# Giovanni Marin

# Personal information

Place and date of birth: Ferrara (Italy), 13 February 1984

Permanent address: Via Martin Luther King, 6, 45030 Occhiobello (RO), Italy

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# Current position

Post-doctoral researcher at IRCrES-CNR (Research Institute on Sustainable Economic Growth, National Research Council of Italy), Milano (Italy), since November 2012

Visiting Researcher at OFCE-SciencesPO, Sophia Antipolis (France), since November 2014

Research affiliate at SEEDS (Sustainability Environmental Economics and Dynamics Studies), Ferrara (Italy), since December 2013

### Past positions

Post-doctoral researcher at OFCE-SciencesPO, Sophia Antipolis (France), November 2014 - April 2015

# **Research** interests

Applied econometrics, Innovation studies, Patent data, Environmental economics, Environmental innovation, Environmentally extended input-output analysis

# Education

- PhD in Economics, Markets and Institutions IMT (Institutions, Markets, Technologies) Advanced Studies Lucca, from March 2009 to June 2012; dissertation: "Essays in Applied Environmental and Innovation Economics"; supervisor: Francesca Lotti (Banca d'Italia); co-supervisor: Massimiliano Mazzanti (Università di Ferrara)
- Visiting Research Scholar at the Department of Economics, University of California, Berkeley, invited by Professor Bronwyn H. Hall, from February 2011 to July 2011
- Laurea Magistrale in Applied Economics and Economic Policies (Economia Applicata e Politiche Economiche), Università di Ferrara, Facoltà di Economia, from October 2003 to December 2008, mark: 110/110 cum laude

Erasmus programme Universidad Castilla la Mancha (Toledo, Spain), from September 2004 to February 2005

#### Other courses

**EXIOPOL Summer School** on Environmental accounting: externality valuation and Input-Output tools for policy analysis, Venezia, July 2010

European Summer School in Industrial Dynamics (ESSID), IEB, Barcelona (Spain), September 2009

### Work experience

National scientific qualification to function as associate professor ("abilitazione") in Political Economy (13/A2), obtained in 2013 and 2014 (valid until December 2020)

#### **Research** assistant

- January 2014 March 2014 "Creation of an integrated database innovation-environment with input-output data and empirical investigation of drivers of innovation", supervisor: Massimiliano Mazzanti (Università di Ferrara)
- September 2012 December 2012 "Collecting and processing data on nighttime luminosity for about 400 European cities for the years 2000-2010, by using software such as ArcMap and STATA; processing data in the geographical coordinates of the borders resulting from the partitions of the Carolingian Empire that took place in 843 and 870 respectively", supervisors: Massimiliano Gaetano Onorato and Mark Dincecco (IMT Institute for Advanced Studies Lucca)
- September 2012 October 2012 "Assembly of data set containing information on contemporaneous institutions (quality of democracy, political rights, corruption, rule of law, civil liberties) and data on the history, society, educational attainment, wealth, political institutions for about 140 former colonies", supervisor: Massimiliano Gaetano Onorato (IMT Institute for Advanced Studies Lucca)
- June 2012 "Data assembly regarding duration and beginning of several financial crisis from 1800 to 2012 for 70 countries", supervisor: Massimiliano Gaetano Onorato (IMT Institute for Advanced Studies Lucca)
- June 2010 "Elaboration of data on municipal, provincial, regional and national elections for Italian capitals of the province for the years 1993-2009", supervisor: Francesco Sobbrio (IMT Institute for Advanced Studies Lucca)
- **April 2009 June 2009** "Review of studies regarding the economic valuation of marine biodiversity and ecosystem functions. Elaboration of a report on the socio-economic situation of the Nortern-Adriatic Sea region in which the value can be used in a logic of benefit transfer", Dipartimento di Biologia Evoluzion-istica Sperimentale, Università di Bologna

#### Other

- July 2015 December 2015 Consultant of Fondazione Tagliacarne Unioncamere for a tender of the Italian Ministry of the Environment for the implementation of the Marine Strategy Framework Directive
- September 2011 January 2012 Occasional collaboration with CERIS-CNR (Milano) for the project 'Statistical, econometric and input-output analysis about emissions embodied in production, consumption and trade flows aimed at integrating these results with environmental accounts such as NAMEA' in collaboration with the International Consortium ETC-SCP (European Topic Center on Sustainable Consumption and Production, Copenhagen)
- June 2014 November 2014 Consultant of CURSA (Consorzio Universitario per la Ricerca Socioeconomica e per l'Ambiente) for a tender of the Italian Ministry of the Environment for the implementation of the Marine Strategy Framework Directive
- November 2007 October 2008 Tutor for undergraduate students 'Tools for economic analysis' (statistics, econometrics, mathematics, game theory) and support tutor for worker-students, Facoltà di Economia, Università di Ferrara

# Participation to research projects

#### International research projects

- RAstaNEWS "Macro-Risk Assessment and Stabilization Policies with New Early Warning Signals" (Research Project of the 7th Framework Programme), 2013-2017
- EMInInn "Environmental Macro Indicator of Innovation" (Research Project of the 7th Framework Programme), 2011-2015
- European Topic Centre on Sustainable Consumption and Production (European Environment Agency), 2010-2014

European Topic Centre on Waste and Materials in a Green Economy (European Environment Agency), 2014-2018

#### National research projects

"La valutazione economica dei disastri naturali in Italia", 2013-2016, Fondazione Assicurazioni Generali

"Climate change in the Mediterranean area: scenarios, economic impacts, mitigation policies and technological innovation", PRIN 2010-2011 (Progetto di Ricerca di Interesse Nazionale), 2012-2015

### Publications on referred journals

- (1) The Effect of Within-Sector, Upstream and Downstream Energy Taxes on Innovation and Productivity (with Chiara Franco), Environmental and Resource Economics, online first.
- (2) SMEs and Barriers to Eco-Innovation in the EU: Exploring different firm profiles (with Alberto Marzucchi and Roberto Zoboli), 2015, Journal of Evolutionary Economics, 25(3):671-705.
- (3) Carbon Dioxide reducing Environmental innovations, sector upstream/downstream integration and policy. Evidence from the EU (with Susanna Mancinelli, Massimiliano Mazzanti and Francesco Nicolli), 2014, Empirica, Journal of European Economics, online first
- (4) Do Eco-Innovations Harm Productivity Growth through Crowding Out? Results of an Extended CDM model 2014, Research Policy, 43(2):301-317
- (5) The Evolution of Environmental and Labor Productivity Dynamics Sector Based Evidence from Italy (with Massimiliano Mazzanti), 2013, Journal of Evolutionary Economics, 23(2):357-399
- (6) Linking NAMEA and input output for 'consumption vs. production perspective' analyses Evidence on emission efficiency and aggregation biases using the Italian and Spanish environmental accounts (with Massimiliano Mazzanti and Anna Montini), 2012, Ecological Economics, 74:71-84
- (7) The dynamics and delinking of industrial emissions: The role of productivity, trade and R&D (with Massimiliano Mazzanti), 2009, Journal of Innovation Economics & Management, 3:91-117

### **Book chapters**

- (1) Closing the Gap? Dynamic Analyses of Emission Efficiency and Sector Productivity in Europe, in (eds V. Costantini, M. Mazzanti) The Dynamics of Environmental and Economic Systems. Innovation, Environmental Policy and Competitiveness, Springer, 2013
- (2) Aggregation Bias in 'Consumption vs Production Perspective' Comparisons Evidence Using the Italian and Spanish NAMEAs (with Massimiliano Mazzanti and Anna Montini), in (eds V. Costantini, M. Mazzanti and A. Montini) Hybrid Economic and Environmental Accounts, Routledge, 2012
- (3) Emissions Trends and Labour Productivity Dynamics (with Massimiliano Mazzanti), in (eds M. Mazzanti, A. Montini) Environmental Efficiency, Innovation and Economic Performances, Routledge, 2010

### Working papers

- (1) Green Skills (with Francesco Vona, Davide Consoli and David Popp), 2015, NBER Working Paper No. 21116; CESifo Working Paper No. 5323
- (2) Do green jobs differ from non-green jobs in terms of skills and human capital? (with Davide Consoli, Alberto Marzucchi and Francesco Vona), 2015, SPRU Working Paper 2015-16 (R&R on Research Policy)
- (3) A Survey of the Literature on Environmental Innovation Based on Main Path Analysis (with Nicol Barbieri, Claudia Ghisetti, Marianna Gilli and Francesco Nicolli), 2015, SEEDS Working Paper Series, No. 2015-07
- (4) Catching-up in waste management. Evidence from the EU (with Francesco Nicolli and Roberto Zoboli), 2014, SEEDS Working Paper Series, No. 2014-26

- (5) Global Virtual Water Trade: Integrating Structural Decomposition Analysis with Network Theory (with Tiziano Distefano and Massimo Riccaboni), 2014, EIC working paper series, IMT Institute for Advanced Studies, no. 8
- (6) The Greener the Better. Job Creation and Environmentally-Friendly Technological Change (with Luisa Gagliardi and Caterina Miriello), 2014, IEFE Working Paper Series, No. 60 (accepted conditional on minor revisions on Industrial and Corporate Change)
- (7) Productivity Effects of Eco-innovations Using Data on Eco-patents (with Francesca Lotti), 2013 (accepted conditional on minor revisions on Industrial and Corporate Change)
- (8) Matching of PATSTAT applications to AIDA firms Discussion of the methodology and results (with Francesca Lotti), 2013, 'Questioni di Economia e Finanza', no. 166, Banca d'Italia

### **Ongoing research**

- Evolution, Concentration and Drivers of Green Jobs: evidence from US regions, 2006-2014 (with Davide Consoli and Francesco Vona)
- Task, Technology and Education: bringing the race to data (with Davide Consoli, Francesco Rentocchini and Francesco Vona)
- Outward Foreign Direct Investments Patterns of Italian Firms in the EU-ETS (with Chiara Franco and Simone Borghesi)
- The causal impact of the European Emission Trading Scheme on market power: an empirical assessment (with Marianna Marino and Claudia Pellegrin)
- Eco-innovation and environmental performance. Sectoral evidence based on patent data (with Valeria Costantini, Francesco Crespi and Alessandro Palma)
- On the Dark Side of Eco-Innovation. The Role of Invention and Diffusion in Energy Efficiency Technologies (with Alessandro Palma)
- Green Economy and Labour Force Composition: Evidence from the EU (with Alessandro Palma)
- Environmental innovation, employment and industry dynamics: evidence from local labour markets in Italy (with Luisa Gagliardi and Caterina Miriello)
- The role of non-waste product innovation for waste production through reduced lifetime of goods (with Roberto Zoboli)
- The Emission Disease in Services (with Roberto Zoboli)
- Calculation of Emission Multipliers in Italy, Spain and Germany (1995-2009). An Environmental Input Output Analysis (with Mostafa Deldoost)
- Crossing the Hurdle of Patenting. Effect of the First Patent on Productivity and Size of Italian Manufacturing SMEs (with Giovanni Cerulli)

### Technical reports

- Resource-efficient green economy and EU policies (prepared with Roberto Zoboli, Susanna Paleari, Giovanni Marin, Massimiliano Mazzanti, Francesco Nicolli, Anna Montini, Valeria Miceli and Stefan Speck), EEA Report, No. 2/2014
- Progress in Sustainable Consumption and Production in Europe Indicator-based Report (prepared with David Watson, David McKinnon, Anders Bjorn, Mikkel Stenbaek Hansen, Dominic Wittmer, Justus von Geibler, Mathieu Saurat, Helmut Schutz, Samus Tobias, Roberto Zoboli, Massimiliano Mazzanti, Massimiliano Volpi, Ilaria Beretta, Lucia Dal Negro), 2011, ETC/SCP working paper 1/2011
- Towards a green economy in Europe EU environmental policy targets and objectives 2010-2050 (prepared with Mike Asquith, Anna Montini, Susanna Paleari, Stefan Speck and Roberto Zoboli), 2013, EEA Report No 8/2013

# Conferences and presentations

### Invited talks

Workshop 'Born to be green: the economics and management of green start-ups', University of Southampton (UK), May 2015

#### Conferences and seminars

- 2009 EMAN EA-SDI Conference 2009 (Prague, Czech Republic, April 2009), DRUID Summer Conference 2009 (Copenhagen, Denmark, June 2009), 50 Riunione Annuale della Società degli Economisti Italiani (Roma, October 2009)
- 2010 Lunch Seminar (Dipartimento di Scienze Economiche, Università di Pisa, May 2010), Eco-efficiency Conference (Egmond aan Zee, Netherlands, June 2010), ISEE 11th Biennial Conference (Oldenburg and Bremen, Germany, August 2010), Workshop 'The Economics of Green IT' (ZEW, Mannheim, Germany, November 2010)
- 2011 International Scientific Conference 'Sustainable Consumption Towards Action and Impact' (Hamburg, Germany, November 2011)
- 2012 European Seminar EuroLIO 2012 'Geography of Innovation' (Saint-Etienne, France, January 2012), Workshop 'Presente e Futuro dell'Economia dell'Ambiente e delle Risorse Naturali in Italia' (Università di Roma Tor Vergata, February 2012), Brown Bag Seminar IMT Lucca (Lucca, March 2012), Lunch seminar Banca d'Italia (Roma, March 2012), Lunch seminar Università di Ferrara (Ferrara, May 2012), EAERE 2012 (Prague, Czech Republic, June 2012), Conference 'The Governance of a Complex World' (Nice, France, November 2012), Workshop on 'Innovation in Italy' (Banca d'Italia, SADIBA, Perugia, December 2012)
- 2013 Workshop 'Innovazione, Produttività a Crescita in Italia' (Arcavacata di Rende, CS, March 2013), EMAEE Conference (Nice, France, June 2013), DRUID Summer Conference 2013 (Barcelona, Spain, June 2013), EAERE 2013 (Tolouse, France, June 2013), AISRe Conference 2013 (Palermo, September 2013), Workshop 'Eco Innovation in the EU: Conceptual and Empirical Perspectives' (Ferrara, September 2013), XXVIII Convegno Nazionale di Economia del Lavoro (Roma, September 2013), LIME Seminars (IMT Lucca, November 2013), IEFE-FEEM Joint Seminar (Milano, December 2013)
- 2014 INGENIO (CSIC-UPV) Seminars in Science and Innovation (Valencia, Spain, January 2014), IAERE Conference (Milano, Italy, February 2014), OFCE-SKEMA Seminar Series (Nice, France, May 2014), EU-SPRI Conference 2014 (Manchester, UK, June 2014), WCERE Conference 2014 (Istanbul, Turkey, June 2014), International Schumpeter Society Conference 2014 (Jena, Germany, July 2014), XV Global Conference on Environmental Taxation (Copenhagen, Denmark, September 2014), 55 Riunione Annuale della Società degli Economisti Italiani (Trento, October 2014), Workshop 'Explaining Economic Change' (Roma, Italy, November 2014), 2014 Italian Stata Users Group meeting (Milano, Italy, November 2014), Workshop 'Innovation in waste management: linking the Circular Economy and the Waste Hierarchy' (Espoo, Finland, November 2014)
- 2015 Green Growth Knowledge Platform Conference (Venezia, Italy, January 2015), IAERE Annual Conference (Padova, Italy, February 2015), Lunch seminar Università di Ferrara (Ferrara, Italy, April 2015), EAERE Conference 2015 (Helsinki, Finland, June 2015)

# Teaching experience

Teaching assistant for undergraduate students in 2007-2008 at the University of Ferrara in the following fields: game theory, statistics, econometrics and mathematics.

### Thesis supervision

Co-supervisor (with Massimo Riccaboni) of Tiziano Distefano (IMT Institute for Advanced Studies), Ph.D., expected graduation: Fall 2015.

# Referee

Ecological Economics, Environmental and Resource Economics, Economics of Innovation and New Technology, Technology Analysis & Strategic Management, Journal of Evolutionary Economics, Journal of Economic Studies, International Journal of Sustainable Development, Science of the Total Environment, International Journal of Computational Economics and Econometrics, International Journal of Innovation and Sustainable Development, Sustainability, Industry and Innovation, Economia Politica (Journal of Analytical and Institutional Economics), Ecological Modelling, Journal of Business Venturing, Energies, International Journal of Emergency Services, Eurasian Business Review, Druid Society Conference 2011, 2012, 2013, 2014, 2015

# Membership

Council member of the Italian Association of Environmental and Resource Economics (IAERE) from 2016, member since 2012

Member of the European Association of Environmental and Resource Economists (EAERE) since 2010

# Languages

Italian: mother tongue

English: fluent, C1

Spanish: good, B2

French: basic, A2