

CLAUDIO FONTANA

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RESEARCH INTERESTS

Mathematical finance, stochastic processes and financial economics. In particular:

- arbitrage theory;
- information modeling and enlargement of filtrations;
- interest rate and credit risk modeling;
- portfolio optimisation;
- applications of stochastic filtering.

ACADEMIC EXPERIENCE

May 2022 - present: **Scientific collaborator**, École Polytechnique (France), Centre de Mathématiques Appliquées.

October 2021 - present: **Associate professor**, University of Padova (Italy), Department of Mathematics.

October 2018 - September 2021: **Senior lecturer** (ricercatore RTD-B), University of Padova (Italy), Department of Mathematics.

September 2014 - September 2018: **Maître de conférences**, HDR, University of Paris (Paris VII, France), Laboratoire de Probabilités, Statistique et Modélisation (LPSM, équipe: Mathematical Finance and Numerical Probability).

November 2013 - August 2014: **Marie Curie IEF senior research fellow**, University of Evry Val d’Essonne (France), Department of Mathematics, research project “*MathFi beyond NFLVR*”.

January 2013 - October 2013: **Post-doctoral researcher**, INRIA Paris - Rocquencourt (France), MATHRISK project (project leader: Agnès Sulem).

January 2012 - December 2012: **Post-doctoral researcher**, University of Evry Val d’Essonne (France), Department of Mathematics. Position financed by the Europlace Institute of Finance, project “Chaire Risque de Crédit”. Supervisor: Monique Jeanblanc.

January 2011 - December 2011: **Research fellow**, Politecnico di Milano (Italy), Department of Mathematics.

January 2008 - December 2011: **Ph.D. in Mathematics**, Department of Mathematics, University of Padova (Italy). Title of the thesis: *Four Essays in Financial Mathematics* (thesis defended on March 26, 2012), supervisor: Wolfgang J. Runggaldier.

September 2008 - March 2010: **Master of Advanced Studies in Finance**, ETH Zürich and University of Zürich. Title of the thesis: *Mean-variance Problems with Applications to Credit Risk Models* (thesis defended on March 23, 2010 - *summa cum laude*), supervisor: Martin Schweizer.

ACADEMIC QUALIFICATIONS

- Habilitation à Diriger des Recherches (HDR), French habilitation as Full Professor in applied mathematics (CNU section 26), obtained at University of Paris, 30 November 2018.
- Italian national habilitation as Full Professor in Probability and Mathematical Statistics (MAT/06).
- Italian national habilitation as Full Professor in Mathematical Methods for Economics and Finance (SECS-S/06).

COMPETITIVE GRANTS, AWARDS AND SCHOLARSHIPS

- STARS (“Supporting Talent in Research”) research grant, University of Padova (100.000 euro), 2020 - 2022.
- Research grant of the Europlace Institute of Finance, 2019.
- Seal of Excellence, project PRISMA, research proposal no. 793790, European H2020-MSCA-IF-2017 program.

- Research grant CNRS PEPS “Jeunes Chercheuses et Jeunes Chercheurs”, 2018.
- Research grant of the Europlace Institute of Finance, 2018.
- Research grant of the Europlace Institute of Finance, 2017.
- Europlace Institute of Finance award for the best paper in finance, Paris, 2017.
- Bruti-Liberati Visiting Fellowship, 2016, University of Technology Sydney.
- Marie Curie Intra-European Fellowship for Career Development, project “*MathFi beyond NFLVR*”, grant PIEF-GA-2012-332345 (202.405 euro), November 2013 - August 2014.
- SIAM travel award for the SIAM Conference on Financial Mathematics and Engineering 2012.
- Best paper award at the XXXIV AMASES meeting, 2010.
- “*Nicola Bruti-Liberati*” international scholarship for graduate studies in Quantitative Finance, awarded on July 13, 2009, at Politecnico di Milano.
- SwissRe scholarship, Zurich, 2009.
- PhD scholarship financed by the Italian Ministry of Education, Universities and Research, 2008-2010.
- “*Bruno de Finetti*” prize for the best master thesis in Mathematical Economics defended in the years 2004-2007, awarded on June 12, 2008 by the President of the Italian Republic at Accademia Nazionale dei Lincei, Rome.

BOOK

1. E. Barucci, C. Fontana, *Financial Markets Theory: Equilibrium, Efficiency and Information*, second edition, 836 pp, Springer Finance, London, 2017.

PREPRINTS AND PUBLICATIONS

1. Valuation of general GMWB annuities in a low rate environment (with F. Rotondi), submitted, 2022.
2. CBI-time-changed Lévy processes (with A. Gnoatto and G. Szulda), submitted, 2022.
3. Caplet pricing in affine models for risk-free rates, submitted, 2022.
4. Term structure modelling with overnight rates beyond stochastic continuity (with Z. Grbac and T. Schmidt), submitted, 2022.
5. CBI-time-changed Lévy processes for multi-currency modeling (with A. Gnoatto and G. Szulda), *Annals of Operations Research*, forthcoming, 2022.
6. Multiple yield curve modelling with CBI processes (with A. Gnoatto and G. Szulda), *Mathematics and Financial Economics*, 15: 579–610, 2021.
7. Arbitrage concepts under trading restrictions in discrete-time models (with W.J. Runggaldier), *Journal of Mathematical Economics*, 92: 66–80, 2021.
8. The value of informational arbitrage (with H.N. Chau and A. Cosso), *Finance and Stochastics*, 24(2): 277–307, 2020.
9. Term structure modeling for multiple curves with stochastic discontinuities (with Z. Grbac, S. Gumbel and T. Schmidt), *Finance and Stochastics*, 24(2): 465–511, 2020.
10. Martingale spaces and representations under absolutely continuous changes of probability (with A. Aksamit), *Electronic Communications in Probability*, 24: no. 62, 2019.
11. On the existence of sure profits via flash strategies (with M. Pelger and E. Platen), *Journal of Applied Probability*, 56(2): 384–379, 2019.
12. Affine multiple yield curve models (with C. Cuchiero and A. Gnoatto), *Mathematical Finance*, 29(2): 568–611, 2019.
13. General dynamic term structures under default risk (with T. Schmidt), *Stochastic Processes and their Applications*, 128(10): 3353–3386, 2018.
14. The strong predictable representation property in initially enlarged filtrations under the density hypothesis, *Stochastic Processes and their Applications*, 128(3): 1007–1033, 2018.
15. Optimal investment with intermediate consumption under no unbounded profit with bounded risk (with H.N. Chau, A. Cosso and O. Mostovyi), *Journal of Applied Probability*, 54(3): 710–719, 2017.
16. Arbitrage of the first kind and filtration enlargements in semimartingale financial models (with B. Acciaio and C. Kardaras), *Stochastic Processes and their Applications*, 126(6): 1761–1784, 2016.
17. A general HJM framework for multiple yield curve modeling (with C. Cuchiero and A. Gnoatto), *Finance and Stochastics*, 20(2): 277–320, 2016. **EIF 2017 prize for the best finance paper.**

18. Weak and strong no-arbitrage conditions for continuous financial markets, *International Journal of Theoretical and Applied Finance*, 18(1): 1550005, 2015.
19. Viability and martingale measures under partial information (with B. Øksendal and A. Sulem), *Methodology and Computing in Applied Probability*, 17(1): 15–39, 2015.
20. On arbitrages arising with honest times (with M. Jeanblanc and S. Song), *Finance and Stochastics*, 18(3): 515–543, 2014.
21. Information, no-arbitrage and completeness for asset price models with a random change point (with M. Jeanblanc, Z. Grbac and Q. Li), *Stochastic Processes and their Applications*, 124(9): 3009–3030, 2014.
22. A note on arbitrage, approximate arbitrage and the fundamental theorem of asset pricing, *Stochastics*, 86(6): 922–931, 2014.
23. A unified approach to pricing and risk management of equity and credit risk (with J.M.A. Montes), *Journal of Computational and Applied Mathematics*, 250: 350–361, 2014.
24. No-arbitrage conditions and absolutely continuous changes of measure, in: Hillairet, C., Jeanblanc, M. & Jiao, Y. (eds.), *Arbitrage, Credit and Informational Risks*, 3–18, World Scientific, 2014.
25. Diffusion-based models for financial markets without martingale measures (with W.J. Runggaldier), in: Biagini, F., Richter, A. & Schlesinger, H. (eds.), *Risk Measures and Attitudes*, 45–81, EAA Series, Springer, 2013. **AMASES 2010 award for the best paper.**
26. Simplified mean-variance portfolio optimisation (with M. Schweizer), *Mathematics and Financial Economics*, 6(2): 125–152, 2012.
27. Credit risk and incomplete information: a filtering framework for pricing and risk management, in: Perna, C. & Sibillo, M. (eds.), *Mathematical and Statistical Methods for Actuarial Sciences and Finance*, 193–202, Springer, 2012.
28. Credit risk and incomplete information: filtering and EM parameter estimation (with W.J. Runggaldier), *International Journal of Theoretical and Applied Finance*, 13(5): 683–715, 2010.

CONFERENCE PRESENTATIONS AND INVITED SEMINARS

- **2022:** XLVI AMASES meeting (Palermo, 22–24 September 2022); Bachelier Finance Society, 11th World Congress (online, 13–17 June 2022); Séminaire Bachelier (**mini-course** on “Recent Developments in Interest Rate Modelling”, Institut Henri Poincaré, Paris, 1, 8, 15 April 2022); Seminar at the University Paris I Panthéon - Sorbonne (7 April 2022); Seminar at the University of Sydney (online, 30 March 2022); Bachelier Finance Society One World seminar (online, 24 March 2022).
- **2021:** Statistics 2021 Canada (15–18 July 2021, online, **invited speaker**); Séminaire Bachelier (Institut Henri Poincaré, online, 18 June 2021); SIAM Conference on Financial Mathematics and Engineering (1–4 June 2021, online, **session organiser**); Seminar at the University of Évry Val d’Essonne (11 March 2021, online).
- **2020:** Workshop on “New Challenges in the Interplay between Finance and Insurance” (25–31 October 2020, Oberwolfach, **invited speaker** - cancelled due to Covid-19); 9th International Colloquium on BSDEs and Mean Field Systems (29 June - 3 July 2020, Annecy, **session organiser** - postponed due to Covid-19); Workshop on “Mathematical Finance and Related Issues” (10–13 March 2020, Osaka, **invited speaker** - cancelled due to Covid-19); XXI Workshop on Quantitative Finance (29–31 January 2020, Naples); Advances in Financial Mathematics (14–17 January 2020, Paris, **invited speaker**).
- **2019:** QMF pre-conference workshop in honour of Eckhard Platen (16 December 2019, Sydney, **invited speaker**); 9th International Congress on Industrial and Applied Mathematics, (15–19 July 2019, Valencia, **organiser of a mini-symposium**); 9th General AMaMeF Conference (11–14 June 2019, Paris); Workshop on “New Frontiers in Stochastics for Economics and Finance” (30 May - 1 June 2019, Siena, **invited speaker**); 12th Financial Risks International Forum (18–19 March 2019, Paris); Seminar at Politecnico di Milano (5 March 2019); Conference on Stochastic Modeling in Finance and Insurance (11–15 February 2019, Bedlewo, **invited speaker**); XX Workshop on Quantitative Finance (23–25 January 2019, Zurich).
- **2018:** Quantitative Methods in Finance Conference (11–14 December 2018, Sydney, **invited speaker**); “Beyond the Classical Paradigm” (QMF 2018 pre-conference workshop, 10 December 2018, Sydney, **invited speaker**); First joint meeting of the Italian Mathematical Union and the Polish Mathematical Society (Wrocław, 17–20 September 2018, **invited speaker**); 14th Viennese Conference on Optimal Control and Dynamic Games (Vienna, 3–6 July 2018, **invited speaker**); Workshop on “Dynamic Uncertainty Modeling” (Wolfgangsee, 1–4 July 2018, **invited speaker**); 4th Workshop on Branching Processes and Related Topics (Shanghai, 21–25 May 2018, **invited speaker**); Seminar at Hong Kong Polytechnic University (14 May 2018); Seminar at the University of Vienna (26 April 2018);

6th NUS-USPC workshop on “Machine learning and FinTech” (Singapore, 18-19 April 2018, **invited speaker**); MAF 2018 - Mathematical and Statistical Methods for Actuarial Sciences and Finance (Madrid, 4-6 April 2018, **invited speaker**); London Mathematical Finance seminar (8 March 2018).

- **2017:** Quantitative Methods in Finance (Sydney, 12-15 December 2017); “Beyond the Classical Paradigm” (QMF 2017 pre-conference workshop, Sydney, 11 December 2017, **invited speaker**); Seminar at CMAP/ENSAE/ENSTA (Paris, 4 December 2017); Seminar at ETH Zurich (26 October 2017); Seminar at Aarhus University (12 October 2017); International Workshop on BSDEs, SPDEs and their Applications (3-7 July 2017, Edinburgh, **invited speaker**); First Italian Meeting on Probability and Mathematical Statistics (19-22 June 2017, Turin, **session organiser**); Seminar at Oxford University (15 June 2017); 3rd International Conference on Engineering and Computational Mathematics (31 May - 2 June 2017, Hong Kong, **invited speaker**); Second Paris-Asia Conference in Quantitative Finance (23-27 May 2017, Suzhou, China, **invited speaker**); 2nd NUS-USPC Workshop on New Challenges in Financial Risk Control (11-12 April 2017, Singapore, **invited speaker**); Barcelona Workshop on Mathematical Finance (Barcelona, 29-30 March 2017, **invited speaker**); Seminar at the University of Bologna (1 March 2017); XVIII Workshop on Quantitative Finance (25-27 January 2017, Milan).
- **2016:** Quantitative Methods in Finance Conference (13-16 December 2016, Sydney, **invited speaker - Bruti-Liberati lecture**); “Beyond the Classical Paradigm” (QMF 2016 pre-conference workshop, 12 December 2016, Sydney, **invited speaker**); Seminar at Monash University, Department of Econometrics and Business Statistics (2 December 2016); Seminar at the Université Paris 1 Panthéon - Sorbonne (16 November 2016); XL AMASES meeting (15-17 September 2016, Catania); Workshop “Enlargement of Filtrations and Financial Applications” (8-9 September 2016, Zurich, **invited speaker**); Bachelier Finance Society, 9th World Congress (15-19 July 2016, New York); 28th European Conference on Operational Research (3-6 July 2016, Poznan); Seminar at the University of Freiburg (16 June 2016); Stochastic Analysis and Mathematical Finance (22-27 May 2016, Oaxaca, Mexico, **invited speaker**); Seminar at the University of Évry Val d’Essonne (17 March 2016); Frontiers in Stochastic Modelling for Finance (2-5 February 2016, Padova, **invited speaker**); XVII Workshop on Quantitative Finance (28-29 January 2016, Pisa).
- **2015:** Seminar at the University of Bielefeld (9 December 2015); Seminar at Politecnico di Milano (3 December 2015); EMLyon Quant 12 Workshop: Quantitative Approaches in Management and Economics (Lyon, 26-27 November 2015); London-Paris Bachelier Workshop on Mathematical Finance (London, 25-26 September 2015, **invited speaker**); XXXIX AMASES meeting (Padua, 10-12 September 2015); Stochastic and Computational Finance (Lisbon, 6-10 July 2015); Second Conference on Stochastics and Environmental and Financial Economics (Oslo, 20-24 April 2015); Challenges in Derivatives Markets (Munich, 30 March - 1 April 2015, **invited speaker**); Paris - Southeast Asia Conference on Mathematical Finance (Siem Reap, Cambodia, 7-11 February 2015), NUS-UParis Diderot Workshop on Quantitative Finance (Singapore, 4-5 February 2015), XVI Workshop on Quantitative Finance (Parma, 29-30 January 2015).
- **2014:** Seminar at Technische Universität Chemnitz (4 December 2014); SIAM Conference on Financial Mathematics and Engineering (Chicago, 13-15 November 2014); Workshop on “insider information - enlargement of filtration” (Paris, 10 November 2014, **invited speaker**); Seminar at University of Naples (24 October 2014); 7th International Risk Management Conference, (Warsaw, 23-24 June 2014); Labex Louis Bachelier - SIAM-SMAI Conference on Financial Mathematics: Advanced Modeling and Numerical Methods (Paris, 17-20 June 2014); Bachelier Finance Society, 8th World Congress (Brussels, 2-6 June 2014); Seminar at University of Padova (30 May 2014); First Berlin-Singapore Workshop on Quantitative Finance and Financial Risk (Berlin, 21-24 May 2014); 31th International French Finance Association Conference (Aix-en-Provence, 19-21 May 2014); *Séminaire Bachelier* (Institut Henri Poincaré, Paris, 11 April 2014); Seminar at University of Vienna (13 March 2014); Seminar at Politecnico di Milano (18 February 2014); XV Workshop on Quantitative Finance (Florence, 23-24 January 2014).
- **2013:** Seminar at Technische Universität Berlin (12 December 2013); Seminar at University of Trento (26 November 2013); Seminar at Paris VII University (14 November 2013); Seminar at London School of Economics and Political Science (11 November 2013); Seminar at ENSTA Paris (28 October 2013); XXXVII AMASES meeting (Stresa, 5-7 September 2013); Seminar at Ludwig-Maximilians-Universität München (8 July 2013); Workshop on Stochastic Portfolio, Arbitrage Theory, Role of Information and Credit Risk (Beijing, 24-28 June 2013, **invited speaker**); 6th General AMaMeF and Banach Center Conference (Warsaw, 10-15 June 2013); 30th International French Finance Association Conference (Lyon, 28-31 May 2013); Seminar at Politecnico di Milano (14 May 2013); Seminar at University of Marne la Vallée (8 February 2013); 7th Bachelier Colloquium on Mathematical Finance and Stochastic Calculus (Métabief, 13-20 January 2013).
- **2012:** *Séminaire Bachelier* (Institut Henri Poincaré, Paris, 19 October 2012); Conference in honor of Wolfgang J. Runggaldier (Padova, 21-22 September 2012, **invited speaker**); Probability and Finance, final conference of

the research project PRIN 2008 (Pescara, 10-12 September 2012); SIAM conference on Financial Mathematics & Engineering (Minneapolis, 9-11 July 2012); Bachelier Finance Society, 7th World Congress (Sydney, 19-22 June 2012); Mathematical and Statistical Methods for Actuarial Sciences and Finance 2012 (Venezia, 10-12 April 2012); Seminar at Ludwig-Maximilians-Universität München (6 February 2012); XIII Workshop on Quantitative Finance (L'Aquila, 26-27 January 2012).

- **2008-2011:** Seminar at University of Verona (14 February 2011); Workshop on Advanced Mathematical Methods for Finance (Berlin, 27-30 September 2010, **invited speaker**); XXXIV AMASES Meeting (Macerata, 1-4 September 2010, **best paper award**); 45th Scientific Meeting of the Italian Statistical Society (Padova, 16-18 June 2010); AMaMeF 2010 Fifth General Conference (Bled, 4-8 May 2010); Mathematical and Statistical Methods for Finance and Actuarial Sciences 2010 (Ravello, 5-7 April 2010); Seminar at Politecnico di Milano (17 March 2010); CREDIT Conference on Liquidity and Credit Risk (Venice, 22-23 September 2008); Bachelier Finance Society, 5th World Congress (London, 15-19 July 2008); Stochastic Methods in Finance 2008, PRIN meeting (Torino, 3-5 July 2008); Numerical Methods in Finance 2008 (Udine, 25-27 June 2008); Seminar at University La Sapienza (Rome, in occasion of the **“Bruno Bassan” prize** for master theses in applied probability, 13 June 2008).

TEACHING DUTIES

- **2021/2022:**
 - Summer Course “Mathematics for Financial Risks and Derivatives”, organised by University of Padova.
 - Lecture “Mathematics for Financial Risks and Derivatives”, master in finance, University of Padova.
 - Lecture “Mathematics”, BSc in chemistry and pharmaceutical sciences, University of Padova.
- **2020/2021:**
 - Lecture “Mathematics for Financial Risks and Derivatives”, master in finance, University of Padova.
 - Lecture “Foundations of Probability”, BSc in statistics, University of Padova.
- **2019/2020:**
 - Lecture “Mathematics for Financial Risks and Derivatives”, master in finance, University of Padova.
 - Lecture “Mathematical Finance”, BSc in mathematics, University of Padova.
- **2018/2019:**
 - Lecture “Insurance Mathematics”, ISIFAR master program, Paris Diderot University.
 - Lecture “Mathematics for Financial Risks and Derivatives”, master in finance, University of Padova.
 - Lecture “Probability and Statistics”, BSc in computer science, University of Padova.
- **2017/2018:**
 - Lecture and exercise class “Stochastic Processes in Finance”, master program in stochastic modeling, Paris Diderot University.
 - Lecture “Financial Mathematics”, ISIFAR master program, Paris Diderot University.
 - Lecture “Insurance Mathematics”, ISIFAR master program, Paris Diderot University.
 - Lecture “Econometrics”, BSc program in applied mathematics, Paris Diderot University.
- **2016/2017:**
 - Exercise classes for the course “Stochastic Processes in Finance”, master program in stochastic modeling, Paris Diderot University.
 - Lecture “Insurance Mathematics”, ISIFAR master program, Paris Diderot University.
 - Lecture and exercise class for the course “Econometrics”, BSc program in applied mathematics, Paris Diderot University.
 - Lecture “Asset Pricing Theory”, master program in quantitative finance, Politecnico di Milano.
- **2015/2016:**
 - Exercise classes for the course “Stochastic Processes in Finance”, master program in stochastic modeling, Paris Diderot University.

- Exercise class for the course “Econometrics”, BSc program in applied mathematics, Paris Diderot University.
- Exercise class for the course “Probability”, BSc program in mathematics, Paris Diderot University.
- Lecture “Asset Pricing Theory”, master program in quantitative finance, Politecnico di Milano.
- **2014/2015:**
 - Exercise classes for the course “Stochastic Processes in Finance”, master program in stochastic modeling, Paris Diderot University.
 - Exercise class for the course “Econometrics”, BSc program in applied mathematics, Paris Diderot University.
 - Exercise class for the course “Probability”, BSc program in mathematics, Paris Diderot University.
 - Lecture “Asset Pricing Theory”, master program in quantitative finance, Politecnico di Milano.
 - Coordination of the seminar “Introduction to research in mathematical finance” (with Z. Grbac and P. Tankov), master program in stochastic modeling, Paris Diderot University.
- **2013/2014:**
 - Lecture “Asset Pricing Theory”, master program in quantitative finance, Politecnico di Milano.
- **2012/2013:**
 - Lecture “Asset Pricing Theory”, master program in quantitative finance, Politecnico di Milano.
- **2011/2012:**
 - Lecture “Asset Pricing Theory”, master program in quantitative finance, Politecnico di Milano.
 - Exercise class for the course “Mathematical Finance I”, BSc program in mathematical engineering, Politecnico di Milano. Supervision of final projects of BSc students.
- **2010/2011:**
 - Exercise class for the course “Mathematical Finance I”, BSc program in Mathematical Engineering, Politecnico di Milano. Supervision of final projects of BSc students.

PHD STUDENT SUPERVISION

- Member of the board of the PhD school in Mathematical Sciences, University of Padova (Italy).
- TBD, Giacomo Lanaro, University of Padova, expected completion in 2024.
- “*Branching processes and multiple term structure modeling*”, Guillaume Szulda, University of Paris, successfully defended on 10/12/2021.
- “*Joint modeling of fixed income and insurance markets under the real-world measure*”, Luigi Carmine del Gusto, PhD thesis, successfully defended on 03/09/2020 (co-supervised with Z. Grbac).
- External referee for the PhD thesis of Francesco Guida (University of Verona), 2022.
- Supervision of the PhD seminars at the department of mathematics of the University of Evry (France), years 2012-2014.

RESEARCH PROJECTS FUNDED BY COMPETITIVE GRANTS

- Principal Investigator of the research project “*Probabilistic Methods for Information in Security Markets*” (STARS StG project), funded by the University of Padova, 2020-2022.
- Principal Investigator of the research project “*Term Structure Dynamics in Interest Rate and Energy Markets: Modelling and Numerics*” (BIRD project), funded by the University of Padova, 2019-2021.
- Core researcher of the research project “*Information in Financial Markets: A Probabilistic Perspective*” (together with G. Callegaro, Y. Jiao and M. Larsson), financed by the Europlace Institute of Finance, 2019.
- Core researcher (together with Z. Grbac) of the research project “*Stochastic Modelling of Information: A Mean-field Game Approach to Market Efficiency*”, CNRS PEPS, 2018.
- Core researcher (together with Z. Grbac and A. Papapantoleon) of the research project “*Interest Rate Term Structures in a Low-Rate Environment: Modelling, Calibration and Regulatory Aspects*”, financed by the Europlace Institute of Finance, 2018.
- Core researcher (together with Z. Grbac and T. Schmidt) of the research project “*Interest Rate Modeling in the Presence of Low Rates, Multiple Curves and Political Events*”, financed by the Europlace Institute of Finance, 2017.

ORGANISATION OF SCIENTIFIC EVENTS AND MEETINGS

- Organiser of the thematic session “Recent Advances in Martingale Representations”, 9th International Colloquium on BSDEs and Mean Field Systems, 27 June - 1 July 2022, Annecy.
- Organiser of the invited session “Stochastic Modeling of Information in Economics and Finance”, 11th World Congress of the Bachelier Finance Society, 13-17 June 2022, Hong Kong (online).
- Organiser (with G. Callegaro) of the *3rd Spring Colloquium on Probability and Finance - in Honour of Wolfgang Runggaldier*, 28-29 April 2022, Padova.
- Organiser of a mini-symposium on “Interest Rate Benchmarks Reform: Challenges and Modelling Solutions”, SIAM conference on financial mathematics and engineering 2021, online, 1-4 June 2021.
- Organiser (with G. Callegaro) of the *2nd Spring Colloquium on Probability and Finance*, 29 April 2021, Padova.
- Member of the scientific and organising committees of the 10th General AMaMeF Conference, 22-25 June 2021, Padova.
- Member of the organising committee of the XLIV AMASES conference (on-line), University of Padova, 18 September 2020.
- Member of the organising committee of the 12th European Summer School in Financial Mathematics, 2-6 September 2019, Padova.
- Organiser (together with Z. Grbac) of a mini-symposium on “Interest Rate Modeling and Related Topics”, ICIAM 2019 conference, Valencia, 15-19 July 2019.
- Organiser (together with B. d’Auria) of the thematic session “Enlargement of Filtrations and Financial Applications”, 2nd Italian Meeting on Probability and Mathematical Statistics, 17-20 June 2019, Vietri sul Mare.
- Organiser (with G. Callegaro) of the *Spring Colloquium on Probability and Finance*, 28 May 2019, Padova.
- Member of the organising committee of the Freiburg-Padova-Vienna-Zurich workshop, 16-17 May 2019, Padova.
- Organiser (together with I. Kharroubi and G. Pagès) of the weekly seminar of the “Mathematical Finance and Numerical Probability” group of LPMA (Paris VI - Paris VII Universities), 2016-2018.
- Member of the organising committee of the NUS-USPC Workshop on Machine Learning and FinTech (Singapore, 18-19 April 2018).
- Member of the organising committee of the NUS-USPC Workshop on Machine Learning and FinTech (Paris, 29-30 November 2017).
- Organiser of the thematic session “Information and Arbitrage in Financial Markets”, First Italian Meeting on Probability and Mathematical Statistics, 19-23 June 2017, Torino.
- Member of the organising committee of the London - Paris Bachelier Workshop on Mathematical Finance (UCL London, 21-22 September 2017).
- Main organiser (together with X. Tan) of the London - Paris Bachelier Workshop on Mathematical Finance (Fédération Bancaire Française and Institut Henri Poincaré, Paris, 29-30 September 2016).

EDITORIAL RESPONSIBILITIES

- Referee for: *Finance and Stochastics*, *Mathematical Finance*, *SIAM Journal on Financial Mathematics*, *Annals of Applied Probability*, *Annals of Probability*, *Stochastic Processes and their Applications*, *Stochastics*, *Stochastic Analysis and Applications*, *Mathematics and Financial Economics*, *Frontiers of Mathematical Finance*, *Journal of Economic Dynamics and Control*, *International Journal of Theoretical and Applied Finance*, *Quantitative Finance*, *Electronic Journal of Probability*, *Electronic Communications in Probability*, *Bernoulli*, *Journal of Banking and Finance*, *Risk Magazine*, *Applied Mathematical Finance*, *Applied Probability Journals*, *Journal of Computational and Applied Mathematics*, *Insurance: Mathematics and Economics*, *Automatica*, *Optimization*, *Statistics and Probability Letters*, *Decisions in Economics and Finance*, *European Journal of Operational Research*, *Stochastic Systems*, *Journal of Mathematical Analysis and Applications*, *Acta Applicandae Mathematicae*, *Applied Stochastic Models in Business and Industry*, *Annals of Operations Research*, *Asia-Pacific Journal of Operational Research*, *Studies in Nonlinear Dynamics and Econometrics*, *Computational Statistics and Data Analysis*, *Numerical Algebra*, *Control and Optimization*, *Acta Mathematicae Applicatae Sinica*, *International Review of Financial Analysis*, *Emerging Markets Finance and Trade*, *Expert Systems with Applications*, *African Journal of Business Management*, *Communications in Statistics - Theory and Methods*, *ESAIM: Probability and Statistics*, *ESAIM: Proceedings and Surveys*, *Risks*, *Mathematics*, *Symmetry*, *Entropy*, *Financial Innovation*, *Mathematical Biosciences and Engineering*, *Modern Stochastics: Theory and Applications*, *Journal of Risk and Financial Management*.
- Reviewer for *Mathematical Reviews* (American Mathematical Society) and *Zentralblatt MATH*.
- Member of the Editorial Board (in the quality of Topic Editor) of the journal *Risks*.

- Lead guest editor of the Special Issue “*Recent Advances in Mathematical Methods for Finance*” of the journal *Annals of Operations Research*, 2021-2022.

OTHER SCIENTIFIC ACTIVITIES AND RESPONSIBILITIES

- Referee for scientific projects DFG (Deutsche Forschungsgemeinschaft, Germany), PRIN (Ministry of University and Research, Italy), SNS (Scuola Normale Superiore, Italy).
- Extended faculty member, MIP School of Management, Politecnico di Milano, 2012-2017.
- External member of the Financial Engineering and Mathematical Optimization Lab, National Technical University of Athens (Greece), since 2019.
- Responsible for the Erasmus exchange programs between the University of Padova and the Universities of Aarhus and Vilnius.
- Responsible (together with F. Rossi) of the “MAPPA - Mathematical Analysis and Probability” double degree master program, in cooperation between the University of Padova and Université Paris Sciences & Lettres.
- Member of the hiring committee for an assistant professor in mathematical finance, Department of Mathematics, University of Padova (Italy), 11/2021.
- Member of the scientific evaluation committee of the Department of Mathematics, University of Padova (Italy), since 2019.
- Member of the *Bachelier Finance Society*, *Associazione per la Matematica Applicata alle Scienze Economiche e Sociali (AMASES)*, *Unione Matematica Italiana (UMI)*, *INdAM*.
- Academic Fellow, Institut Louis Bachelier.

Padova, 6 September 2022

Claudio Fontana