

Magda Fontana

✉ magda.fontana@unito.it • 🌐 www.magdafontana.com

Personal information

Affiliation: Department of Economics and Statistics “Cognetti De Martiis”, University of Turin, Lungo Dora Siena 100 A, 10153 Turin, Italy

Tel: +390116703888

ORCID: 0000-0002-9504-2080

Scientific National Qualification

- For the position of **Associate professor** in the field: **Economic Policy (13/A2)** (expiring date 2020)
- For the position of **Associate professor** in the field: **Economics (13/A1)** (expiring date 2024)

Employment

- **Assistant Professor of Public Economics** at the Department of Economics and Statistics “Cognetti De Martiis”, University of Turin, Turin, Italy (since 1/11/2001)
- **Director of Master in Data Science for Complex Economic Systems**, Collegio Carlo Alberto and University of Turin (since 2012)
- **Senior Researcher at Despina Big Data Lab**, University of Turin (since 2015)
- **Researcher at E-lab - CS DC Complexity Science Digital Campus**, Complex Systems Society and UNESCO (since 2014)
- **Post-doc Research Fellowship** University of Turin (1999-2001)

Education

- DATE: 1/11/95 – 1/1/99
TITLE OF QUALIFICATION: Dottorato in Studi Economici Europei/ **Ph.D in European Economic Studies**
SUBJECT: Market and Institutions an Agent-based model
NAME AND TYPE OF ORGANISATION PROVIDING EDUCATION: University and Polytechnic of Turin
- DATE: 25/9/96 – 30/9/97
TITLE OF QUALIFICATION: **Master in Political Economy**
NAME AND TYPE OF ORGANISATION PROVIDING EDUCATION: University of East Anglia, School of Economic and Social Studies

- DATE: April 1995
TITLE OF QUALIFICATION: **Degree in Law** (110/110 awarded with laude and distinction)
SUBJECT: Institutions and Organizations: market, firms, and development
NAME AND TYPE OF ORGANISATION PROVIDING EDUCATION: University of Turin

Selected Seminars, Keynote lectures, and Visiting

- **Invited speaker**, GREDEG-CNRS, **Université de Nice-Sophia Antipolis**, Seminar on Complexity Economics, 2019
- **Invited keynote speaker**, **Complex Systems Society**, "Trade runner 2049: Complexity, development, and the future of the economy", Thessaloniki, 2018
- **Invited keynote speaker**, Colloquium on Institutions and Complexity, Institute for Institutions and Innovation, **University of Bremen**, Bremen 2016.
- **Invited keynote speaker**, **15th Conference of the Schumpeter Society**, Foundation of Economic Change: Behavior, Interaction and Aggregate Outcomes, Jena, 2015.
- **Invited Professor**, Economic Policy and Self-Government Department, **Poznan University**, Poznan May 2018
- **Invited Professor**, Economic Policy and Self-Government Department, **Poznan University**, Poznan September 2017
- **Invited Speaker** , Joint Research Center, **EU Commission**, Ispra, May 2017.
- **Invited Speaker**, Connected Countries: Italian- Israeli Roundtable on Networks, Special Session of **NetSci-X 2017**, Tel Aviv January 2017.
- **Invited Speaker** , Joint Research Center, **EU Commission**, Petten, July 2016.
- **Invited speaker**, Agent-based modelling and networks in Energy Market, **European Academy, Bolzano** , December 2016.
- **Invited speaker**, Economic Futures, Imaginaries, Narratives and Calculations, Max Planck Institute for the Study of Societies, Paris, 2016.
- **Invited researcher** Joint Research Center, **EU Commission**, Institute for Energy and Transport , Petten, the Netherlands December 2015 <https://www.overleaf.com/project/5c7f99ca2b33ea16e1b50216>
- **Invited speaker**, Studies in Complexity, **Scuola superiore di studi universitari e di perfezionamento Sant'Anna**, Pisa, 2015.
- **Invited Speaker**, Seminar on "Specialization in mainstream economics", Max Planck Institute of Economics, Jena, 2014
- **Invited speaker**, Cabdyn Complexity Centre, **Institute for New Economic Thinking**, University of Oxford, 2012
- **Invited speaker**, "Methodological and Theoretical Assessment of Complexity Economics" Esalen Conference on Complexity Economics **Institute for New Economic Thinking** , University of Oxford, Big Sur, CA, 2012
- **Invited Researcher**, **Institute for Advanced Studies**, Hebrew University of Jerusalem, Patterns and Processes in Organizational Networks group, 2012
- **Invited speaker** "The physics of conflict and competition". Galway, Department of Economics

National University of Ireland, Galway, 2012

- **Invited speaker** ,“Complexity an Interdisciplinary Approach” Racah Department of Physics, Hebrew **University of Jerusalem**, Jerusalem 2012.
- **Invited Professor, Universidad Nacional de Cordoba**, Argentina, 2006

TEACHING ACTIVITY

PhD courses.....

- **Complexity Economics**, Vilfredo Pareto Doctorate in Economics, since 2007
- **History of Complexity Economics** ,Complexity Economics Vilfredo Pareto Doctorate in Economics since 2007
- **Agent-based modeling** Vilfredo Pareto Doctorate in Economics since 2012
- **Agent-based modeling**, Economic Policy and Self-Government Department, Poznan University, Poznan 2017

Master Programs and Advanced degrees.....

- **Empirical Applications in Economics**, Degree in Metodi statistici ed economici per le decisioni since 2017
- **Agent-based Modeling**, Degree in Economics, University of Economics and Business, Poznan 2018
- **Complexity Economics**, Degree in Economia dell'Ambiente della Cultura e del Territorio since 2014
- **Complexity Economics**, Degree in Metodi Statistici ed Economici per le Decisioni since 2015
- **Economics**, Laurea Magistrale in Giurisprudenza since 2010-1016
- **Agent-based Modeling**, Master in Data Science for Complex Economics Systems since 2013
- **Economics**, Corso di laurea in Giurisprudenza, sede di CUNEO, 2006-2011
- **Public Economcs** Corso di laurea in Giurisprudenza, sede di CUNEO 2001-2 e 2005-2011
- **Statistics**, Corso di laurea in Giurisprudenza, sede di CUNEO, 2005

Undergraduate.....

- **Local Government and Fiscal Federalism**, Scienze dell'amministrazione e Consulenza del lavoro, 2013
- **Economics of the Public Sector**, Diritto per le Imprese e le Istituzioni, 2008-9
- **Public Economics**, Diritto per le Imprese e le Istituzioni, 2012- 13
- **Economics**, Diritto per le Imprese e le Istituzioni 2010.11
- **Public Economics**, Facultad de Ciencias Economicas, Universidad De Cordoba, Argentina, 2006

Other.....

- **Didattica dell'Economia Pubblica**, Formazione Insegnanti Scuole Superiore CIFIS, 2012-14 (Training program for high school teachers)

Teaching evaluation.....

Students teaching evaluation always very high. Systematically in the top quartile of the distribution

Administrative and Steering Activity

- **Teaching Committee** member (Collegio dei Docenti) Vilfredo Pareto Doctorate in Economics University of Turin Doctoral School in Human and Social Sciences (since 2013)
- **Deputy Coordinator** of the curriculum Economics & Complexity at Vilfredo Pareto Doctorate in Economics University of Turin - Doctoral School in Human and Social Sciences (2013-2017)
- **Director** of the Master Degree in Data Science for Complex Economic Systems, Collegio Carlo Alberto and University of Turin (since 2013)
- Member of the **Research Committee** of the Department of Economics and Statistics, University of Turin (since 2014)
- Responsible for **Students Orientation**, Advanced Degree in Economics of the Environment, Culture and Territory (2012)
- Member of the **Statute Committee**, Department of Economics and Statistics, University of Turin (since 2011)
- Member of the **Department Board**, Department of Economics and Statistics, University of Turin (2011-13)
- Responsible for the **organization of Seminars**, Department of Economics and Statistics, University of Turin (2007 and 2005)
- Member of the Committee responsible for the implementation of **University Reform** introduced by the Law n.10, February 2000, n. 30, School of Law, University of Turin (2004-2006)

PhD supervision

- Azzurra Gigante, - **Interpreting recent institutional economic theory: a theoretical and empirical contribution to Institutional Cognitive Economics** (Vilfredo Pareto Doctorate in Economics)
- Ilaria Bertazzi, **Three essays on Economic and Complex Behaviour** (Vilfredo Pareto Doctorate in Economics)
- Tommaso Panini – **Three Essays on Agent-based modelling and Network Analysis** (Vilfredo Pareto Doctorate in Economics)
- Paolo Racca - **Data Mining and Computational Modelling for Knowledge Discovery in Social Science** (Vilfredo Pareto Doctorate in Economics)
- Martina Iori – **Three Essays on Interdisciplinarity and Novelty in Science and Technology** (Vilfredo Pareto Doctorate in Economics)
- Giulia Chersoni – **Diffusion of smart technologies in the EU** (in collaboration with EURAC) – in progress
- Daniel Fernando De Souza – **Interdisciplinarity and Economic Growth** - in progress

- Velia Bigi - **Urban Flood Defences** (Dottorato Interateneo in Urban and Regional Development, University and Polytechnic of Turin) (co-tutorship) – in progress

PhD Committees

Thesis Defense.....

- 2019 Carlo Bottai, Doctorate in Economics, University of Turin
- 2017 Computational Economics and Finance, University of Genova
- 2013 Davoud Taghawi Nejad, Doctorate in Economics, University of Turin
- 2012 Irene Bonafine , Doctorate in Economics, University of Turin

Students Selection.....

- 2017 Vilfredo Pareto Doctorate in Economics (External Expert - scholarship in Agent-based modelling Network analysis of the electricity market funded by EURAC)
- 2017 Vilfredo Pareto Doctorate in Economics
- 2015 Vilfredo Pareto Doctorate in Economics
- 2014 Vilfredo Pareto Doctorate in Economics

Editorial and other Scientific Activities

- Member of the **Editorial Board** of *Æconomia*
- Member of the **Editorial Board** of the Journal of Policy and Complex Systems
- **Editor** of the Book Series in Complexity Economics, Elsevier.
- **Editor** of the Special Issue of *Æconomia* (with A. Kirman, J. Davis, M. Dal Pont Legrand, C. Hédoïn), From thought experiments to Agent Based Models and calibration. Reflecting (on) the many facets of simulations in economics.
- **Organizer** (with F. Montobbio and P. Racca) of the Special Session on The Geography of Scientific Knowledge, Conference on the Geography of Innovation. Barcelona, 2018.
- **Organizer** (with W. Elsner and T. Heinrich) of the special session on History, definition and theoretical cores of Heterodox Economics, EAEPE Conference 2018, Nice
- **Organizer** (with T. Heinrich, A. Caiani and A. Roventini) of the special session on Machine learning, AI, and Robotization: Effects on socio-economic systems and opportunities for economic analysis, EAEPE Conference 2019, Warsaw
- **Research coordinator** of the Complexity Economics Area, European Association for Evolutionary Political Economy
- **Scientific Committee** of the Master in Data Science for Business Intelligence, University of Turin
- **Scientific Committee** of the Center for Laboratory Simulations and Experimental Research - CLOSER, University of Turin.

Publications

Articles.....

- Fontana M., M. Iori, C.R. Nava (2019), "Switching behavior in the Italian electricity retail market: Logistic and mixed effect Bayesian estimations of consumer choice", *Energy Policy*, 129, 339-351. DOI 10.1016/j.enpol.2019.01.060 (FASCIA A 13 Economic Sciences)
- Beretta E., M. Fontana, M. Guerzoni, A. Jordan (2018), "Cultural dissimilarity: Boon or Bane for Technology Diffusion?" *Technological Forecasting and Social Change*, 133, 95-103. DOI: 10.1016/j.techfore.2018.03.008 (FASCIA A 13 Economic Sciences)
- Ambrosino A, M. Fontana, A. Gigante (2018), "Shifting boundaries in Economics: the Institutional Cognitive strand and the Future of Institutional Economics" *Journal of Economic Issues*, 32, 3, 767-791. DOI: 10.1111/joes.12214 (FASCIA A 13 Economic Sciences)
- Cedrini M., M. Fontana (2017), "Just Another Niche in the Wall: How Specialization is Changing the Face of Mainstream Economics", *Cambridge Journal of Economics*, 42, 2, 427-51. DOI 10.1093/cje/bex003 (FASCIA A 13 Economic Sciences)
- Fontana M., P. Terna (2015), "From Agent-Based Models to Network Analysis (and Return): The Policy-Making Perspective", *Journal of Policy and Complex Systems*, 2,1, 77-92. DOI: 10.18278/jpcs.2.1.8
- Fontana M. (2014), "Pluralism in Economics: lessons from Complexity and Innovation Economics", *Journal of Evolutionary Economics*, 24, 1, 189-204. DOI:10.1007/s00191-013-0333-5 (FASCIA B 13 Economic Sciences)
- Fontana M., T. Corsatea (2013), "Empirical Evidence of Change in Economics: Scientific Interaction and Knowledge Diffusion at the Santa Fe Institute", *Complexity Economics*, 2,1, 1-29. DOI: 10.7564/13-COEC11
- Fontana M. (2010) "The Santa Fe Perspective on Economics: Emerging Patterns in the Science of Complexity", *History of Economic Ideas*, XVII, 167-196. DOI: 10.1400/148279 (FASCIA C 13 Economic Sciences)
- Fontana M. (2010), "Can Neoclassical Economics Handle Complexity? The Fallacy of The Oil Spot Dynamic", *Journal of Economic Behavior and Organization*, 76, 584-596. DOI: 10.1016/j.jebo.2010.08.010 (FASCIA A 13 Economic Sciences)
- Fontana M. (2006), "Computer Simulations, Mathematics, and Economics", *International Review of Economics*, 53,1, pp. 96-124. DOI: 10.1007/BF0302985 (FASCIA C 13 Economic Sciences)
- Fontana M. (2006), "Simulation in economics: Evidence on diffusion and communication", *Journal of Artificial Societies and Social Simulation*, 9(2). (Impact Factor:1,061 –social science JCR) (FASCIA A Area 14/C Sociology)
- Fontana M. (2005), "A feasible route to answering how much. A Comment to D. McCloskey "The trouble with mathematics and statistics in economics", *History of Economic Ideas*, XXIII, 3, 117-120. DOI: 10.1400/18568 (FASCIA C 13 Economic Sciences)
- Fontana M. (1999), "Individualismo metodologico e modelli fondati su agenti" *Sistemi intelligenti*, 11,1, 174-178. DOI: 10.1422/3507 (FASCIA A 11/C Philosophy)

Contribution to books.....

- Sciallo A., E. Vallino, M. Iori, and M. Fontana (2019), "Paths and processes in complex electricity markets: the agent based perspective", Soytas U. and R. Sari (eds.), *Routledge Handbook of Energy Economics*, Chapter 36. ISBN 9781138208254
- Fontana M., Iori M., Nava C. (2018), "Barriers to switching in retail electricity markets: a regional

analysis of the Italian Market" in Bisello A., Vettorato D., Laconte P., Costa S. (Eds.) *Smart and Sustainable Planning for Cities and Regions*, 477-487

- Fontana M. (2012), "On Policy in Non Linear Economic Systems", in P. Heritier - P. Silvestri (eds.), *Good Government. Governance and Human Complexity*, Oelski.
- Fontana M. (2006), "Uso della simulazione in economia", in Boero – Sonnessa – Terna (eds.) *Modelli per la Complessità*, Bologna: Il Mulino, 29-46.
- Fontana M. – Sapienza M.D. (2001), "Search in artificial labour markets: a simulation study", *Simulations in Swarm: Agent-based Methods in Economics and Finance*, Kluwer Academic Press, 283-304.
- Fontana M. (2000), "Costanza Costantino", *A Biographical Dictionary of Women Economists*, Edward Elgar, 118-121.
- Fontana M. (1998), "Path Dependency, diritti di proprietà e cambiamento istituzionale", in G. Clerico - S. Rizzello, *Diritto ed Economia della Proprietà Intellettuale*, CEDAM, Padova: 147-172.

Books and Handbooks.....

- Fontana M. (2010), *L'Economia e l'equilibrio impossibile*, Giappichelli, Torino.
- Scacciati F. and M. Fontana (2002), *Lezioni di Macroeconomia vol. I e II*, Giappichelli, Torino.

Review Papers.....

- Fontana M. (2008), "Agent-Based Modelling and Simulation in the Social and Human Sciences by Denis Phan and Frédéric Amblard (Eds.)", *Journal of Artificial Societies and Social Simulation*, 11, 2.

Reports and Policy Briefs.....

- Fontana M. , M. Iori, C.R. Nava, P. Terna (2019), *Analysis of socio-economic drivers of switching behaviours in retail electricity markets. A report*, European Commission, JRC/PTT/0052/RC-AMI

Conference Proceedings and Working papers.....

- Fontana M., M. Iori, F. Montobbio, R. Sinatra (2018), A bridge over troubled water: Interdisciplinarity, Novelty, and Impact, *Quaderni del Dipartimento di Politica Economica*, Università Cattolica del Sacro Cuore, 2/2018
- Cedrini M. and M. Fontana (2017), "Just Another Niche in the Wall? How Specialization Is Changing the Face of Mainstream Economics" *CESMEP Working Papers*, No. 2017/2
- Fontana M., M. Iori, C.R. Nava (2017), Switching Behavior and the Liberalization of the Italian Electricity Retail Market. Logistic and Mixed Effect Bayesian Estimations of Consumer Choice, Department of Economics and Statistics Cognetti de Martiis. Working Papers 201721
- Chersoni G. and M. Fontana (2017), "Economic Evaluation of Fuel Treatment Effectiveness. An Agent-Based Model Simulation of Fire Spreads Dynamics", Department of Economics and Statistics Cognetti de Martiis, Working Papers 201729, University of Turin.
- Cedrini M. and M. Fontana (2015), "Mainstreaming. Reflections on the Origins and Fate of Mainstream Pluralism", *CESMEP Working Papers*, No. 2015/1
- Fontana M. (2009), The Santa Fe Perspective on Economics: emerging patterns in the science of complexity, *CESMEP Working Papers*, No. 2009/8
- Fontana M. (2008), The complexity approach to economics: a paradigm shift, The complexity approach to economics: a Paradigm shift, *CESMEP Working Papers*, No. 2008/1
- Fontana M. and R. Marchionatti (2007), Endogenous animal spirits and investment an agent-based model, *CESMEP Working paper* No. 09/2007
- Ferraris G. and M. Fontana (2006), On Classifier Systems and Genetic Algorithms Playing Iterated

Prisoner's Dilemma, *Proceedings of the The First World Congress on Social Simulation 2*, 32-50

- Ferraris G. and M. Fontana (2006) *Managing Knowledge in Agent-based Models: Theoretical and Methodological Issues* Department of Economics and Statistics Cognetti de Martiis. Working Papers No. 3/2006
- Ferraris G. and M. Fontana, Beating the Tit for Tat: Using a Genetic Algorithm to Build an Effective Adaptive Behavior Department of Economics and Statistics Cognetti de Martiis. Working Papers No. 4/2006
- Fontana M.(2005) Computer simulations, mathematics and economics, CESMEP Working Papers, No. 2005/6, University of Turin.

Submissions and Ongoing Research

- Fontana M., M. Iori, F. Montobbio, R. Sinatra, A bridge over troubled water: Interdisciplinarity, Novelty, and Impact, Under revision for publication in *Research Policy*
- Fontana M., F. Montobbio, P. Racca, Topics and Geographical Diffusion of Knowledge in Top Economic Journals, Revised and re-submitted to *Economic Inquiry*