IL PRESENTE ALLEGATO COSTITUISCE UNO SCHEMA-TIPO, NEL QUALE SONO INDICATE ALCUNE VOCI A MERO TITOLO ESEMPLIFICATIVO, PERTANTO PUO' ESSERE MODIFICATO/INTEGRATO DAL CANDIDATO ADATTANDOLO ALLE PECULIARITÀ DELLA PROPRIA ATTIVITÀ SCIENTIFICO-PROFESSIONALE

ALL. B

Decreto Rettore Università di Roma "La Sapienza" n 1616/2022 del 11/05/2022.

ALESSANDRO CALVIA
Curriculum Vitae

Part I – General Information

Full Name	Alessandro Calvia

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
University graduation	2011	Politecnico di Milano	B. Sc. in Mathematical Engineering. Advisor for the final exam (Reading course) Prof. Emilio Barucci.
University graduation	2014	Politecnico di Milano	M. Sc. in Mathematical Engineering. Thesis: Filtering of pure jump Markov processes with noise-free observation. Advisor Prof. Marco Fuhrman.
PhD	2018	Università degli Studi di Milano-Bicocca	PhD in Pure and Applied Mathematics. Thesis: Optimal control of pure jump Markov processes with noise-free partial observation. Advisor Prof. Marco Fuhrman. Supervisor Prof. Gianmario Tessitore.

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
01/01/2018	14/10/2019	Università degli Studi di Milano-Bicocca	Postdoctoral Research Fellow, Dep. of Statistics and Quantitative Methods. Scientific supervisor: Prof. Emanuela Rosazza Gianin
15/10/2019	14/10/2022	LUISS Guido Carli	Assistant Professor, Dep. of Economics and Finance

IIIB – Other Appointments

Start	End	Institution	Position
15/10/2019	-	LUISS Guido Carli	Representative for the activity Project works of Master's Degree Programs of the Department of Economics and Finance, LUISS University.
12/02/2020	12/02/2020	LUISS Guido Carli	Member of the admissions committee (as representative of the Department of Economics and Finance, LUISS University) of the Program Transizione ambientale ed economia territoriale: politiche pubbliche e strategie di impresa, Scuola per le Politiche Pubbliche – nono corso 2020, Italiadecide.
16/06/2020	-	LUISS Guido Carli	Representative for the activity Project works of Bachelor's Degree Programs of the Department of Economics and Finance, LUISS University.
09/07/2020	-	LUISS Guido Carli	Member of the Gruppo di Riesame of Master's Degree in Accounting, Finance and Control, LUISS University.
15/02/2021	15/02/2021	LUISS Guido Carli	Member of the admissions committee (as representative of the Department of Economics and Finance, LUISS University) of the Program La dimensione urbana delle politiche territoriali: istituzioni, ambiente e contesto socio-economico. I casi di Brescia, Reggio Calabria e Roma, Scuola per le Politiche Pubbliche – decimo corso 2021, Italiadecide.
24/02/2021	24/02/2021	LUISS Guido Carli	Member of the evaluation committee for the Structured Partnership Program with the Utrecht University School of Economics, targeted at students of the Bachelor's Degree in Economics and Business, LUISS University.
14/02/2022	14/02/2022	LUISS Guido Carli	Member of the admissions committee (as representative of the Department of Economics and Finance, LUISS University) of the

			Program Next Generation UE e qualità della spesa: istituzioni, società e imprese, Scuola per le Politiche Pubbliche – undicesimo corso 2022, Italiadecide.
09/03/2022	09/03/2022	LUISS Guido Carli	Member of the evaluation committee for the Structured Partnership Program with the Utrecht University School of Economics, targeted at students of the Bachelor's Degree in Economics and Business, LUISS University.

Part IV – Didactic activity

IV.A – Teaching experience

Year	Institution	Lecture/Course
2013/2014	Politecnico di Milano, Bachelor's Degree in Energy Engineering	Tutor for the first and second semester courses in Statistics. Teachers: Prof. Elio Piazza and Prof. Laura Sangalli (first semester); Prof. Matteo Gregoratti and Dr. Francesca Ieva (second semester).
2014/2015	Politecnico di Milano, Bachelor's Degree in Engineering of Computing Systems	Tutor for the course Mathematical Analysis I. Teacher: Prof. Liliana Curcio.
2014/2015	Politecnico di Milano, Bachelor's Degree in Mechanical Engineering	Tutor for the course Statistics. Teacher: Prof. Fabio Zucca.
2014/2015 2015/2016 2016/2017	Politecnico di Milano, Bachelor's Degree in Mathematical Engineering	Tutor for the course Probability. Teacher: Prof. Marco Fuhrman.
2015/2016 2016/2017	University of Milano-Bicocca, Bachelor's Degree in Mathematics	Teaching assistant (esercitatore) for the course Probability Theory. Main teacher: Prof. Francesco Caravenna. S.S.D.: MAT/06.
2015/2016 2016/2017	University of Milano-Bicocca, Bachelor's Degree in Mathematics	Teaching assistant (esercitatore) for the course Measure Theory. Main teacher: Prof. Gianmario Tessitore. S.S.D.: MAT/05.
2015/2016 2016/2017 2017/2018 2018/2019	University of Milano-Bicocca, Bachelor's Degree in Management Accounting	Teaching assistant (esercitatore) for the course General Mathematics I. Main teacher: Prof. Federica Masiero. S.S.D.: SECS-S/06.
2017/2018 2018/2019	Politecnico di Milano, Bachelor's Degree in Mathematical Engineering	Teaching assistant (esercitatore) for the course Probability. Main teacher: Prof. Matteo Gregoratti. S.S.D.: MAT/06.
2018/2019	University of Milano-Bicocca, Bachelor's Degree in Banking, Finance and Insurance	Teaching assistant (esercitatore) for the course Mathematics for Finance. Main teacher: Prof. Emanuela Rosazza Gianin. S.S.D.: SECS-S/06.

2019/2020 2020/2021 2021/2022	LUISS Guido Carli, Bachelor's Degree in Management and Computer Science	Main teacher (titolare) of the course Quantitative Models for Data Science. 8 CFU. S.S.D.: SECS-S/06.
2019/2020 2020/2021 2021/2022	LUISS Guido Carli, Master's Degree in Accounting, Finance and Control	Main teacher (titolare) of the course Quantitative Methods for the Enterprise. 8 CFU. S.S.D.: SECS-S/06.
2020/2021	Universität Bielefeld, Center for Mathematical Economics (IMW)	Main teacher (titolare) of the PhD course (15 hours) Stochastic filtering and applications to finance and economics.
2021/2022	Université Paris Dauphine-PSL	Main teacher (titolare) of the PhD course (15 hours) Stochastic filtering and applications to optimal control problems in finance and economics.

IV.B – Supervising and reviewing activity

Supervisor of 8 Master's Degree theses in Accounting, Finance and Control, LUISS Guido Carli (5 of these theses have been discussed in the A.Y. 2020/2021, the remaining 3 are in preparation). Reviewer of a PhD Thesis for the University of Cape Town (South Africa), Department of The African Institute of Financial Markets and Risk Management.

IV.C – Other didactic activity

Year	Institution	Activity
2015-2017	University of Milano-Bicocca, Dept. of Mathematics and its Applications	Organization of the seminar cycle "Insalate di Matematica", promoted by Dept. of Mathematics and Applications, University of Milano-Bicocca. The seminar cycle consisted in a series of informal talks by Ph.D. Students and early researchers in Mathematics.
2016-2017	University of Milano-Bicocca, Dept. of Mathematics and its Applications	Tutor for the project "Piano Lauree Scientifiche. Laboratorio denominato 'Il gioco e il caso' ", funded by the Dept. of Mathematics and Applications, University of Milano-Bicocca under the scientific supervision of Prof. Maria Gabriella Kuhn. The project consisted in a series of meetings with high school students aimed at improving knowledge of basic probability concepts to better understand gambling and its risks.

Part V - Society memberships, Awards and Honors

Year	Title
2015 -	Member of the INdAM-GNAMPA group
2019 -	Member of AMASES
2020 -	Member of UMI
2020 -	Member of EMS

Part VI - Funding Information

VI.A - Grants as PI-principal investigator or I-investigator

Year	Title	Program	Grant value
2015	Applicazioni innovative dei processi di punto marcato	INdAM-GNAMPA 2015. **Investigator**. P.I.: Dr. Fulvia Confortola.	
2016	Problemi di controllo ottimo stocastico con osservazione parziale e processi di punto marcati	INdAM-GNAMPA 2016. **Investigator**. P.I.: Dr. Fulvia Confortola.	
2017	Sistemi stocastici singolari: buona posizione e problemi di controllo	INdAM-GNAMPA 2017. **Investigator**. P.I.: Prof. Enrico Priola.	
2017-2020	Deterministic and stochastic evolution equations	MIUR-PRIN 2015. **Investigator**. P.I.: Prof. Alessandra Lunardi.	
2018	Controllo ottimo stocastico con osservazione parziale: metodo di randomizzazione ed equazioni di Hamilton-Jacobi-Bellman sullo spazio di Wasserstein	INdAM-GNAMPA 2018. **Investigator**. P.I.: Dr. Elena Bandini.	
2019	Problemi di controllo ottimo stocastico con osservazione parziale in dimensione infinita	INdAM-GNAMPA 2019. **Principal Investigator**. Members of the research group (other than the P.I.): Dr. Elena Bandini, Dr. Matteo Brachetta, Prof. Claudia Ceci, Dr. Katia Colaneri, Prof. Fulvia Confortola, Dr. Davide Cortesi.	€
2020-2023	The Time-Space Evolution of Economic Activities: Mathematical Models and Empirical Applications	MIUR-PRIN 2017. **Investigator**. P.I.: Prof. Fausto Gozzi.	

VI.B – Other grants

Year	Grant	Description
2020	Erasmus+ Staff Mobility for teaching	The project provides funding for a scientific visit at the Center for Mathematical Economics, Bielefeld University, including teaching a PhD course (15 hours), titled Stochastic filtering and applications to finance and economics. The mobility was

		postponed to the A. Y. 2020/2021, due to the Covid-19 pandemic, and was held (in virtual mode) from 14 to 18 June 2021.
2022	Erasmus+ Staff Mobility for teaching	The project provides funding for a scientific visit at the Université Paris Dauphine-PSL, including teaching a PhD course (15 hours), titled Stochastic filtering and applications to optimal control problems in finance and economics. The course was held from 9 to 13 May 2022.

Part VII – Research Activities

Keywords	Brief Description
Stochastic filtering and optimal control problems under partial observation.	Stochastic filtering problems for pure-jump processes, possibly with path-dependent local characteristics, and different kind of observed processes (pure-jump, jump-diffusion). Optimal control problems under partial observation for pure-jump processes, possibly infinite dimensional. Stochastic filtering and optimal control problems under partial observation for singularly controlled systems and applications to economics and management (with Prof. Giorgio Ferrari).
Optimal control problems on networks or in infinite dimensions and applications to economics.	Economic growth models with spatial dependence of the economic variables: the cases of networks and of a continuum of spatial locations (with Prof. Fausto Gozzi, Dr. Marta Leocata, Prof. Anastasios Xepapadeas, and Prof. Athanasios N. Yannacopoulos).
Risk measures	Risk measures and progressive enlargement of filtrations (with Prof. Emanuela Rosazza Gianin).

VII.A - Visiting

Date	Institution
12-14/09/2018	University of Leeds, UK. Invited by Dr. Katia Colaneri.
17-19/01/2022	University of Milano-Bicocca, Italy. Invited by Prof. Federica Masiero.
21/03-08/04/2022 (3 weeks)	University of Bologna, Italy. Invited by Dr. Elena Bandini.
09-13/05/2022 (1 week)	Université Paris Dauphine-PSL, France. Invited by Prof. René Aïd.
16-20/05/2022 (1 week)	Universität Bielefeld, Germany. Invited by Prof. Giorgio Ferrari.

VII.B – Participation in conferences, workshops and schools

Date	Event
02-06/02/2015	Winter School Recent Breakthroughs in Singular Stochastic PDEs, University of Milano-Bicocca, Italy.
13-14/04/2015	Conference Control Theory and Related Topics, Politecnico di Milano, Italy.
22/05/2015	Workshop Optimal Stopping and Applications, University of Turin, Italy.
28/09-02/10/2015	Stochastic Analysis with applications in biology, finance and physics, RTG 1845 Berlin-Potsdam Summer School, Levico Terme, Italy.
09-11/12/2015	Course Martingale Optimal Transport, University of Pisa, Italy.
30/05-03/06/2016	Stochastic Partial Differential Equations & Applications - X, FBK - CIRM Conference, Levico Terme, Italy.
20-23/06/2016	Convegno Scientifico GNAMPA 2016, INdAM - GNAMPA group Conference, Montecatini Terme, Italy.
27/06-01/07/2016	3rd Barcelona Summer School on Stochastic Analysis, A 2016 EMS Summer School, Centre de Recerca Matemàtica, Universitat Autònoma de Barcelona, Bellaterra, Spain.
13-15/06/2017	10th International Workshop on Bayesian Inference in Stochastic Processes, Bocconi University, Milan, Italy.
19-22/06/2017	First Italian Meeting on Probability and Mathematical Statistics, University of Turin & Politecnico di Torino, Italy.
03-07/07/2017	International Workshop on BSDEs, SPDEs and their Applications, The University of Edimburgh, UK.
04-06/09/2017	Workshop related to the MIUR-PRIN 2015 project titled Deterministic and stochastic evolution equations, University of Parma, Italy.
11-15/09/2017	Conference Stochastic control, BSDEs and new developments, Roscoff, France.
18-21/12/2017	Verona Paris Stochastic Modeling Semester Opening Conference, University of Verona, Italy.
15-16/03/2018	Workshop Model Uncertainty & Robust Finance, University of Milan, Italy.
03-06/07/2018	14th Viennese Conference on Optimal Control and Dynamic Games, TU Wien, Austria.
23-27/07/2018	RISM6 – Developments in Stochastic Partial Differential Equations, RISM – Riemann International School of Mathematics, Varese, Italy.
10-12/09/2018	BSDEs, Information and McKean-Vlasov equations, University of Leeds, UK.
23-25/01/2019	Quantitative Finance Workshop 2019, ETH Zürich, Zurich, Switzerland.
11-14/06/2019	9th General AMaMeF Conference, Paris, France.
17-20/06/2019	Second Italian Meeting on Probability and Mathematical Statistics, Vietri sul Mare, Italy.
09-11/09/2019	Vienna Congress on Mathematical Finance, Wien, Austria.
13-14/12/2019	Workshop on "Space and Growth: Theoretical and Empirical Models", University of Pisa, Italy.
22-25/06/2021	10th General AMaMeF Conference, University of Padova, Italy.

13-18/09/2021	AMASES XLV, University of Reggio Calabria, Italy.
03/03/2022	Workshop on Mathematical Economics and Financial Mathematics, Universität Bielefeld, Germany.
31/03-01/04/2022	Quantitative Finance Workshop 2022, University of Rome Tor Vergata, Italy.
28-29/04/2022	3rd Spring Colloquium on Probability and Finance, University of Padova, Italy.
26-28/05/2022	Taming Uncertainty and Complexity in Economics and Finance, LUISS University, Italy.
13-16/06/2022	Third Italian Meeting on Probability and Mathematical Statistics, University of Bologna, Italy.
27/06-01/07/2022	9th Colloquium on BSDEs, Differential Equations and Mean Field Systems, Université Savoie Mont-Blanc, Annecy, France.

VII.C – Seminars and Posters

Date	Title and Event
29/09/2015	Contributed talk: Filtering of time-homogeneous pure jump Markov processes with noise-free observation, RTG 1845 Berlin-Potsdam Summer School, Levico Terme, Italy.
17/11/2015	Conference Control Theory and Related Topics, Politecnico di Milano, Italy. Didactic talk: Stochastic filtering and Marked Point Processes: an introduction and an application to the noise-free model, University of Milano-Bicocca, Italy.
30/06/2016	Contributed talk: Filtering and control of time-homogeneous pure jump Markov processes with noise-free observation, 3rd Barcelona Summer School on Stochastic Analysis: A 2016 EMS Summer School, Centre de Recerca Matemàtica, Universitat Autònoma de Barcelona, Bellaterra, Spain.
13/06/2017	Poster: Filtering of time-homogeneous pure jump Markov processes with noise-free observation and applications., 10th International Workshop on Bayesian Inference in Stochastic Processes, Bocconi University, Milan, Italy.
22/06/2017	Contributed talk: Filtering and control of time-homogeneous pure jump Markov processes with noise-free observation, First Italian Meeting on Probability and Mathematical Statistics, University of Turin & Politecnico di Torino, Italy.
07/07/2017	Contributed talk: Filtering and control of time-homogeneous pure jump Markov processes with noise-free observation, International Workshop on BSDEs, SPDEs and their Applications, The University of Edimburgh, UK.
05/09/2017	Invited talk: Filtering and optimal control of time-homogeneous pure jump Markov processes with noise-free partial observation, Workshop related to the MIUR-PRIN 2015 project titled 'Deterministic and stochastic evolution equations', University of Parma, Italy.
14/09/2017	Invited talk: Filtering and optimal control of time-homogeneous pure jump Markov processes with noise-free partial observation, Stochastic control, BSDEs and new developments, Roscoff, France.

20/12/2017	Poster: Filtering and optimal control of time-homogeneous pure jump Markov processes with noise-free partial observation, "Verona Paris Stochastic Modeling Semester" Opening Conference, University of Verona, Italy.
05/03/2018	Invited talk: Optimal control of pure jump Markov processes with noise-free partial observation, University of Pisa, Italy.
06/07/2018	Invited talk: Stochastic filtering and optimal control of pure jump Markov processes with noise-free partial observation, 14th Viennese Conference on Optimal Control and Dynamic Games, TU Wien, Austria.
11/09/2018	Contributed talk: Optimal control of pure jump Markov processes with noise-free partial observation, BSDEs, Information and McKean-Vlasov equations, University of Leeds, UK.
24/01/2019	Contributer talk: Risk measures and progressive enlargement of filtrations: a BSDE approach, Quantitative Finance Workshop 2019, ETH Zürich, Switzerland.
06/02/2019	Invited talk: Optimal control problems with partial observation: an application to the noise-free model, Politecnico di Milano, Italy.
19/03/2019	Invited talk: Risk measures and progressive enlargement of filtrations: a BSDE approach, Politecnico di Milano, Italy.
13/06/2019	Contributed talk: Risk measures and progressive enlargement of filtrations: a BSDE approach, 9th General AMaMeF Conference, Paris, France.
19/06/2019	Contributed talk: Risk measures and progressive enlargement of filtrations: a BSDE approach, Second Italian Meeting on Probability and Mathematical Statistics, Vietri sul Mare, Italy.
09/09/2019	Contributed talk: Risk measures and progressive enlargement of filtrations: a BSDE approach, Vienna Congress on Mathematical Finance, Wien, Austria.
12/04/2021	Contributed talk: Economic growth problems in time-space, DEF Internal Seminars, LUISS University, Italy.
10/06/2021	Invited talk: Economic growth problems in time-space, University of Insubria, Italy.
25/06/2021	Contributed talk: On a class of partially observed systems arising in singular optimal control, 10th General AMaMeF Conference, University of Padova, Italy.
16/09/2021	Invited talk: On a class of partially observed systems arising in singular optimal control, AMASES XLV, University of Reggio Calabria, Italy.
03/03/2022	Invited talk: On a class of partially observed systems arising in singular optimal control, Workshop on Mathematical Economics and Financial Mathematics, Universität Bielefeld, Germany.
01/04/2022	Contributed talk: On a class of partially observed systems arising in singular optimal control, Quantitative Finance Workshop 2022, University of Rome Tor Vergata, Italy.
06/04/2022	Invited talk: On a class of partially observed systems arising in singular optimal control, University of Bologna, Italy.
29/04/2022	Invited talk: On a class of partially observed systems arising in singular optimal control, 3rd Spring Colloquium on Probability and Finance, University of Padova, Italy.

13/05/2022	Invited talk: On a class of partially observed systems arising in singular optimal control, Séminaire Bachelier, Institut Henri Poincaré, Paris, France.
27/05/2022	Invited talk: Economic Growth Models in Time-Space on Networks, Workshop "Taming Uncertainty and Complexity in Economics and Finance", LUISS University, Italy.
13/06/2022	Invited talk: On a class of partially observed systems arising in singular optimal control, Third Italian Meeting on Probability and Mathematical Statistics, University of Bologna, Italy.
27/06/2022	Invited talk: Risk measures and progressive enlargement of filtrations: a BSDE approach, 9th Colloquium on BSDEs, Differential Equations and Mean Field Systems, Université Savoie Mont-Blanc, Annecy, France.

VII.D – Organization of conferences, workshops and invited sessions

17-20/06/2019	Organizer (with Dr. Elena Bandini) of the Session Methods for Stochastic Filtering and Optimal Control of Processes with Jumps, Second Italian Meeting on Probability and Mathematical Statistics, Vietri sul Mare, Italy. Invited speakers: Dr. Katia Colaneri, Prof. Fulvia Confortola, Prof. Giorgio Ferrari.
07-08/09/2020	Organizer (with Prof. Fausto Gozzi, Prof. Francesco Lippi, and Dr. Giovanni Zanco) of the online Workshop Mean Field Games in Economics, LUISS University and the Einaudi Institute for Economics and Finance (EIEF), Rome, Italy.
26-28/05/2022	In the local organizing committee of the workshop Taming Uncertainty and Complexity in Economics and Finance, LUISS University, Italy.
13-16/06/2022	Organizer (with Dr. Katia Colaneri) of the Session Stochastic models for energy, management, and environmental issues, Third Italian Meeting on Probability and Mathematical Statistics, University of Bologna, Italy. Invited speakers: Prof. Sara Biagini, Dr. Athena Picarelli, Prof. Salvatore Federico.

VII.E – Refereeing activity

Referee for SIAM Journal on Control and Optimization, Mathematical Finance, Journal of Economic Dynamics and Control, Journal of Optimization Theory and Applications, Journal of Mathematical Economics, Mathematics and Financial Economics, Statistics and Probability Letters, The Journal of Risk, Asia-Pacific Financial Markets, Bulletin of the Malaysian Mathematical Sciences Society.
Reviewer for AMS Mathematical Reviews (MathSciNet).

Part VIII – Publications and preprints

VIII.A - Publications

1. A. Calvia, Optimal control of pure jump Markov processes with noise-free partial observation, PhD Thesis.
2. A. Calvia, Optimal control of continuous-time Markov chains with noise-free observation, SIAM J. Control Optim., 56 (2018), pp. 2000–2035, https://doi.org/10.1137/17M1139989.
3. A. Calvia, Stochastic filtering and optimal control of pure jump Markov processes with noise-free partial observation, ESAIM: COCV, 26 (2020), 25, https://doi.org/10.1051/cocv/2019020.

4. A. Calvia, E. Rosazza Gianin, Risk measures and progressive enlargement of filtration: a BSDE approach, SIAM J. Financial Math., 11 (2020), pp. 815–848, https://doi.org/10.1137/19M1259134.
5. A. Calvia, S. Federico, F. Gozzi, State constrained control problems in Banach lattices and applications, SIAM J. Control Optim., 59 (2021), pp. 4481–4510, https://doi.org/10.1137/20M1376959.
6. A. Calvia, G. Ferrari, Nonlinear Filtering of Partially Observed Systems arising in Singular Stochastic Optimal Control, Appl. Math. Optim., 85:12 (2022), https://doi.org/10.1007/s00245-022-09822-x.
7. E. Bandini, A. Calvia, K. Colaneri, Stochastic filtering of a pure jump process with predictable jumps and path dependent local characteristics, Stoch. Proc. Appl., 151 (2022), pp. 396-435, https://doi.org/10.1016/j.spa.2022.06.007.

VIII.B – Preprint

A. Calvia, F. Gozzi, F. Lippi, G. Zanco, A simple planning problem for COVID-19 lockdown: a dynamic programming approach, preprint, arXiv:2206.00613, 2022 (submitted).