Academic CV

PERSONAL INFORMATION

Matteo Brachetta (Associate Professor at University of Genoa)

matteo.brachetta@unige.it

Personal website: https://sites.google.com/view/matteobrachetta/home-page

Sex Male | Date of birth 09/12/1990 | Nationality Italian

ACADEMIC POSITIONS

September 2024 – today
Associate Professor (University of Genoa, Department of Economics)
Bachelor Course of Mathematics
Bachelor Course of Financial Mathematics
Master Course of Options Theory and Trading

2023 – 2024
Vice Director of the Master in "Finance, Insurance & New Technologies", Cefriel-Polimi for the Allianz Talent Program, 3rd edition

June 2023
National Habilitation as Associate Professor in Mathematical Methods for Economics, Actuarial and Financial Sciences

January 2022 – September 2024
Assistant Professor (i.e. RTD-A in Italian System) in Mathematics for Economics
Politecnico of Milan, Department of Mathematics
Teaching:
Master Course of Insurance and Econometrics (since A.Y. 2022/2023)
Master Course of Mathematical Finance II (A.Y. 2023/2024)

September 2020 – January 2022
Post-Doctoral Researcher
Politecnico of Milan, Department of Mathematics

June 2020 – August 2020
Research fellowship
University of Chieti-Pescara, Supervisor: Prof. Claudia Ceci

November 2019 – April 2020
Post-graduate research fellowship
University of Chieti-Pescara, Supervisor: Prof. Claudia Ceci

EDUCATION AND TRAINING

November 2016 – October 2019 (Completion date: 24-04-2020)
PhD in "Business, Institutions, Markets" cum laude
Thesis: "Optimal Reinsurance and Investment for Stochastic Factor Risk Models"
Supervisor: Prof. Claudia Ceci
Department of Economics, University of Chieti-Pescara (Italy)

October 2018 – December 2018
PhD visiting period at University of Cologne (Germany)
Supervisor: Prof. Hanspeter Schmidli

October 2016 – March 2017
Post-graduate Course of Higher Education in "Mathematical Finance", 30/30
University of Bologne (Italy)
Directors: Prof. Andrea Pascucci, Prof. Sergio Polidoro

2016
Advanced Course in Economics and Techniques for bank management
University of Chieti-Pescara (Italy)

2014 – 2016
Master's degree in Economics, 110/110 magna cum laude
Thesis: "Stochastic Control for Jump Diffusion Processes and Applications in Finance"
Supervisor: Prof. Claudia Ceci
University of Chieti-Pescara (Italy)

2011 – 2014	**Bachelor's degree** in Economics Thesis: "Mathematical foundations of financial markets modeling: the stochastic integral" Supervisor: Prof. Cristina Caroli Costantini University of Chieti-Pescara (Italy)

CONTRIBUTED TALKS

13/03/2025	Invited talk at Politecnico of Milan, Title: "Risk measures and optimal reinsurance: finding a connection via BSDEs"
10/06/2024 – 14/06/2024	Speaker at the 4th Italian Meeting on Probability and Mathematical Statistics, Rome (RM), Title: "Risk measures and optimal reinsurance: finding a connection via BSDEs"
11/03/2024 – 13/03/2024	Speaker at Quantitative Finance Workshop 2024, Bologna (BO), Title: "Optimal reinsurance via BSDEs in a partially observable model with jump clusters"
16/01/2024	Invited talk at Forschungsseminar Angewandte Stochastik, Hagen (Germany), Title: "A self-excited risk model for insurance: optimal control via BSDEs"
19/04/2023 – 23/04/2023	Speaker at Quantitative Finance Workshop 2023, Gaeta (LT), Title: "Dynamic adoption of CBDC in a stochastic game"
13/03/2023	Invited talk at Symposium in Honour of Prof. Dr. Hanspeter Schmidli's 60th Birthday in University of Cologne (Germany). Title: "A contagion risk model with jump clusters under partial information"
27/10/2022 – 28/10/2022	Speaker at International Fintech Research Conference: Finance, technology, methodologies in Milan, Italy, Politecnico of Milan. Title: "Dynamic adoption of CBDC in a stochastic game".
22/09/2022 – 24/09/2022	Speaker at the AMASES XLVI Conference, title: "Optimal reinsurance via BSDEs in a partially observable contagion model with jump clusters".
13/07/2022 – 15/07/2022	Speaker at 25th International Congress on Insurance: Mathematics and Economics (IME 2022), Virtual Congress; title: "Optimal reinsurance via BSDEs in a partially observable contagion model with jump clusters".
28/04/2022 – 29/04/2022	Invited talk at the 3rd Spring Colloquium on Probability and Finance in Padova (Italy), title: "A Stochastic Control Approach to Public Debt Management".
31/03/2022 – 01/04/2022	Speaker at the XXIII Workshop on Quantitative Finance (QFW 2022), Rome (Italy), title "A Stochastic Control Approach to Public Debt Management".
14/07/2021	Invited talk at "Virtual seminar in Insubria & Bicocca" (Organizers: Prof. Emanuela Rosazza Gianin and Elisa Matrogiacomo); title: "Optimal Public Debt Management"
07/07/2021	Speaker at 24th International Congress on Insurance: Mathematics and Economics (IME 2021), Virtual Congress; title: "Optimal reinsurance problem under fixed cost and exponential preferences"
14/04/2021	Invited talk at University of Chieti-Pescara (organizer: Prof. Claudia Ceci); title: "I principi di base della teoria del rischio: rischi assicurativi e calcolo dei premi"
17/04/2020	Invited talk at Politecnico of Milan (organizer: Prof. Emilio Barucci), title: "Stochastic Factor Risk Models and Optimal Reinsurance"
29-31/01/2020	Speaker at Quantitative Finance Workshop 2020, Napoli (Italy), title: "Optimal Reinsurance and Investment in a Diffusion Model"
09-11/09/2019	Speaker at 43rd Annual Meeting of the AMASES, Perugia (Italy), title: "Optimal Reinsurance and Investment in a Diffusion Model" **Winner of the AMASES Award for the best paper presented by a young researcher**

10-13/07/2019	Speaker at 23rd International Congress on Insurance: Mathematics and Economics (IME 2019), Munich (Germany), title: “Optimal Reinsurance and Investment in a Diffusion Model”
23-25/01/2019	Poster presentation at Quantitative Finance Workshop 2019, Zurich (Switzerland), title: “Optimal excess-of-loss reinsurance for stochastic factor risk models”
09/11/2018	Invited talk at University of Bielefeld (organizer: Prof. Giorgio Ferrari), title: “Optimal reinsurance and investment problem for stochastic factor models”
18/10/2018	Invited talk at University of Cologne (organizer: Prof. Hanspeter Schmidli), title: “Optimal reinsurance and investment problem for stochastic factor models”
13-15/09/2018	Speaker at 42nd Annual Meeting of the AMASES, Napoli (Italy), title: “Optimal reinsurance and investment problem for stochastic factor models”
24-26/01/2018	Speaker at Quantitative Finance Workshop 2018, Roma (Italy), title: “Optimal reinsurance and investment problem for stochastic factor models”

OTHER ATTENDED CONFERENCES OR SCHOOLS

08/02/2023 – 10/02/2023	Chair at Energy Finance Italia 8 at Politecnico of Milano
08/07/2021	Chair at 24th International Congress on Insurance: Mathematics and Economics (IME 2021), Virtual Congress. Session “Ruin Theory and Its Applications”
10-11/06/2021	Discussant at “Big Data and Machine Learning in Finance Conference”, Online Conference organized by Politecnico of Milan.
22-27/07/2018	Summer School "Complexity and Emergence: ideas, methods, with a special attention to economics and finance", Como (Italy)
18-21/12/2017	Verona Paris Stochastic Modeling Semester - Opening Conference
02-08/07/2017	21st International Congress on Insurance: Mathematics and Economics (IME 2017), Vienna (Austria)
28/04/2017	First Edition of Qfin@work, Roma (Italy)

PUBLICATIONS

2025	Barucci, E., Brachetta, M. and Marazzina, D. “The Adoption of Central Bank Digital Currency”, 2025, Management Science
2023	Brachetta, M., Callegaro, G., Ceci, C. and Sgarra, C. “Optimal reinsurance via BSDEs in a partially observable model with jump clusters”, 2023, Finance and Stochastics
2023	Barucci, E., Brachetta, M. and Marazzina, D. "Debt redemption fund and fiscal incentives", 2023, Communications in Nonlinear Science and Numerical Simulation, 119.
2023	Barucci, E., Brachetta, M. and Marazzina, D. "On the feasibility of a debt redemption fund", 2023, Economic Modelling, 119.
2022	Brachetta, M. and Ceci, C. “*A stochastic control approach to public debt management*”. 2022. Math Finan Econ.
2021	Brachetta, M. and Ceci, C. “*Optimal reinsurance problem under fixed cost and exponential preferences*”. 2021, Mathematics, 9(4).
2020	Brachetta, M. and Ceci, C. “*A BSDE-based approach for the optimal reinsurance problem under partial information*”. 2020, Insurance: Mathematics and Economics, 95:1-16.

2019 Brachetta, M. and Schmidli, H. "*Optimal Reinsurance and Investment in a Diffusion Model". *2019, Decisions in Economics and Finance. 8:1 – 21.

2019 Brachetta, M. and Ceci, C. "*Optimal proportional reinsurance and investment for stochastic factor models*". 2019, Insurance: Mathematics and Economics, 87:15 – 33.

2019 Brachetta, M. and Ceci, C. "*Optimal excess-of-loss reinsurance for stochastic factor risk models*". 2019, Risks, 7(2).

JOURNALS COLLABORATIONS

Editorial activity

Co-Guest Editor of the Special Issue "Stochastic Optimization Methods in Economics, Finance and Insurance" on Mathematics (https://www.mdpi.com/journal/mathematics/special_issues/stochastic_optimization),
Guest Editor: Prof. Claudia Ceci.

Journals peer-reviewing

- 2023-today: Computational Economics
- 2022-today: Decisions in Economics and Finance (DEAF)
- 2022-today: Optimization Letters
- 2022-today: Applied Economics Letters
- 2022-today: North American Journal of Economics and Finance (NAJEF)
- 2021-today: Annals of Operations Research (ANOR)
- 2021-today: Journal of Industrial and Management Optimization (JIMO)
- 2021-today: Open Mathematics
- 2021-today: Risks (MDPI)
- 2020-today: Mathematics (MDPI)
- 2020-today: Journal of Computational and Applied Mathematics (JCAM).
- 2019-today: European Journal of Operational Research (EJOR).

ACADEMIC ACTIVITY

Since 2025 Coordinator of the Department Tutors activities and member of the Departmental Orientation Committee

Since 2025 Bachelor Course in Financial Mathematics (first semester)

Since 2024 Master Course in Options Theory and Trading (first semester)

Since 2024 Bachelor Course in Mathematics (first semester)

2023-2024 Supervision of Master Theses for students of Mathematical Engineering

2023/2024 Master Course in "Mathematical Finance II" for Mathematical Engineering (Master's Degree, Course language: English, first semester).
Master Course in "Insurance and Econometrics" for Mathematical Engineering (Master's Degree, Course language: English, second semester).

2023/2024 Allianz Master in Finance, Insurance and New Technologies 2nd edition, Cefriel-Polimi (30 hours).

2022/2023 Master Course in "Insurance and Econometrics" for Mathematical Engineering (Master's Degree, Course language: English, second semester).

2022-2023 Allianz Master in Finance, Insurance and New Technologies 2nd edition, Cefriel-Polimi (68 hours).

2022 Mathematical Finance II (exercise classes: 26 hours), Politecnico of Milan, Professor Carlo Sgarra. Course language: English

2022-2024 ERASMUS Reference Professor for Mathematical Engineering outgoing students at Politecnico of Milan.

2022 Core Module in Business Analytics and Quantitative Finance for the TOPWIN Corporate Master in Fintech (Quantitative Finance: 12 hours)
Organizer: MIP Politecnico of Milan Graduate School of Business

2022 Finance I (exercises classes: 20 hours), Politecnico of Milan, Professor Emilio Barucci.

2022 Advanced Mathematical Models In Finance (exercises classes: 20 hours), Politecnico of Milan, Professor Emilio Barucci. Course language: English.

2021 Mathematical Finance II (exercise classes: 26 hours), Politecnico of Milan, Professor Carlo Sgarra. Course language: English.

2021 Advanced Mathematical Models In Finance (exercises classes: 20 hours), Politecnico of Milan, Professor Emilio Barucci. Course language: English.

2020 Mathematical Finance II (exercise classes: 40 hours), Politecnico of Milan, Professor Carlo Sgarra. Course language: English.

2020 Probability Theory Workshop, 12 hours, PCTO (Percorsi per le Competenze Trasversali e l'Orientamento), University of Chieti-Pescara.

2019 Master thesis supervising at University of Chieti-Pescara.

2019 Mathematical modeling for investment decisions, 20 hours, Master degree in Economics and Finance, University of Chieti-Pescara.

2018 Introduction to Probability Theory (within Course in Econometrics), 6 hours, Bachelor degree in Economics, University of Chieti-Pescara.

2018 Probability Theory Workshop, 12 hours, ASL (Alternanza Scuola-Lavoro), University of Chieti-Pescara.

AWARDS AND FUNDED PROJECTS

2020 Funded INdAM – GNAMPA Project 2020 on “A class of optimization problems in actuarial and economics science” (“Una classe di problemi di ottimizzazione in ambito attuariale ed economico”), Organizer: Prof. Claudia Ceci.

2020 Research Project “Problemi di controllo stocastico e arresto ottimo e applicazioni in ambito assicurativo ed economico”, Principal Investigator: Prof. Claudia Ceci

2019 Funded INdAM – GNAMPA Project 2019 on “Stochastic control problems with partial information in infinite dimensions” (“Problemi di controllo ottimo stocastico con osservazione parziale in dimensione infinita”), Organizer: Alessandro Calvia.

2019 **AMASES Award for the best paper presented by a young researcher** in 2019

2019 Research Project “Problemi di controllo stocastico in informazione parziale con applicazione ai mercati finanziari e assicurativi e copertura del rischio di controparte in ambito assicurativo”, Principal Investigator: Prof. Claudia Ceci

2018 Research Project “Problemi di controllo stocastico in informazione parziale: il problema della riassicurazione ottima e applicazioni alla gestione del debito pubblico”, Principal Investigator: Prof. Claudia Ceci

2017 Research Project “Valutazione di derivati assicurativi sulla vita unit-linked in contesto d’informazione parziale e copertura del rischio di controparte in ambito assicurativo e di rischio di credito”, Principal Investigator: Prof. Claudia Ceci

ADDITIONAL INFORMATION

Memberships	Member of the Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni (GNAMPA) of the Istituto Nazionale di Alta Matematica (IndAM) since 2018.
	Member of the AMASES (Association for Mathematics Applied to Economics and Social Sciences) since 2018.
Research interests	Stochastic control problems in economics, finance and actuarial science, public debt management, insurance, economic modelling.

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Genoa, 30/08//2025