

FABIO PRIVILEGGI

ACADEMIC POSITION

POSITION	Since October 2021: Full Professor in Mathematical Methods in Economics and Finance (SS 13/D4)
AFFILIATION	Department of Economics and Statistics “Cognetti de Martiis”, Università degli Studi di Torino
ADDRESS	Lungo Dora Siena 100 A, 10153 - Torino (Italy)
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PAST POSITIONS

- July 2013–Sept. 2021: Associate Professor in Mathematical Methods in Economics and Finance (SS 13/D4), Department of Economics and Statistics “Cognetti de Martiis”, Università degli studi di Torino (Torino, Italy).
- Dec. 2004–June 2013: Associate Professor in Mathematical Methods in Economics and Finance (SS 13/D4), Department *DiGSPES - POLIS* (former Faculty of Political Sciences), Università del Piemonte Orientale A. *Avogadro* (Alessandria, Italy).
- Jan. 1999–Dec. 2004: Assistant Professor in Mathematical Methods in Economics and Finance (SS 13/D4), Faculty of Political Sciences Department of Public Policy and Public Choice “POLIS”, Università del Piemonte Orientale A. *Avogadro* (Alessandria, Italy).
- Jan. 1997–Dec. 1998: Assistant Professor in Mathematical Methods in Economics and Finance (SS 13/D4), Faculty of Political Science in Alessandria, Department of Statistics and Mathematics for Social Sciences *D. De Castro*, Università di Torino (Torino, Italy).

PROFESSIONAL CERTIFICATIONS

- 2018: Italian Habilitation as Full Professor in Mathematical Methods in Economics and Finance (SS 13/D4), MIUR, Rome (Italy).
- 2015: Italian Habilitation as Full Professor in Economics (SS 13/A1), MIUR, Rome (Italy).
- 2014: Italian Habilitation as Full Professor in Political Economy (SS 13/A2), MIUR, Rome (Italy).

EDUCATION

- Jan. 1996–Dec. 1996: Post-doc scholarship at Università di Trieste, Department of Applied Mathematics *B. de Finetti*, Faculty of Economics (Trieste, Italy).
- Oct. 1995: Ph.D. in *Mathematics applied to Economic Problems* at Università di Trieste (Italy). Thesis topic: Recursive Methods for Stochastic Dynamic Optimization (in Italian). Fields include: Mathematical Analysis, Probability and Stochastic Processes, Bellman Principle of Maximum, Euler Equations in discrete-time Stochastic Models, Stochastic Optimal Growth in discrete-time. Supervisor: Prof. Luigi Montrucchio, Università di Torino (Italy).
- July 1988: Laurea, equiv. BSc, in Political Sciences - Economics field (110/110 cum laude), at Università di Trieste (Italy). Dissertation on Alternative Approaches to the Structure and the Role of the Non-Profit Sector in a Market Economy (in Italian). Supervisor: Prof. C. Busana, Università di Trieste (Italy).

 RESEARCH INTERESTS

Mathematical Economics, Optimization, Discrete-time Dynamical Systems (Non-Linear Dynamics and Chaos), Discrete-time Stochastic Dynamic Optimization (with Applications to Optimal Growth, Equilibrium and Inequality), Fractals in Economics, Continuous-time Endogenous Growth Models (with Innovation and Intellectual Property Rights), Knowledge Growth, Growth and Social Capital, Fiscal Policy (Tax Evasion and Tax Amnesties), Economic-Epidemiological Models.

 PUBLICATIONS

Articles in peer reviewed international Journals

1. Montrucchio, L. and F. Privileggi (2024), Negative dynamic programming with non-additively time-separable objective, *Communications in Optimization Theory*, forthcoming.
2. La Torre, D., Marsiglio, S., Mendivil, F. and F. Privileggi (2024), Infectious diseases and social distancing under state-dependent probabilities, *Annals of Operations Research* **337**: 993–1008.
<https://doi.org/10.1007/s10479-023-05409-z>
3. Bahamazava, K., Marchese, C. and F. Privileggi (2024), A Cournot Equilibrium between Dark Net Market and Street Market, *FinanzArchiv* **79**: 308–331.
<https://doi.org/10.1628/fa-2024-0002>
4. La Torre, D., Marsiglio, S., Mendivil, F. and F. Privileggi (2024), Stochastic Disease Spreading and Containment Policies under State-Dependent Probabilities, *Economic Theory* **77**: 127–168.
<https://doi.org/10.1007/s00199-023-01496-y>
5. La Torre, D., Marsiglio, S., Mendivil, F. and F. Privileggi (2022), Generalized Fractal Transforms with Condensation: a Macroeconomic-Epidemiological Application, *Pure and Applied Functional Analysis* **7**: 2101–2128.
6. Carmeci, G., Mauro, L. and F. Privileggi (2021), Growth Maximizing Government Size, Social Capital, and Corruption, *Journal of Public Economic Theory* **23**: 438–461.
<https://doi.org/10.1111/jpet.12508>
7. La Torre, D., Marsiglio, S., Mendivil, F. and F. Privileggi (2021), Public Debt Dynamics under Ambiguity by Means of Iterated Function Systems on Density Functions, *Discrete & Continuous Dynamical Systems - B* **26**: 5873–5903.
<https://doi.org/10.3934/dcdsb.2021070>
8. Marsiglio, S. and F. Privileggi (2021), Three Dimensional Fractal Attractors in a Green Transition Economic Growth Model, *Communications in Nonlinear Science and Numerical Simulation* **93**: 105509.
<https://doi.org/10.1016/j.cnsns.2020.105509>
9. Marsiglio, S. and F. Privileggi (2021), On the Economic Growth and Environmental Trade-Off: a Multi-Objective Analysis, *Annals of Operations Research* **296**: 263–289.
<https://doi.org/10.1007/s10479-019-03217-y>
10. Marchese, C. and F. Privileggi (2020), A Competitive Idea-Based Growth Model, *Economics of Innovation and New Technology* **29**: 313–330.
<https://doi.org/10.1080/10438599.2019.1616663>
11. La Torre, D., Marsiglio, S., Mendivil, F. and F. Privileggi (2019), A stochastic economic growth model with health capital and state-dependent probabilities, *Chaos, Solitons and Fractals* **129**: 81–93.
<https://doi.org/10.1016/j.chaos.2019.08.010>
12. Marchese, C., S. Marsiglio, F. Privileggi and G. B. Ramello (2019), Endogenous Recombinant Growth and Intellectual Property Rights, *Macroeconomic Dynamics* **23**: 2035–2067.
<https://doi.org/10.1017/S136510051700058X>

13. Privileggi, F. and S. Marsiglio (2019), Dynamics and Welfare in Recombinant Growth Models with Intellectual Property Rights: a Computational Method, *Communications in Nonlinear Science and Numerical Simulation* **69**: 98–118.
<https://doi.org/10.1016/j.cnsns.2018.09.008>
14. La Torre, D., Marsiglio, S. and F. Privileggi (2018), Fractal Attractors in Economic Growth Models with Random Pollution Externalities, *Chaos: An Interdisciplinary Journal of Nonlinear Science* **28**: 055916.
<https://doi.org/10.1063/1.5023782>
15. Marchese, C. and F. Privileggi (2018), Endogenous Economic Growth with Disembodied Knowledge, *Journal of Public Economic Theory* **20**: 437–449.
<https://doi.org/10.1111/jpet.12284>
16. La Torre, D., Marsiglio, S., Mendivil, F. and F. Privileggi (2018), Fractal Attractors and Singular Invariant Measures in Two-Sector Growth Models with Random Factor Shares, *Communications in Nonlinear Science and Numerical Simulation* **58**: 185–201.
<https://doi.org/10.1016/j.cnsns.2017.07.008>
17. La Torre, D., Marsiglio, S., Mendivil, F. and F. Privileggi (2015), Self-Similar Measures in Multi-Sector Endogenous Growth Models, *Chaos, Solitons and Fractals* **79**: 40–56.
<https://doi.org/10.1016/j.chaos.2015.05.019>
18. Privileggi, F. (2015), Takeoff vs. Stagnation in Endogenous Recombinant Growth Models, *Mathematics and Computers in Simulation* **108**: 184–214.
<https://doi.org/10.1016/j.matcom.2014.05.012>
19. Privileggi, F. and S. Marsiglio (2013), Environmental Shocks and Sustainability in a Basic Economy-Environment Model, *International Journal of Applied Nonlinear Science* **1**: 67–75.
<https://doi.org/10.1504/IJANS.2013.052755>
20. Biswas, R., C. Marchese and F. Privileggi (2013), Firm's Tax Evasion in a Principal-Agent Model with Self-Protection, *Journal of Economics* **110**: 125–140.
<https://doi.org/10.1007/s00712-012-0306-4>
21. La Torre, D., S. Marsiglio and F. Privileggi (2011), Fractals and Self-Similarity in Economics: the Case of a Stochastic Two-Sector Growth Model, *Image Analysis & Stereology* **30**: 143–151.
<https://doi.org/10.5566/ias.v30.p143-151>
22. Privileggi, F. (2011), Transition Dynamics in Endogenous Recombinant Growth Models by means of Projection Methods, *Computational Economics* **38**: 367–387.
<https://doi.org/10.1007/s10614-011-9278-7>
23. Marchese, C. and F. Privileggi (2009), A model of the Italian cut-off system for taxing small businesses, *Research in Economics* **63**: 127–134.
<https://doi.org/10.1016/j.rie.2009.04.003>
24. Mitra, T. and F. Privileggi (2009), On Lipschitz Continuity of the Iterated Function System in a Stochastic Optimal Growth Model, *Journal of Mathematical Economics* **45**: 185–198.
<https://doi.org/10.1016/j.jmateco.2008.08.003>
25. Mitra, T. and F. Privileggi (2006), Cantor Type Attractors in Stochastic Growth Models, *Chaos, Solitons & Fractals* **29**: 626–637.
<https://doi.org/10.1016/j.chaos.2005.08.094>
26. Marchese, C. and F. Privileggi (2004), Tax Amnesties and the Self-Selection of Risk-Averse Tax Payers, *European Journal of Law and Economics* **18**: 319–341.
<https://doi.org/10.1007/s10657-004-4276-z>

27. Mitra, T. and F. Privileggi (2004), Cantor Type Invariant Distributions in the Theory of Optimal Growth under Uncertainty, *Journal of Difference Equations and Applications* **10**: 489–500.
<https://doi.org/10.1080/1023619042000193649>
28. Mitra, T., L. Montrucchio and F. Privileggi (2003), The Nature of the Steady State in Models of Optimal Growth Under Uncertainty, *Economic Theory* **23**: 39–71.
<https://doi.org/10.1007/s00199-002-0340-5>
29. Montrucchio, L. and F. Privileggi (2001), On Fragility of Bubbles in Equilibrium Asset Pricing Models of Lucas-Type, *Journal of Economic Theory* **101**: 158–188.
<https://doi.org/10.1006/jeth.2000.2718>
30. Privileggi, F., C. Marchese and A. Cassone (2001), Agent’s Liability Versus Principal’s Liability when Attitudes toward Risk Differ, *International Review of Law and Economics* **21**: 181–195.
[https://doi.org/10.1016/S0144-8188\(01\)00055-2](https://doi.org/10.1016/S0144-8188(01)00055-2)
31. Montrucchio, L. and F. Privileggi (1999), Fractal Steady States in Stochastic Optimal Control Models, *Annals of Operations Research* **88**: 183–197.
<https://doi.org/10.1023/A:1018978213041>
32. Marchese, C. and F. Privileggi (1997), Taxpayers Attitudes Toward Risk and Amnesty Participation: Economic Analysis and Evidence for the Italian Case, *Public Finance – Finance Publique* **52**: 394–410.
33. Privileggi, F. (1995), A Characterization for Solutions of Stochastic Discrete Time Optimization Models, *Rivista di Matematica per le Scienze Economiche e Sociali* **18**: 165-180.
<https://doi.org/10.1007/BF02096426>

Book chapters

34. Privileggi, F. (2010), On the Transition Dynamics in Endogenous Recombinant Growth Models, in Bischi, G.I., Chiarella, C. and L. Gardini (Eds.), *Nonlinear dynamics in economics, finance and social sciences*, Berlin: Springer Verlag: 251-278.
https://doi.org/10.1007/978-3-642-04023-8_14

Working Papers in Progress

35. The Great Fish War under State-Dependent Probabilities, with D. La Torre, and S. Marsiglio.
36. An Endogenous Growth Model of Secular Stagnation, with G. Carmeci and L. Mauro.
37. Recombinant Growth by means of Partial Hamiltonian Approach, with S. Marsiglio.
38. Consumption Externalities and Endogenous Growth, with C. Marchese.

Other Working Papers

39. La Torre, D., Marsiglio, S., Mendivil, F. and F. Privileggi (2022), Stochastic Disease Spreading and Containment Policies under State-Dependent Probabilities, *Dip. “Cognetti de Martiis” Working Paper 05/22*, Torino (Italy).
https://www.est.unito.it/do/home.pl/Download?doc=/allegati/wp2022dip/wp_05_2022.pdf
40. La Torre, D., Marsiglio, S., Mendivil, F. and F. Privileggi (2021), Generalized Fractal Transforms with Condensation: a Macroeconomic-Epidemiological Application, *Dip. “Cognetti de Martiis” Working Paper 07/21*, Torino (Italy).
https://www.est.unito.it/do/home.pl/Download?doc=/allegati/wp2021dip/wp_07_2021.pdf

41. Marchese, C. and F. Privileggi (2016), A Competitive Idea-Based Growth Model with Shrinking Workers' Income Share, *Dip. "Cognetti de Martiis" Working Paper 04/16*, Torino (Italy).
https://www.est.unito.it/do/home.pl/Download?doc=/allegati/wp2016dip/wp_4_2016.pdf
42. Marchese, C. and F. Privileggi (2014), A Competitive Idea-Based Growth Model with Shrinking Workers' Income, *Dip. "Cognetti de Martiis" Working Paper 15/14*, Torino (Italy).
https://www.est.unito.it/do/home.pl/Download?doc=/allegati/wp2014dip/wp_15_2014.pdf
43. Marchese, C., S. Marsiglio, F. Privileggi and G. B. Ramello (2014), Endogenous Recombinant Growth through Market Production of Knowledge and Intellectual Property Rights, *Dip. "Cognetti de Martiis" Working Paper 13/14*, Torino (Italy).
https://www.est.unito.it/do/home.pl/Download?doc=/allegati/wp2014dip/wp_13_2014.pdf
44. Cozzi, G. and F. Privileggi (2009), The Fractal Nature of Inequality in a Fast Growing World: New Revision, *University of Glasgow, Dept. of Economics Discussion Papers Series 2009-30*, Glasgow (UK).
https://www.gla.ac.uk/media/Media_126649_smxx.pdf
45. Privileggi, F. (2007), The Cutoff Policy of Taxation when CRRA Taxpayers Differ in Risk Aversion Coefficients and Income: a Proof, *POLIS Working Paper 107*, Alessandria (Italy).
<http://polis.unipmn.it/pubbl/RePEc/uca/ucapdv/privileggi107.pdf>
46. Marchese, C. and F. Privileggi (2007), Increasing the Efficiency of the 'Studi di Settore' Might Backfire, *POLIS Working Paper 92*, Alessandria (Italy).
<http://polis.unipmn.it/pubbl/RePEc/uca/ucapdv/marchese92.pdf>
47. Cozzi, G. and F. Privileggi (2002), Wealth Polarization and Pulverization in Fractal Societies, *ICER Working Paper 39*, Torino (Italy).
<https://www.bemservizi.unito.it/repec/icr/wp2002/privileggi39-02.pdf>
48. Marchese, C. and F. Privileggi (2002), The Cutoff Policy of Taxation When Taxpayers are Risk Averse, *DISEFIN Working Paper 7*, Genova (Italy).
<https://core.ac.uk/download/pdf/301905397.pdf>

Other Publications

49. Privileggi, F. (1995), Metodi Ricorsivi per L'Ottimizzazione Dinamica Stocastica (in Italian), *PhD Thesis*, Università di Trieste (Italy).
50. Privileggi, F. (1989), Il Settore Non Profit Nell'Economia di Mercato: Interpretazioni Alternative (in Italian), in Alberto Mortara (ed.), *Collana di studi e monografie n. 80*, Milano: CIRIEC (Italy).

Conference Proceedings

51. Montrucchio, L. and F. Privileggi (1998), Fast Growing Stochastic Dynamic Models, *Atti del XXII Convegno AMASES*, Genova (Italy), 371–382.

Teaching manuals

52. Mattalia, C. and F. Privileggi (2017), *Matematica per le Scienze Economiche e Sociali, Volume 2: Algebra lineare, funzioni di più variabili e ottimizzazione statica* (in Italian), Milano: Maggioli Editore (Italy).
53. Mattalia, C. and F. Privileggi (2015), *Matematica per le Scienze Economiche e Sociali, Volume 1: Funzioni di Una Variabile* (in Italian), Milano: Maggioli Editore (Italy).

54. Privileggi, F. (2012), *Compendio di Matematica per l'Economia: un percorso esaustivo ma user-friendly* (second ed., in Italian), Vol. **44/6**, Napoli: EsseLibri Simone (Italy).
55. Privileggi, F. (2007), *Compendio di Matematica per l'Economia: un percorso esaustivo ma user-friendly* (in Italian), Vol. **44/6**, Napoli: EsseLibri Simone (Italy).

VISITING PERIODS AND FELLOWSHIPS

- May 13–27, 2023: Visiting scholar at SKEMA Business School and Université Côte d'Azur, Sophia Antipolis (France): collaboration with Prof. Davide La Torre on the project *Calculus of Variations with respect to Fractal Measures and Application to Economic Growth*.
- Mar 26–Apr 8, 2023: Visiting scholar at SKEMA Business School and Université Côte d'Azur, Sophia Antipolis (France): collaboration with Prof. Davide La Torre on the project *Stochastic Optimal Growth through State-Dependent Probabilities*.
- Feb 2004–June 2004: Visiting scholar at Department Of Economics, Cornell University (Ithaca NY, USA): collaboration with Prof. Tapan Mitra on the project *Cantor Type Distributions in One-Sector Optimal Growth Models under Uncertainty*.
- Mar 2002–June 2002: Visiting scholar at Department Of Economics, Cornell University (Ithaca NY, USA): collaboration with Prof. Tapan Mitra on the project *Cantor Type Invariant Distributions in the Theory of Optimal Growth under Uncertainty*.
- Mar 2000–June 2000: Visiting scholar at Department Of Economics, Cornell University (Ithaca NY, USA), with the support of a Short-Term Mobility scholarship issued by CNR: collaboration with Prof. Tapan Mitra on the project *The Nature of the Steady State in Models of Optimal Growth Under Uncertainty*.
- Jan 1999–June 1999: Visiting scholar at Department Of Economics, Cornell University (Ithaca NY, USA), with the support of a NATO-CNR Senior scholarship: participation in the *Macro Workshop* (co-ordinator Prof. Karl Shell).

INVITED SEMINARS

- 2023: *Stochastic Disease Spreading and Containment Policies under State-Dependent Probabilities*, with D. La Torre, S. Marsiglio and F. Mendivil; invited talk for the Dynamical Systems Workshop at SKEMA Business School and I3S Laboratory (Université Côte d'Azur), Sophia Antipolis (France).
- 2023: *Stochastic Optimal Growth through State-Dependent Probabilities*, with D. La Torre, S. Marsiglio and F. Mendivil; invited talk for the Analytics and Management Science Seminars at SKEMA Business School and Université Côte d'Azur, Sophia Antipolis (France).
- 2011: *Intellectual Property Rights and Market Production of Knowledge in a Decentralized Endogenous Recombinant Growth Model*, with C. Marchese, S. Marsiglio and G. Ramello; invited talk for the Seminars in Economics at the Department of Economics, Business and Statistics, Università di Milano, Milano (Italy).
- 2011: *What Iterated Function systems and Fractals have to do with Economic Growth*; invited talk for the Shape and Size in Medicine, Biotechnology Materials Science and Social Sciences Workshop, Department of Mathematics, Università di Milano, Milano (Italy).
- 2008: *Intellectual Property Rights, Knowledge Production, and Endogenous Growth*, with G. Ramello; invited talk for the Economic Theory Conference in honor of Professor Tapan Mitra on his 60th birthday, Cornell University, Ithaca NY (USA).
- 2007: *The Fractal Nature of Inequalities in Societies with Equal Opportunities*, with G. Cozzi; invited talk for the Economic Theory Seminar, CORE-ECORE, Louvain La Neuve (Belgium).

- 1999: *On Fragility of Bubbles in Equilibrium Asset Pricing Models of Lucas-Type*, with L. Montrucchio; Invited talk for the Macroeconomics Workshop, Cornell University, Ithaca NY (USA), May 27, 1999.
- 1999: *Fractal Steady States in Stochastic Optimal Control Models*, with L. Montrucchio; Invited talk for the Macroeconomics Workshop, Cornell University, Ithaca NY (USA).

CONFERENCE PRESENTATIONS

- 2022: *Stochastic Disease Spreading and Containment Policies under State-Dependent Probabilities*, with D. La Torre, S. Marsiglio and F. Mendivil; MDEF2022, Modelli Dinamici in Economia e Finanza Workshop, Urbino (Italy).
- *Stochastic Optimal Growth through State-Dependent Probabilities*, with D. La Torre, S. Marsiglio and F. Mendivil:
 - 2022: 13th Viennese Workshop on Optimal Control and Dynamic Games, Vienna (Austria).
 - 2021: NED 2021, 12th Nonlinear Economic Dynamics Conference, Milano (Italy).
- 2019: *Self-similar Attractors in Solow-type Public Debt Dynamics Generated by Iterated Function Systems on Density Functions*, with D. La Torre, S. Marsiglio and F. Mendivil; NED 2019, 11th Nonlinear Economic Dynamics Conference, Kyiv (Ukraine).
- 2018: *A Stochastic Economic Growth Model with Place-Dependent Probabilities*, with D. La Torre, S. Marsiglio and F. Mendivil; MDEF2018, Modelli Dinamici in Economia e Finanza Workshop, Urbino (Italy).
- 2018: *Growth Maximizing Government Size and Social Capital*, with G. Carmeci and L. Mauro; 14th Viennese Conference on Optimal Control and Dynamic Games, Vienna (Austria).
- 2017: *Who should fear Big Governments? A Model of Social Capital, Rule of Law and Growth*, with G. Carmeci and L. Mauro; 41st AMASES Meeting, Cagliari (Italy).
- *A Competitive Idea-Based Growth Model with Shrinking Workers' Income Share*, with C. Marchese:
 - 2017: Conference on Finance and Economic Growth in the Aftermath of the Crisis, Milano (Italy).
 - 2016: 15th Journées Louis-André Gérard-Varet Conference in Public Economics, Aix-En-Provence (France).
 - 2015: 13th Viennese Workshop on Optimal Control and Dynamic Games, Vienna (Austria).
- 2016: *Fractal attractors and singular measures in multi-sector growth models with random shocks on factor shares*, with D. La Torre, S. Marsiglio and F. Mendivil; MDEF2016, Modelli Dinamici in Economia e Finanza Workshop, Urbino (Italy).
- 2015: *Endogenous Economic Growth with Disembodied Knowledge*, with C. Marchese; 39th AMASES Meeting, Padova (Italy).
- 2014: *Self-Similar Measures in Multi-Sector Endogenous Growth Models*, with D. La Torre, S. Marsiglio and F. Mendivil; MDEF2014, Modelli Dinamici in Economia e Finanza Workshop, Urbino (Italy).
- 2013: *Takeoff vs. Stagnation in Endogenous Recombinant Growth Models: XXXVII AMASES Meeting*, Stresa (Italy).
- 2013: *Endogenous Recombinant Growth through Market Production of Knowledge and Intellectual Property Rights* with C. Marchese, S. Marsiglio and G. Ramello; 12th Journées Louis-André Gérard-Varet Conference in Public Economics, Aix-En-Provence (France).
- *Intellectual Property Rights and Market Production of Knowledge in a Decentralized Endogenous Recombinant Growth Model*, with C. Marchese, S. Marsiglio and G. Ramello:

- 2012: MDEF2012, Modelli Dinamici in Economia e Finanza, Urbino (Italy).
- 2012: XXXVI AMASES Meeting, Vieste (Italy).
- 2011: *The Cutoff Policy of Taxation When CRRA Taxpayers Differ in Risk Aversion Coefficients and Income*, with C. Marchese; 10th Journées Louis-André Gérard-Varet Conference in Public Economics, Marseille (France).
- 2010: *Transition Dynamics in Endogenous Recombinant Growth Models by means of Projection Methods*; MDEF2010, Modelli Dinamici in Economia e Finanza Workshop, Urbino (Italy).
- 2010: *Tax Evasion in a Principal-Agent Model with Self-Protection* with C. Marchese and R. Biswas; XXXIV AMASES Meeting, Macerata (Italy).
- *Intellectual Property Rights, Knowledge Production, and Endogenous Growth*, with G. Ramello:
 - 2008: Open Societies vs Intellectual Enclosures: Innovation, Imitation and Economic Growth Workshop, Università degli Studi del Piemonte Orientale A. Avogadro, Alessandria (Italy).
 - 2008: MDEF2008, Modelli Dinamici in Economia e Finanza, Urbino (Italy).
 - 2008: 1st Workshop on Dynamics, Optimal Growth and Population Change: Theory and Applications, Università di Milano (Italy).
- 2006: *The Cutoff Policy of Taxation When Taxpayers are Heterogeneous and Risk Averse*, with C. Marchese; XXX AMASES Meeting, Trieste (Italy).
- 2004: *Cantor Type Distributions in One-Sector Optimal Growth Models under Uncertainty*, with T. Mitra; MDEF2004, Modelli Dinamici in Economia e Finanza, Urbino (Italy).
- 2003: *Cantor Type Invariant Distributions in the Theory of Optimal Growth under Uncertainty*, with T. Mitra; XXVII AMASES Meeting, Cagliari (Italy).
- 2002: *The Fractal Nature of Inequality in Societies with Equal Opportunities*, with G. Cozzi; XXVI AMASES Meeting, Verona (Italy).
- *Wealth Polarization and Pulverization in Fractal Societies*, with G. Cozzi:
 - 2002: Summer School in Economic Theory, 2nd edition, Intertemporal Macroeconomics: Growth, Fluctuations, and the Open Economy, SET Center for Advanced Studies in Economic Theory, Isola di San Servolo, Venezia (Italy).
 - 2002: The Cornell-PSU Macro Workshop, Pennsylvania State University, State College PA (USA).
 - 2001: XXV AMASES Meeting, Firenze (Italy).
- *The Nature of the Steady State in Models of Optimal Growth Under Uncertainty*, with T. Mitra and L. Montrucchio:
 - 2001: V Conference of the Society for the Advancement in Economic Theory, Ischia (Italy).
 - 2000: MDEF2000, Modelli Dinamici in Economia e Finanza, Urbino (Italy).
 - 2000: XXIV AMASES Meeting, Padenghe (Italy).
- 2001: *On Fragility of Bubbles in Equilibrium Asset Pricing Models of Lucas-Type*, with L. Montrucchio; II Workshop in Mathematical Finance, Pisa (Italy).
- 1998: *Fast Growing Stochastic Dynamic Models*, with L. Montrucchio; XXII AMASES Meeting, Genova (Italy).
- 1997: *Fractal Steady States in Stochastic Optimal Control Models*, with L. Montrucchio; 6th Viennese Workshop on Optimal Control, Dynamic Games, Nonlinear Dynamics and Adaptive Systems, Wien (Austria).

- 1997: *Agent's Liability Versus Principal's Liability when Attitudes Toward Risk Differ*, with A. Cassone and C. Marchese; Annual Conference of the Canadian Law and Economics Association (CLEA), Toronto (Canada).
- 1995: *A Characterization for Solutions of Stochastic Discrete Time Optimization Models*; XIX AMASES Meeting, Pugnochiuso (Italy).

BOARD MEMBERSHIPS

- April 2014–present: Member of the Faculty Board of the International Ph.D. programme in *Comparative Analysis of Institutions, Economics and Law (IEL)*, Università di Torino and Collegio Carlo Alberto (Torino, Italy).
- May 2009–Dec. 2010: Member of the Faculty Board of the Ph.D. programme in *Economic Sciences (DSE)*, Università di Torino and Collegio Carlo Alberto (Torino, Italy).

INSTITUTIONAL RESPONSIBILITIES

- Oct. 2021–present: Member of the Teaching Committee of the Department of Economics and Statistics “Cognetti de Martiis”, Università di Torino (Torino, Italy).
- Oct. 2016–Dec. 2019: Chair of the Master Degree Programme in *Statistical and Economical Methods for Decisions (SEED)*, (<https://www.seed.unito.it/>), Department of Economics and Statistics “Cognetti de Martiis”, Università di Torino (Torino, Italy).
- May 2014–Dec. 2019: Member of the “Cognetti de Martiis” Library Committee, Università di Torino (Torino, Italy).
- Jan. 2014–Dec. 2018: Member of the Committee “Commissione Didattica Paritetica” of the Degree Programme in *Economics and Statistics for the Organizations*, Department of Economics and Statistics “Cognetti de Martiis”, Università di Torino (Torino, Italy).
- Jan. 2015–Dec. 2018: together with prof. Dalit Contini, Member of the sub-committee of the Teaching Committee of the Department of Economics and Statistics “Cognetti de Martiis”, Università di Torino (Torino, Italy) dedicated to planning the educational offer of the Department.
- Feb. 2009–June 2013: Chair of the International Master Degree Programme in *Economic and, Public Policy, Environment and Culture*, Department DiGSPES - POLIS, Università degli Studi del Piemonte Orientale A. Avogadro, (Alessandria, Italy).

PH.D. EXTERNAL EXAMINER

- 2012: Roberto Ippoliti, IEL Ph.D., Università di Torino and Collegio Carlo Alberto, Moncalieri (Torino, Italy), Thesis on *The Market of Human Experimentation, a Law and Economics Analysis of the Pharmaceutical Clinical Research*.

POST-DOC AND PH.D. STUDENTS SUPERVISION

- Jan. 2020–present: Katsiaryna Bahamazava, IEL Ph.D. student, Università di Torino and Collegio Carlo Alberto (Torino, Italy); Ph.D. Thesis on *Dark Net Market, Criminal Activities and Cryptocurrencies: Comparative Law and Economic Analysis*.
- Dec. 2010–Nov. 2011: Simone Marsiglio, Post-Doc, Department of Public Policy and Public Choice “POLIS”, Università degli Studi del Piemonte Orientale A. Avogadro (Alessandria, Italy); research projects *Endogenous Recombinant Growth Models* and *Fractal Attractors in Multi-Sector Optimal Growth Models under Uncertainty*.

EDITORIAL ACTIVITY

- Apr. 2012–present: Associate editor of the *International Journal of Applied Nonlinear Science* (Inter-science).

AD HOC REFEREEING

Annals of Operations research (Springer), *Chaos, Solitons & Fractals* (Elsevier), *Communications in Nonlinear Science and Numerical Simulation* (Elsevier), *Decisions in Economics and Finance* (Springer-Verlag), *Economic Modelling* (Elsevier), *Economic Theory* (Springer-Verlag), *Economics of Innovation and New Technology* (Routledge, Taylor & Francis), *European Journal of Comparative Economics* (Università Carlo Cattaneo - LIUC), *European Journal of Law and Economics* (Springer-Verlag), *International Economic Review* (University of Pennsylvania), *Journal of Economic Behavior and Organization* (Elsevier), *Journal of Economic Dynamics and Control* (Elsevier), *Journal of Economics* (Springer-Verlag), *Journal of Optimization Theory and Applications* (Springer-Verlag), *Journal of Public Economic Theory* (Wiley), *Macroeconomic Dynamics* (Cambridge University Press), *Mathematical Review* (American Mathematical Society), *Mathematics and Computers in Simulation* (Elsevier), *Research in Economics – Ricerche Economiche* (Università Ca' Foscari di Venezia), *Technological Forecasting and Social Change* (Elsevier).

MEMBERSHIP

- The American Mathematical Society (AMS).
- Associazione per la Matematica Applicata alle Scienze Economiche e Sociali (AMASES).
- Finance and Growth lab (FinGro, Department of Economics, Management and Quantitative Methods, University of Milano).
- International Society of Difference Equations (ISDE).

TEACHING

Graduate Level

- 2008–present: APPLIED MATHEMATICS (taught in English), International Ph.D. programme in *Comparative Analysis of Institutions, Economics and Law (IEL)*, Università di Torino and Collegio Carlo Alberto (Torino, Italy).
- 2010 to 2011: INTRODUCTORY MATHEMATICS (taught in English), Ph.D. programme in *Economic Sciences (DSE)*, Università di Torino and Collegio Carlo Alberto, Moncalieri (Torino, Italy).

Master Level

- 2016–present: MATHEMATICS, Master Degree in *Statistical and Economical Methods for Decisions*, Department of Economics and Statistics “Cognetti de Martiis”, Università di Torino (Torino, Italy).
- 2017–2018: GROWTH THEORY, Master Degree in *Statistical and Economical Methods for Decisions*, Department of Economics and Statistics “Cognetti de Martiis”, Università di Torino (Torino, Italy).
- 2013–2015: MATHEMATICS, Master Degree in *Statistics, Economics and Management*, Department of Economics and Statistics “Cognetti de Martiis”, Università di Torino (Torino, Italy).
- 2009–2013: QUANTITATIVE METHODS FOR ECONOMICS II, International Master Degree in *Economics and Public Policy, Environment and Culture (EPPAC)*, Department DiGSPES - POLIS, Università del Piemonte Orientale A. Avogadro (Alessandria, Italy).

- 2012 to 2013: ECONOMIC GROWTH (taught in English), International Master Degree in *Economics and Public Policy, Environment and Culture (EPPAC)*, Department *DiGSPES - POLIS*, Università del Piemonte Orientale A. Avogadro (Alessandria, Italy).
- 2009–2010: MACROECONOMICS II, International Master Degree in *Economics and Public Policy, Environment and Culture (EPPAC)*, Department *DiGSPES - POLIS*, Università del Piemonte Orientale A. Avogadro (Alessandria, Italy).
- 2003–2008: QUANTITATIVE METHODS FOR ECONOMICS II, International Master Degree in *Economics and Public Policy, Environment and Culture (EPPAC)*, Department of Public Policy and Public Choice “POLIS”, Università del Piemonte Orientale A. Avogadro (Alessandria, Italy).
- 2007–2008: QUANTITATIVE METHODS FOR ECONOMICS (taught in English together with prof. Cristina Uberti), *CORIFE - Master in Economics*, Collegio Carlo Alberto, Moncalieri (Torino, Italy).
- 2000: teaching assistant for QUANTITATIVE METHODS FOR ECONOMICS (taught in English, instructor prof. Luigi Montrucchio), *CORIFE - Master in Economics*, Collegio Carlo Alberto, Moncalieri (Torino, Italy).

Undergraduate Level

- 2013–present: MATHEMATICS FOR SOCIAL SCIENCES, Degree Programme in *Economics and Statistics for the Organizations*, Department of Economics and Statistics “Cognetti de Martiis”, Università di Torino (Torino, Italy).
- 2003–2008: QUANTITATIVE METHODS FOR ECONOMICS I, Degree Programme in *Political, Economic and Social Sciences for the Administration*, Department *DiGSPES - POLIS*, Università del Piemonte Orientale A. Avogadro, Alessandria (Italy).
- 2000–2003: FINANCIAL CALCULUS, Degree Programme in *Political, Economic and Social Sciences for the Administration*, Department of Public Policy and Public Choice “POLIS”, Università del Piemonte Orientale A. Avogadro, Alessandria (Italy).
- 2000: FINANCIAL AND ACTUARIAL CALCULUS, Degree Programme in *Labor Consultants*, Department of Public Policy and Public Choice “POLIS”, Università del Piemonte Orientale A. Avogadro, Asti (Italy).
- 2000: MATHEMATICS FOR ECONOMICS, Degree Programme in *Political Sciences*, Department of Public Policy and Public Choice “POLIS”, Università del Piemonte Orientale A. Avogadro, Alessandria (Italy).
- 1999: MATHEMATICS FOR SOCIAL SCIENCES, Old System Degree Programme in *Political Sciences*, Department of Public Policy and Public Choice “POLIS”, Università del Piemonte Orientale A. Avogadro, Alessandria (Italy).

OTHER PROFESSIONAL ACTIVITIES

- Nov. 1989–Jul. 1990: Collaboration in a research program on the Impact of the Friuli Venezia Giulia Regional Public Spending at the *Center of Economic and Social Research S.r.l.*, Udine (Italy).
- Dec. 1988–Jul. 1989: Professional Master in *Finance and Capital Markets* with final stage at the Bank of Cooperative Economy at *A.G.F. - Cooperatives' League*, Bologna (Italy).

LANGUAGES

Italian (mother tongue), English (advanced).

COMPUTING SKILLS

Windows: Maple, LaTeX, Scientific Workplace and Office.

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