curves Construction for Market Coherent Forward Rates Estimation", published in "Modeling Interest Rates: Latest Advances for Derivatives Pricing", edited by F. Mercurio, Risk Books, 2009. Avaiable at <u>SSRN</u>.
- E. Scalas, M. Bianchetti, F. Mainardi, H.E. Roman, A. Vivoli, "Syntethic Markets", conference poster, published in Proceedings of the 8th Annual Workshop on Economics with Heterogeneous Interacting Agents, Kiel, Germany, May 29-31, 2003, http://people.unipmn.it/scalas/wehia2003sm/wehia2003sm.html.
- M. Bianchetti, "Towards High Performance Monte Carlo Pricing of Portfolios of Equity Derivatives", in proceedings of CAPI2001, CILEA, 2001, <u>http://www.bianchetti.org/Finance/CAPI2001/CAPI2001-</u> <u>Presentation.htm</u>.

Conferences, talks, etc. (as speaker)

- Joint talk with F. Lania, "FRTB ready to go: challenges and opportunities", Risk Europe 2025, 17 Jun. 2025.
- □ Joint talk with F. Lania, "*Preserving the Viability of the Internal Models Approach (IMA) under FRTB in Europe: Challenges and Opportunities*", RiskMinds International, London, 19 Nov. 2024.
- Invited talk "Sharpening Market Risk Allocation From Basel 2.5 to FRTB", Dept. of Economic Sciences, University of Verona, 13 Dec. 2024.
- □ Talk "Sharpening Market Risk Allocation From Basel 2.5 to FRTB", WBS Quantitative Finance Conference, 27 Sep. 2024.
- □ Joint talk with G. Crupi, "*Learning Market Data Anomalies* ", Lake Como School of Advanced Studies, <u>Statistical Physics of Deep Learning II</u>, Villa del Grumello, Como, 11 Jun. 2024.
- Talk, "Learning Market Data Anomalies ", Dept. of Mathematics, University of Padua, 6 May 2024.
- Talk, "Sharpening Risk Allocation", International Risk Management Conference 2024, Bocconi University, Milan, Jun. 2024.
- □ Joint talk with M. Scaringi, "Fair Risk Allocation", RiskMinds International, London, 14 Nov. 2023.
- Joint talk with M. Scaringi, "Learning Market Data Anomalies", QuantMinds International, London, 14 Nov. 2023.
- Talk, "Learning Market Data Anomalies", International Risk Management Conference 2023, Florence, 7 Jul. 2023.
- □ Talk, "Learning Market Data Anomalies", 67th EWGCFM Meeting, Rome, 5 May 2023.
- Joint talk with M. Scaringi, "Learning Market Data Anomalies", QuantMinds International, Barcellona, 9 Nov. 2022.
- □ Joint talk with J. M. Vegas, "ESG Market Risk Valuation and Management", Risk Minds, Barcellona, Nov. 2022.
- □ Joint talk with M. Scaringi, "*Learning Market Data Anomalies*", International Fintech Research Conference, Politecnico di Milano, 27 Oct. 2022.
- Joint talk with J. M. Vegas, "ESG Market Risk Valuation and Management", The 3rd ESG & Climate Risk in Quantitative Finance Hybrid Conference, WBS Quantitative Finance Conference, London, May. 2022.
- □ Joint talk with G. Amici, F. Brina, M. Mezzetti, A. Peroni, P. Rossi, "*Learning Exotic Derivatives Without Calibration*", QuantMinds in Focus Conference, May 2021.
- □ Joint invited talk with G. Amici, F. Brina, M. Mezzetti, A. Peroni, P. Rossi, "*Learning Exotic Derivatives Without Calibration*", WBS Quant Conference Spring Edition, Mar. 2021.
- □ Joint talks with M. Scaringi, Pictet Quant seminars (2 events), February 2021.
- □ Joint talk with M. Scaringi, "*No Fear of Discounting*", WBS Quantitative Finance Conference, Oct. 2020.
- □ Joint talk with M. Scaringi, "*Learning the Optimal Portfolio Risk-Oriented Portfolio Management with Global Optimization Algorithms* ", QuantMinds International, 2-6 Nov. 2020.
- □ Talk "Valuation Risk Management", webinar AIFIRM and Refinitiv, 14 Jul. 2020.
- Joint invited talk with Marco Scaringi, "New Interest Rate Benchmarks Valuations and Risk Management", 15th Quantitative Finance Conference, WBS, Rome, 17 October 2019.
- □ Talk "Valuation Risk Management", V-FI Europe, London, 26 Jun. 2019.
- □ Talk "New Interest Rate Benchmarks Valuations and Risk Management", Cass Business School, London, 19 Jun. 2019.
- Talk "New Interest Rate Benchmarks Valuations and Risk Managemen", Prometeia, Bologna, 22 May 2019.
- Joint invited talk with M. Scaringi, "IBORs Reform: user guide for quants and risk managers", QuantMinds International, 15 May 2019, Vienna.
- Talk "Past, Present and (Possible) Futures of Valuations and Risk Management under IBORs evolution", Benchmark Rates Reform: Valuations, Discounting and Forward Risk, London, 15 Mar. 2019.
- Talk "Beyond fair valuations", Risk and Supervision 2018, Unione Bancaria e Basilea 3, Rome, 14 June 2018.

- □ Talk "*Bitcoin, Brexit and other bubble stories*", International Summer School Risk Measurement and Control, Rome, 5 June 2018.
- Joint talk with M. Scaringi, "Learning the Optimal Risk Advanced Risk-Based Portfolio Management with Global Optimization and Machine Learning Algorithms", QuantMinds International, 16 May 2018, Lisbon.
- Joint talk with M. Scaringi, "Learning the Optimal Risk Advanced Risk-Based Portfolio Management with Global Optimization and Machine Learning Algorithms", Università degli Studi Milano Bicocca, Milan, 21 March 2018.
- Joint talk with MarM.co Scaringi, "Learning the Optimal Risk Advanced Risk-Based Portfolio Management with Global Optimization and Machine Learning Algorithms", Machine Learning & AI in Quantitative Finance Conference, WBS, London, 15 March 2018.
- Talk "Are Cryptocurrencies Real Financial Bubbles? Evidence from Market and Sentiment Analyses", Prometeia, Bologna, 8 March 2018.
- □ Talk "*Brexit, Bitcoin & other stories Evidence from different bubble models*", RiskMinds International, 5 Dec. 2017, Amsterdam.
- □ Talk "*Brexit, Bitcoin & other stories Evidence from different bubble models*", WBS 13th Fixed Income Conference, 20 Oct. 2017, Firenze.
- □ Joint talk with Anna Cremon, "Prudent Valuation and MPU: Efficient Capital Allocation under EBA RTS", V-FI Europe, London, 21 Jun. 2017.
- Talk "Is Brexit still a bubble", Global Derivatives Trading and Risk Management, Barcelona, May 2017.
- □ Talks "Brexit or Bremain ? Evidence from bubble analysis" and "Gruppo di lavoro Fundamental Review of the Trading Book (FRTB) Avvio lavori", XII Convention AIFIRM, Milano, 16 Nov. 2016.
- □ Talk "*Prudent Valuation Bridging the gap between pricing and risk management*", Prometeia, Bologna, 13 Oct. 2016.
- □ Talk "*Prudent Valuation Bridging the gap between pricing and risk management*", Workshop New Themes in Finance, Insurance and Energy Markets, Novara, 22 Sep. 2016
- Talk "Brexit or Bremain? Evidence from Bubble Analysis", 1st Workshop on MIning DAta for financial applicationS (MIDAS 2016), Riva del Garda, Italy, 19 Sep. 2016.
- □ Talk "*The Age of Negative Rates Market facts and modelling consequences"*, PRMIA and Numerix conference, Milan, 26 May 2016.
- Talks "Prudent Valuation: here we go", and "Better Pricing & Risk Management with High Dimensional Quasi Monte Carlo" (with S. Scoleri), Global Derivatives Trading and Risk Management, Budapest, May 2016.
- Joint invited talk with S. Scoleri and S. Kucherenko, "Better Pricing & Risk Management with High Dimensional Quasi Monte Carlo – Multi-asset options and AAD", Imperial College, Dept. of Mathematics, London, 9 Mar. 2016.
- □ Talk "Prudent Valuation: conclusione lavori", AIFIRM, Milan, 2 Dec. 2015.
- □ Talk "Prudent Valuation: A New Bridge Between Pricing & Risk Management", Cass Business School, London, 4 Nov. 2015.
- □ Joint talk with S. Scoleri, "Better Pricing & Risk Management with High Dimensional Quasi Monte Carlo Multi-asset options and AAD", WBS Fixed Income Conference, Paris, 9 Oct. 2015.
- Talks "Prudent Valuation: A New Bridge Between Pricing & Risk Management", and "Better Pricing & Risk Management with High Dimensional Quasi Monte Carlo" (with S. Scoleri), Global Derivatives Trading and Risk Management, Amsterdam, May 2015.
- □ Joint talk with T. Dehapiot, "Prudent Valuation: Bridging the Gap Between Pricing & Risk Management", Risk Minds, Amsterdam, 10 Dec. 2014.
- □ Joint talk with I. Faerman, "Prudent Valuation: Bridging the Gap Between Pricing & Risk Management", Numerix Webinar, 12 Nov. 2014.
- □ Joint talk with S. Scoleri, "*Better Pricing and Risk Management with High Dimensional Quasi Monte Carlo*", WBS 10th Fixed Income Conference, Barcelona, 26 Sep. 2014.
- □ Joint talk with U. Cherubini, "Funding Valuation and Prudent Valuation Adjustments (PVA & FVA)", ABI conference, Roma, 16 Jun. 2014
- □ Talk "Modern Derivative Pricing Including Funding and Collateral", Prometeia, Bologna, 22 May 2014.
- □ Talk "Advanced Techniques in Computing Counterparty Risk Measures: Quasi Monte Carlo
- Simulation", Global Derivatives Trading and Risk Management, Amsterdam, 15 May 2014.
 Talk "Advanced Techniques in Computing Counterparty Risk Measures: Quasi Monte Carlo Simulation", Risk Minds, Amsterdam, 3 Dec. 2013.
- Talk "Modern Derivative Pricing Including Funding and Collateral", Risk Quant Congress, London, 12 Jun. 2013.
- □ Talk "*Modern Derivative Pricing Including Funding and Collateral*", Global Derivatives Trading and Risk Management, Amsterdam, 17 Apr. 2013.
- □ Talk "Quants in finance What a scientist can do in a bank", Polytechnic of Milan, 10 Apr. 2013.
- Talk "Modern Derivative Pricing Including Funding and Collateral", 2nd WBS Interest Rate Conference, London 13 Mar. 2013.

- Talk "Modern no-Arbitrage Pricing", Scuola Normale Superiore di Pisa, 29 Jan. 2013.
 Talk "Bootstrapping the Illiquidity", Qfin Colloquia, Polytechnic of Milan, 22 Nov. 2012.
- □ Talk "Quants in Finance", Mateday, Math. Engineering, Polytechnic of Milan, 24 Oct. 2012.
- □ Talk "Modern Derivatives' Pricing", Risk Quant Congress, New York, 11 Jul. 2012.
- □ Talk "The Zeeman Effect in Finance", 18th Global Derivatives Trading and Risk Management, Barcellona, 19 Apr. 2011.
- □ Talk "Modern Interest Rates", WBS Interest Rate Conference, London, 28 Mar. 2012.
- □ Talk "Modern Interest Rates", Cass Business School, London, 28 Mar. 2012.
- □ Talk "Modern Derivatives' Pricing", Risk Annual Summit, London, 22 Mar. 2012.
- □ Talk "Interest Rate After the Credit Crunch", Risk Quant Congress, London, 8 Nov. 2011.
- □ Talk "Interest Rates After the Credit Crunch", Scuola Sup. S. Anna, Pisa, 17 Oct. 2011.
- □ Talk "Switching to CSA discounting and beyond", WBS 7th Fixed Income Conference, Berlin, 6 Oct. 2011.
- □ Talk "Risk Management, Fair Value and Model Validation after the Credit Crunch", Banca IMI conference "The Debt Crisis: Different Rules for a Different World", New York, 17-20 May 2011.
- □ Talk "Interest Rate After the Credit Crunch", IX RiskLab Meeting on Financial Risks, Madrid, 12 May 2011.
- Talk "Interest Rate Derivatives After the Credit Crunch", Bank of International Settlements, Basel, 6 May 2011.
- Talk "Switching to CSA Discounting", 17th Global Derivatives Trading and Risk Management, Paris, 11-15 Apr. 2011.
- □ Talk "Multiple Curves One Price", 16th Global Derivatives Trading and Risk Management, Paris, 17-21 May 2010.
- □ Talk "Two Curves One Price", Marcus Evans workshop "Risk and Modelling Fixed Income Interest Rates", London, 15-16 Apr. 2010.
- □ Talk "Fair value, la crisi: impatti sui modelli di pricing", joint with P. Virgili and L. A. Cefis, workshop Bank of Italy, Rome, 19 Jan. 2010.
- Talk "Two Curves One Price", Quant Congress Europe, London, 3-5 Nov. 2009.
 Talk "Two Curves One Price", X Workshop of Quantitative Finance, Milan, Jan. 2009.
- □ Internal talk "Pricing & hedging inflation-linked derivatives", Caboto Intesa, Jan. 2004.
- □ Talk "Towards High Performance Monte Carlo Pricing of Portfolios of Equity Derivatives" at CAPI2001, CILEA, Catholic Univ. Milan, Oct. 2001.
- □ Organizer of 1 day workshop "Introduction to Econophysics", University of Milan, Physics Department, Nov. 1999 (http://www.bianchetti.org/Finance/Econophysics1999.htm).

Referee

- International Journal of Theoretical and Applied Finance (2013)
- □ Journal of Risk (2013)
- □ Journal of Economic Dynamics and Control (2012)
- □ Mathematical Finance (2013)
- Quantitative Finance (2017-present)
- □ Risk Magazine (2010-present).
- Wilmott Journal (2012)
- □ World Scientific Publishing Co. (2011).

Memberships

- □ Since 2024: member of the <u>QuantMinds International Congress</u> Advisory Board.
- □ Since 2023: member of the <u>Quant Congress</u> Advisory Board.
- □ Since 2017: member of the PhD programme "Mathematical Models and Methods in Engineering" Advisory Board, Politecnico di Milano.
- □ Since 2013, coordinator, jointly with Prof. U. Cherubini, of AIFIRM Market Risk Committee.
- □ Since 2011, member of the Board of Directors of "Master in Finanza Quantitativa", MIP School of Management, Politecnico di Milano.
- 2004-2005: member of the Board of Directors of "Master in metodologie e modelli per la finanza quantitativa", University of Milan, Dept. of Physics.

Teaching activity

Regular

- Since 2015: Adjunct Professor of "Advanced Interest Rate Models and Markets" (30h), School of Economy, Management and Statistics, Bologna University, SSD: SECS S/06.
- 2018-2023: Adjunct Professor of "Quantitative Risk Management" (8h), Dept. of Economic-Social and Mathematical-Statistical Sciences, University of Torino, SSD: SECS S/06.

- Since 2015: Lecturer "Elective Course Market and Counterparty Risk Management" (8h out of 16h course), Mafinrisk, Bocconi University.
- Since 2011: Lecturer "Fixed income financial instruments" (15-20h course) at Master in Finanza Quantitativa, MIP School of Management, Politecnico di Milano.
- 2005-2020: Lecturer on fixed income financial instruments and markets at Corso di Alta Formazione in Finanza Matematica, Dept. of Mathematics, Bologna University:
- 2005: Lecturer "Modelli per gli strumenti finanziari" (25h), Master in metodologie e modelli per la finanza quantitativa, University of Milan, Dept. of Physics.

□ Irregular

- Lecture (3h) "Anomaly Market Data Detection, RWA Allocation, Portfolio Optimization", Dept. of Economics, Social Studies, Applied Mathematics and Statistics, Univ. of Turin, 5 Mar. 2025.
- Joint lecture with S. Scoleri and S. Kucherenko, "Applications of QMC Methods in Finance Part Three: Applications to Counterparty Risk", Certificate in Quantitative Finance Institute, London, 14 March 2018.
- Lecture "Modelling & Validation for Capital, Initial Margin & Prudent Value", Global Derivatives Trading and Risk Management, Amsterdam, May 2015 (1-day joint workshop with M. Morini).
- Lecture "Modern Interest Rates", M.Sc. Course in Quantitative Finance, Dept. of Economy & Finance, University of Bologna, 24 April 2015, (2 days workshop).
- Lecture "Prudent Valuation", 4th WBS CVA Conference, London, 25 Mar. 2015 (1-day joint workshop with U. Cherubini).
- Lecture "Prudent Valuation", London Stock Exchange Group Academy, Milano, 28 Nov. 2014 (1day joint workshop with U. Cherubini, A. Pignataro, S. Vasconi).
- Lecture "Prudent Valuation", London Stock Exchange Group Academy, Milano, 29 May 2014 (1-day joint workshop with U. Cherubini, E. Maffi, A. Pignataro, S. Vasconi).
- Lecture "Quantitative Risk Management", University of Milan-Bicocca, 23 Nov. 2013 (1h).
- Lecture "Modern Derivative Pricing with Collateral, Funding and Credit Risk", WBS Quants Hub, London, 17 Nov. 2013 (1-day workshop).
- Lecture "Modern Derivative Pricing with Collateral, Funding and Credit Risk", Risk Quant Congress, London, 11 Jun. 2013 (1-day workshop).
- Lecture "Understanding and Managing Model Risk", Workshop, Risk Minds, Amsterdam, 7 Dec. 2012 (half day workshop).
- Lecture "Interest Rates Derivatives", WBS, Frankfurt, 19 Nov. 2012 (day 1 of 2). •
- Lecture "Interest Rates After the Credit Crunch", WBS, London, 15 May. 2012 (2h).
- Lecture "Modern Interest Rates", Technical Master Class, 18th Global Derivatives Trading an Risk Management, Barcellona, 20 Apr. 2011 (half day workshop).
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- Lecture "Interest Rates After the Credit Crunch", WBS, Paris, 27 Feb. 2012 (day 1 of 2). Lecture "Interest Rates After the Credit Crunch", WBS, Madrid, 28 Nov. 2011 (day 1 of 2). Lecture "Interest Rates After the Credit Crunch", Concentric, Milan, 27 Oct. 2011 (day 1 of 2).
- Lecture "Interest Rates After the Credit Crunch", WBS 7th Fixed Income Conference, Berlin, 5 Oct. 2011 (1 day).
- Lecture "Interest Rates After the Credit Crunch", WBS, London, Mar. 2011 (day 1 of 2).
- Lecture "Interest Rates After the Credit Crunch"; WBS, Frankfurt, Feb. 2011 (day 1 of 2). Lecture "Interest Rates After the Credit Crunch", Piedmont University, Dept. of Economic Sciences • and Quantitative Methods, 14 Dec. 2010 (3h).
- Lecture "Interest Rates After the Credit Crunch"; WBS, Milan, Oct. 2010 (day 1 of 2).
- Lecture "Two Curves One Price", WBS, London, Apr. 2010 (1.5h of 2 days).
- Lecture "The SABR Model", Piedmont University, Dept. of Economic Sciences and Quantitative Methods, Dec. 2009 (3h).

□ Students (as supervisor)

- Oussama Zekiouk, M.Sc. Quantitative Finance, University of Bologna, "Application of Stochastic Kriging and Quasi-Monte Carlo Techniques", expected Dec. 2024.
- Simona Lentini, M.Sc. Quantitative Finance, University of Bologna, "XVA Modelling in the G2++ Model Framework: Extension to FVA, MVA and Quasi-Monte Carlo Technique", Mar. 2024.
- Luca Albieri, M.Sc. Quantitative Finance, University of Bologna, "Monte Carlo, Quasi-Monte Carlo ٠ and Randomized Quasi-Monte Carlo Methods for Option Pricing and Risk-Management with Global Sensitivity Analysis", March 2024.
- Giovanni Greco, M.Sc. Quantitative Finance, University of Bologna, "A Non-Replication Approach to Price CMS Spread Options", Dec. 2023.
- Riccardo Lamia, M.Sc. Quantitative Finance, University of Bologna, "SABR Model: recent developments, calibration and pricing results", March 2023.
- Michele Silano, M.Sc. Quantitative Finance, University of Bologna, "Extended SABR Model and New Financial Benchmarks: an efficient and low bias Monte Carlo approach", March 2022.

- Dario Diamantini, M.Sc. Quantitative Finance, University of Bologna, "On the calibration and applicability of the Backward-looking SABR model in the post-IBOR world", March 2022.
- Guillermo Juan Martinez Cantalapiedra, M.Sc. Quantitative Finance, University of Bologna, "Option Based Financial Bubble Detection", March 2022.
- Giuseppe D'Antuono, M.Sc. Quantitative Finance, University of Bologna, "Accurate method for option sensitivities: Chebyshev Interpolation", 17 Dec. 2021.
- Matteo Mezzetti, M. Sc. Quantitative Finance, University of Bologna, "Deep Learning on European Swaptions: an innovative market-based approach", 30 October 2022.
- Federico Brina, M. Sc. Quantitative Finance, University of Bologna, "Innovative market-approach for deep learning on cap & Foor options", Dec. 2020.
- Gianmarco Antognetti, M. Sc. Quantitative Finance, University of Bologna, "*Pricing Convexity Adjustment with SABR Model: Application to CMS Derivatives*", Dec. 2020.
- Behnam Lari, M. Sc. Quantitative Finance, University of Bologna, "Deep Learning on Exotic Derivatives Portfolio", Mar. 2020.
- Silvia Franchin, M. Sc. Quantitative Finance, University of Bologna, "Financial Bubbles Growth & Burst: from Theoretical Models to Real Case Computational Analysis", 25 Mar. 2019.
- Davide Chiarabini, M. Sc. Quantitative Finance, University of Bologna, "Geometrical derivation of the free boundary SABR model and stability control for its numerical implementation", 25 Mar. 2019.
- Giulio Gattiani, M. Sc. Quantitative Finance, University of Bologna, "Theoretical derivation and swaption calibration of the free boundary SABR model", 25 Mar. 2019.
- Federica Palma, M. Sc. Quantitative Finance, University of Bologna, "Modelling negative interest rates", Oct. 2017.
- Alessio Tognon, M. Sc. Quantitative Finance, University of Bologna, "Quasi Monte Carlo Simulation of Heston Dynamics", Oct. 2017.

Students (as co-supervisor)

- Davide Cantù, M.Sc. Mathematical Engineering, Politecnico di Milano, "Default Risk Charge", March. 2025.
- Adriana Pachioli, M.Sc. Mathematical Engineering, Politecnico di Milano, "*Portfolio Optimization*", Jun. 2024.
- Daniel Sima, M.Sc. Mathematical Engineering, Politecnico di Milano, "Machine Learning Methods for finance", expected Dec. 2023.
- Giuseppe Crupi, M. Sc. Physics, University of Milan, "Development of a Machine Learning framework for Anomaly Detection in Financial Time Series", July 2023.
- Francesco Codazzi, M. Sc. Physics, University of Milan, "*Testing Machine Learning Algorithms for Market Data Anomalies*", June 2023.
- Stefano Polo, M. Sc. Physics, University of Milan, "*Reinforcement Learning for Optimal Stochastic Control in Finance*", 9 Feb. 2021.
- Pietro Gallo, M. Sc. Mathematical Engineering, Politecnico di Milano, "*Portfolio Optimization*", Apr. 2019.
- Francesco Reggiani, M. Sc. Physics, University of Milan, "*Comparison between financial bubble models: theory and application*", Jul. 2017.
- Anna Cremon, M.Sc. Finance, Bocconi University, "Prudent Valuation and Market Price Uncertainty: methodologies for an efficient capital allocation under EBA Regulatory Technical Standards", Apr. 2017.
- Nicola Sedini, M. Sc. Physics, University of Milan, "A Comparison Between Monte Carlo and Quasi-Monte Carlo Methods in Finance: Nested Simulations for Counterparty Credit Risk", Feb. 2017.
- Marco Scaringi, M. Sc. Physics, University of Milan, "Financial bubbles: genesis and detection within the JLS model framework", Feb. 2017
- Angelo Salvatori, M. Sc. Physics, University of Milan, "Stochastic Models for Self-Organized Criticality in Financial Markets", Apr. 2016.
- Mattia Carlicchi, M. Sc. Finance, Bocconi University, "I tassi di interesse dopo il credit crunch: l'evoluzione del mercato e dei modelli", Dec. 2010
- Piero Del Boca, M. Sc. Physics, University of Milan, "*Modelli stocastici per la valutazione di derivati sull'inflazione*", Jan. 2009.

Trainings (as trainee)

- "Practical Approaches to Managing Model Risk", Incisive Training, London, 2010 (2 days).
- □ "Market Models", M. Joshi, Caboto, 2006/2007 (8 weeks).
- □ "Hybrids & Inflation Derivatives Workshop", WBS, London, Mar. 2005 (2 days).
- □ "Interest Rate Derivatives", Y. Aït-Sahalia, FAME, Geneve, 2004 (5 days).
- □ "Workshop of Quantitative Finance", Siena, Jan. 2004 (2 days).
- □ "Advanced Derivative Pricing", G.Barone-Adesi, Banca Intesa, 2002 (5 days).

Interviews

- □ Short interview by Risk Magazine, in "*Risk 25: no more heroes in quantitative finance*?", by Laurie Carver, 1 Aug. 2012.
- Interview by Bloomberg, in "London Banks Seen Rigging Rates Losing Credibility with Markets", by Mark Gilbert, Gavin Finch and Anchalee Worrachate, Nov. 2011 (Bloomberg, NSN LV2NIP0UQVI9 <GO>).
- Interview "From physics to finance", appeared in "Career Book 2005", Somedia, nº 1, anno 8, p. 160, Nov. 2004, and in "Repertorio delle professioni", Università degli Studi di Milano, ed. 2004, p. 343, (italian).

Softwares

"Inflation-linked derivatives proprietary model and trading system", 2002-2007.
 Applix/ELF/C⁺⁺/platform (7000+ code lines). Pricing, hedging & bookeeping of 600+ inflation linked swaps, Futures, bonds, calls/puts, caps/floors with multiple underlying CPI.

2) Physics

Papers, proceedings, etc.

- "Ab-initio Study of the Electromagnetic Response and Polarizability Properties of Carbon Chains", M.Bianchetti, P. F. Buonsante, F. Ginelli, H. E. Roman, R. A. Broglia, F. Alasia, Physics Reports 357 (2002), 459-513 (<u>Research Gate, direct link</u>).
- "Ab-initio calculations of axially symmetric isolated carbon structures: from linear chains to nanotubes", M. Bianchetti, Ph.D. thesis, Jan. 2000 (direct link).
- "Field Emission Properties of Carbon Nanowires from Ab-Initio Calculations", M. Bianchetti, P.F.Buonsante, F.Ginelli, A.Lorenzoni, H.E.Roman, R.A.Broglia; in Proceedings of the XIII International Winter School of Electronic Properties of Novel Materials - Science and Technology of Molecular Nanostructures (IWEPNM99), Ed. H. Kuzmany, J. Fink, M. Mehring, S.Roth, AIP Conference Proceedings 486, 448 (1999).
- "¹²³Te Electron Capture Half-Life in Nuclear Field Theory", M.Bianchetti, M.R.Quaglia, G.Colò, R.A.Broglia, P.F.Bortignon, P.M.Pizzochero, in proceedings of VII National Conference on Problems in Theoretical Nuclear Physics, Cortona, 19-21 oct. 1998.
- "Competition Between Particle-Particle and Particle-Hole Correlations in Forbidden Electron Capture: the Case of ¹²³Te", M.Bianchetti, M.R.Quaglia, G.Colò, R.A.Broglia, P.F.Bortignon, P.M.Pizzochero, Physical Review C, 56, R1675, Oct. 1997, ArXiv preprint <u>http://arxiv.org/abs/nucl-th/9607032</u>.
- "Nuclear structure and solar neutrino absorption", M. Bianchetti, M.Sc. thesis, Jul. 1995.

Conferences, courses, etc

- Poster "Field Emission Properties of Carbon Nanowires from Ab-Initio Calculations", M. Bianchetti, P.F.Buonsante, F.Ginelli, A.Lorenzoni, H.E.Roman, R.A.Broglia presented at <u>IWEPNM99</u>, XIII International Winterschool on Electronic Properties of Novel Materials - Science and Technology of Molecular Nanostructures", Kirchberg, Austria 1999.
- □ "Management of Technology", University of Milan, 1998-1999 (annual course).
- □ "VI Summer School of Vector and Parallel Computing", CINECA, Bologna, 1997 (2 weeks).

Teaching activity

- A.a. 1999-2000, 2nd semester: general physics (mechanic, thermodynamic, electromagnetism), B.Sc. Telecommunication Engineering, Polytechnic of Milan (exercise lecturer, ~70 students).
- □ A.a. 1999-2000, 1st semester: general physics I (mechanic, thermodynamic), M.Sc in Computer Science, University of Milan (joint lecturer with Prof. Marco Bersanelli, ~150 students).
- A.a. 1998-1999, 2nd semester: general physics (mechanic, thermodynamic, electromagnetism), B.Sc. Telecommunication Engineering, Polytechnic of Milan (exercises lecturer, ~50 students).
- □ A.a. 1998-1999, 1st semester: general physics I (mechanic, thermodynamic), M.Sc. in Computer Science, University of Milan Bicocca (lecturer, ~50 students).

Softwares

- "Kohn Sham equations in Local Density Approximation in cylindrical basis", Ph.D. research project, 1996-2000, C/Linux platform (5000+ code lines): electronic, electromagnetic and field emission properties of carbon nanotubes and linear chains (in collaboration with P.F.Buonsante and F. Ginelli).
- "Proton-Neutron Quasi Particle Random Phase Approximation", M.Sc. research project, 1993-1996, Fortran/OpenVMS platform (4000+ code lines): weak transitions in nuclei, solar neutrino absorption, beta decay, electron capture (in collaboration with B. Lauritzen).