

CURRICULUM VITAE ET STUDIORUM

SIMONE BORGHESI

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ACADEMIC POSITIONS AND QUALIFICATIONS

- 2016-today Associate Professor in Public Finance, Department of Political and International Sciences, University of Siena
- 2014 Associate Professor Qualification in Public Finance - 13-A3 obtained at the national qualification (ASN) of the Italian University System (13/01/2014)
 Associate Professor Qualification in Political Economy - 13-A1 obtained at the national qualification (ASN) of the Italian University System (04/02/2014)
- 2013 Full Professor and Associate Professor Qualifications in Economic Policy- 13-A2 obtained at the national qualification (ASN) of the Italian University System (18/12/2013)
- 2008-2016 Assistant professor at the University of Siena, Department of Political and International Studies (formerly Dept. of Law, Economics and Government)
- 2005-2008 Assistant professor at the University of Pescara, Dept. Quantitative Methods and Economic Theory
- 2000-2004 Research fellowship at the Dept. of Political Economy, University of Siena
- 2003-2005 Lecturer at the University of Pescara, Faculty of Business Studies.
- 2001-2005 Lecturer at the University of Siena, Faculty of Economics and Faculty of Political Science
- 2002-2003 and 1998-2001 Lecturer at the University of Florence, Faculty of Economics.

VISITING SCHOLAR ABROAD

- 2015 Visiting scholar at the Department of Land Economy, University of Cambridge (May 2015)
- 2013 Visiting scholar at INRA – Institute National de la Recherche Agronomique, Laboratoire d'Economie Appliquée (June 2013)

EDUCATION

- 1996-2001 European University Institute, Florence
 Ph.D. in Economics
 Average grade in the Ph.D. exams: A
 Title awarded on 23/02/2001
 Thesis title: “Essays on environmental economics”
 Thesis Committee members:
 Prof. Pierpaolo Battigalli (University Bocconi and European University Institute,

Supervisor)
 Prof. Andrea Ichino (European University Institute, Co-supervisor)
 Prof. Geoffrey Heal (Columbia University, New York)
 Prof. Marzio Galeotti (University of Bergamo and Fondazione ENI Mattei, Milan)

- 1995-1996 University College London, London (UK)
 Master of Science (MSc) in Economics
 Master awarded on 1/11/1996 with thesis distinction.
 Title of the Master thesis: “Altruism and sustainability”
 Supervisor: Prof. David Ulph.
- 1988.1995 University of Siena, Faculty of Economics and Banking
 Laurea (B.A.) in Economics
 Laurea awarded on 26/4/1995 with full marks and honors (110/110 e lode).
 Title of dissertation: “Ethics, environment and economic theory”
 Supervisor: Prof. Alessandro Vercelli
 Co-supervisor: Prof. Nicola Dimitri.

RESEARCH INTERESTS

Environmental Economics: sustainable development, environmental Kuznets curve, North-South models, globalization, emission trading schemes, eco-innovation, environmental accounting, panel data analysis, natural resource economics, biodiversity, environmental degradation and health, energy economics, sustainable mobility.

Economic Growth and Development, Inequality, Poverty, Happiness.

AWARDS

- 1996 “A.Sclavi” Award to the best graduate for the academic year 1994/95 in the Faculty of Economics and Banking, University of Siena

HONORS

- 2012 Invited participant by the Prime Minister of Bhutan, H.E. Mr. Jigmi Y Thinley, at the United Nations at the High-Level Meeting on “*Happiness and Wellbeing: Defining A New Economic Paradigm*”, New York, 2-4/4/2012.

SCHOLARSHIPS

- 2001-2002 University of Siena, “Young Researchers Project”: financial support to the research
 1999.2000 project on “Economic growth and environmental degradation: the environmental Kuznets curve”
- 1996-1999 Ministry of Foreign Affairs: scholarship for the attendance of the Ph.D. program at the European University Institute, Florence, Italy.
- 1995 Fondazione L. Einaudi, Turin: scholarship for the attendance of the Master course at the University College London

WORK EXPERIENCE

- 1999 Fondazione ENI Enrico Mattei, Milan
Collaboration to the research group on “Climate Change Modeling and Policy”
Coordinator: Prof. Marzio Galeotti
- 1998 International Monetary Fund, Department of Fiscal Studies, Washington D.C.
Summer Intern Programme (July-October)

PAPERS AND PUBLICATIONS

Articles in international journals

1. “Are regional systems greening the economy? Local spillovers, green innovations and firms’ economic performances”, (2016), with D. Antonioli and M. Mazzanti (University of Ferrara), *Economics of Innovation and New Technology*, published online 14/01/2016. DOI: <http://dx.doi.org/10.1080/10438599.2015.1127557>
2. “FDI, environmental externalities and capital segmentation in a rural economy”, (2015), with A. Antoci (University of Sassari), E. Ticci (University of Siena), P. Russu (University of Sassari), *Ecological Economics*, 116, 341-353, DOI: <http://dx.doi.org/10.1016/j.ecolecon.2015.04.029>.
3. “Carbon abatement, sector heterogeneity and policy responses: evidence on induced eco innovations in the EU”, (2015), with Crespi F. (University Rome Tre), D'Amato A. (University of Rome Tor Vergata), Mazzanti M. (University of Ferrara), Silvestri (Eco&Eco), *Environmental Science and Policy*, 54, 377-388.
4. “Linking emission trading to environmental innovation: evidence from the Italian manufacturing industry”, (2015), with G. Cainelli (Università di Padova) and M. Mazzanti (Università di Ferrara), *Research Policy*, 44 (3), 669-683, doi: <http://dx.doi.org/10.1016/j.respol.2014.10.014>.
5. “Analysing the Interactions of Energy and Climate Policies in a broad Policy ‘Optimality’ Framework. The Italian case study”, (2014), with Antonioli D., D'Amato A., Gilli M., Nicolli F., Mazzanti M. (Università di Ferrara), *Journal of Integrative Environmental Sciences*, 11:3-4, 205-224, DOI: 10.1080/1943815X.2014.962549.
6. “On the feasibility of a consumer-based allocation method in national GHG inventories”, (2014), with D. Caro, S. Bastianoni and F. Pulselli (University of Siena), *Ecological Indicators*, 36, pp.640-643.
7. “The effect of a consumption-based accounting method in national GHG inventories: a trilateral trade system application”, (2014), with S. Bastianoni, D. Caro and F. Pulselli (University of Siena), *Frontiers in Energy Systems and Policy*, doi: 10.3389/fenrg.2014.00004.
8. “Environmental innovation and socio-economic dynamics in institutional and policy contexts”, (2013), with V. Costantini (University Rome Tre), F. Crespi (University Rome Tre), M. Mazzanti (University of Ferrara), *Journal of Evolutionary Economics*, vol.23 (2), pp.241-245.
9. “Water tradable permits: a review of theoretical and case studies”, (2013), *Journal of Environmental Planning and Management*, 57 (9), 1305-1332. DOI:10.1080/09640568.2013.820175
10. “Environmental options and technological innovation: an evolutionary game model”, (2013), with A. Antoci (University of Sassari) and M. Galeotti (University of Florence), *Journal of Evolutionary Economics*, vol.23 (2), pp.247-269. Published on-line 21/7/2011,

DOI 10.1007/s00191-011-0238-0.

11. "Happiness and health: two paradoxes", (2012), with A. Vercelli (University of Siena), *Journal of Economic Surveys*, vol.26, No.2, pp.203-233. DOI: 10.1111/j.1467-6419.2010.00635.x.
12. "Preserving or escaping? On the welfare effects of environmental self-protective choices", (2012), with A. Antoci (University of Sassari), *Journal of Socio-Economics*, 41, pp.248-254.
13. "Environmental protection mechanisms and technological dynamics", (2012), with A. Antoci (University of Sassari) and P. Russu (University of Sassari), *Economic Modelling*, 29, No.3, pp.840-847.
14. "To drive or not to drive? A simple evolutionary model", (2012), with A. Antoci (University of Sassari) and G. Marletto (University of Sassari), *Economics and Policy of Energy and the Environment*, No.2/2012, pp.31-47.
15. "The European emission trading scheme and renewable energy policies: credible targets for incredible results?", (2011), *International Journal Sustainable Economy*, vol.3, n.3, pp.312-327.
16. "Environmental degradation, self-protection choices and coordination failures in a North-South evolutionary model", (2010), with A. Antoci (University of Sassari), *Journal of Economic Interaction and Coordination*, vol.5, No.1, pp.89-107, Springer Verlag.
17. "Greenhouse gas emissions and the energy system: are current trends sustainable?", (2009), with A. Vercelli (University of Siena), *International Journal of Global Energy Issues*, vol.32, No. 1-2, pp.160-174, Inderscience Enterprises Ltd.
18. "From Hubbert to Kuznets: on the sustainability of the current energy system", (2008), *International Journal of Global Environmental Issues*, vol.8, No.4, pp.425-444.
19. "Should we replace the environment? Limits of Economic Growth in the Presence of Self-Protective Choices", (2008), with A. Antoci (University of Sassari) e M. Galeotti (University of Florence), *International Journal of Social Economics*, vol.35, n.4, pp.283-297, Emerald Ltd.
20. "Environmental defensive expenditures, expectations and growth", (2005), with A. Antoci and P. Russu (University of Sassari), *Population and Environment*, n.27, pp.227-244, Springer Verlag.
21. "Interaction between economic and ecological dynamics in an optimal economic growth model", (2005), with A. Antoci and P. Russu (University of Sassari), *Nonlinear Analysis. Theory, Methods and Applications*, vol.63, n.5/7, pp.e389-e398, Elsevier Science Ltd.
22. "Biodiversity and economic growth: trade-offs between stabilization of the ecological system and preservation of natural dynamics", (2005), with A. Antoci and P. Russu (University of Sassari), *Ecological Modelling*, vol.189, n.3/4, pp.333-346, Elsevier Science Ltd.
23. "The Kuznets curve and the environmental Kuznets curve: a simple steady-state analysis", (2005), in *International Review of Economics (RISEC)*, vol.52, n.1, pp.35-61, University Bocconi, Milan, CEDAM, Padova.
24. "Globalisation, inequality and health", (2004), with A. Vercelli (University of Siena), in *International Journal of Global Environmental Issues*, vol.4, n.1/2/3, pp.89-108, Inderscience Enterprises Ltd.
25. "Sustainable globalisation", (2003), with A. Vercelli (University of Siena), *Ecological Economics*, vol.44, n.1, pp.77-89, Elsevier Science Ltd.

Articles in Italian journals

26. "European Emission Trading Scheme and environmental innovation: an empirical analysis using CIS data for Italy" (2012), with G. Cainelli (University of Padua) and M. Mazzanti

- (University of Ferrara), *Giornale degli Economisti e Annali di Economia*, Vol.71, n.1, pp.71-97.
27. “The European policy for climate change: some important critical issues” (2011), *QA-Rivista dell’Associazione Rossi-Doria*, n.2-2011, p.85-109.
 28. “Water tradeable permits: an analysis of the main case-studies” (2008), *Rivista Internazionale di Scienze Sociali*, n.2/2008, pp.137-158.
 29. “Individual welfare, collective discomfort: self-protective choices in a model with strategic interaction”, (2007), with A. Antoci (University of Sassari) e M. Galeotti (University of Florence), *Economia e Politica Industriale*, vol.34, n.4, pp.95-113.
 30. “Sustainable development, pollution and supply of natural resources”, (2007), *Economia e Politica Industriale*, n.1, pp.33-48.
 31. “Defensive expenditures and economic growth: the role of environmental expectations”, (2004), with A. Antoci and P. Russu (University of Sassari), in *Global and Local Economic Review*, vol.VII, n.1, p.53-77.
 32. “Income inequality, economic growth and environmental degradation”, (2003), *Studi e Note di Economia*, n.1, pp.131-151, Firenze.
 33. “Defensive behavior and dynamics of the economic activity”, (2002), with A. Antoci (University of Sassari), in *Economia delle Fonti di Energia e dell’Ambiente*, n.3, pp.133-149, Bocconi University, Franco Angeli, Milano.
 34. “Health and the environment. An analysis of the main causal links”, (2002), “*Il Pensiero Economico Moderno*”, IPEM edizioni, Pisa, pp.285-302.
 35. “Sustainable development, paternalism and the freedom of choice of future generations”, (1997), *Annali della Fondazione L.Einaudi*, vol.XXXI, pp.175-187, L.S. Olschki editore, Florence.

Articles in edited books

36. “Emission Trading Systems and technological innovation: a random matching model”, (2015), with A. Antoci (University of Sassari) and M. Sodini (University of Pisa), in Semmler W. and Bernard L. (eds.), *The Handbook of the Macroeconomics of Climate Change*, Oxford University Press, 376-397. A preliminary version has been published as Working Paper FEEM n. 79.2012, Fondazione ENI Enrico Mattei, Milan.
37. “Water conservation and management: common sense for a common resource?”, (2014), in L. Castellucci (ed.) “Government and the environment. The role of the modern state in the face of global challenges”, pp.116-131, Routledge.
38. “The European Emission Trading System: Flashing Lights, Dark Shadows and Future Prospects for Global ETS Cooperation”, (2014), with M. Montini (University of Siena), in Bakker C., Francioni F. (eds.) “The EU, the US and Global Climate Governance”, pp.115-125, Ashgate Ltd.
39. “Environmental innovations in the Italian industry: policy and sector effects”, (2012), with G. Cainelli (University of Padua) and M. Mazzanti (University of Ferrara), IEEE Conference Proceedings of the 9th *International Conference of the European Energy Market (EEM12)*, European University Institute, IEEEExplore. ISBN: 978-146730832-8, DOI: 10.1109/EEM.2012.6254661.
40. “La sostenibilità dello sviluppo locale culture-led” (The sustainability of local culture-led development), (2012), with V. Carlei (University of Pescara) and P.L. Sacco (IULM, Milan), in Sacco P.L., Ferilli G., Tavano Blessi G. (eds.) “*Cultura e sviluppo locale. Verso il distretto culturale evoluto*”, pp.117-134. Il Mulino, Bologna.
41. “Environmental degradation, economic growth and welfare: the role of self-protection choices”, (2010), with A. Antoci (University of Sassari), in Montini A., Mazzanti M. (eds.)

- ‘Environmental efficiency, economic performances and environmental policy’, Routledge, pp.200-206.
42. “Transferring negative externalities: feedback effects of self-protection choices in a two hemispheres model”, (2010), con A. Antoci (Università di Sassari), in Bischi G.I., Chiarella C., Gardini L. (eds.) *"Nonlinear dynamics in economics, finance and social sciences"*, Springer, pp.1-11.
 43. “Sustainable development and energy trends”, (2009), with A. Vercelli (University of Siena), in Salvadori N., Opocher A. (eds.) “Long-run Growth, Social Institutions and Living Standards”, Edward Elgar, pp.289-304.
 44. “Inequality and poverty in the globalized world”, (2008), in Pompeo Della Posta, Milica Uvalic, Amy Verdun (eds) *Globalization, Development and Integration: a European perspective*, Palgrave-Macmillan, New York, pp.67-80.
 45. “Global health”, (2006), with A. Vercelli (University of Siena), in Farina F., Savaglio E. (eds.), *Inequality and economic integration*, pp.107-135, Routledge.
 46. “Income inequality and the environmental Kuznets curve”, (2006), in Basili M., Franzini M., Vercelli A. (eds.), *Environment, inequality and collective action*, pp.33-51, Routledge.
 47. “Globalisation, pauvreté et développement durable”, (2003), with A. Vercelli (University of Siena), in Dubois J.L., Lachud J.P., Montaud J.M., Pouille A., (eds.) “Pauvreté et développement socialement durable”, Université Montesquieu-Bordeaux IV and UNESCO, Presses Universitaires de Bordeaux.
 48. “Welfare indices and environmental accounting: a critical survey”, (2001), with S. Tiezzi (University of Siena), in Franzini M., Nicita A. (eds.) *Economic Institutions and Environmental Policy*, pp. 15-56, Ashgate.
 49. “The environmental Kuznets curve: a critical survey”, (2001), in Franzini M., Nicita A. (eds.), *Economic Institutions and Environmental Policy*, pp.201-224, Ashgate. Previously published as Nota di Lavoro n.85.99, 1999, Fondazione ENI Enrico Mattei, Milan, Italy.

International Reports

50. “*Pathways to deep decarbonization in Italy*”, (2015), Sustainable Development Solutions Network (SDSN, Nazioni Unite, New York) and Institute for Sustainable Development and International Relations (IDDRI, Paris)
contributing author of Ch.2 (Deep decarbonization pathways), lead author of Ch.4 (Discussion and Conclusions)

Books

51. “*The European Emission Trading System and Its Followers: Comparative Analysis and Linking Perspectives*”, (2016), with Montini M., Barreca A., (Università di Siena), Springer.
52. “*Global Sustainability*”, (2008), with A. Vercelli (Università di Siena), Palgrave-Macmillan, New York.

Book Reviews on “Global Sustainability”:

- § Smulders S., 2009, *Land Economics*, 85 (3), pp.552-554.
- § Valli, V., 2009, *The European Journal of Comparative Economics*, 6 (2), pp.347-350.
- § Musu I., 2009, *ApertaContrada*, 8 giugno 2009.
- § Donzelli P., 2009, *ApertaContrada*, 22 maggio 2009.

53. “*La sostenibilità dello sviluppo globale*”, (2005), with A. Vercelli (University of Siena), Carocci, Roma.

Book Reviews on “La sostenibilità dello sviluppo globale”:

§ Costabile L., 2006, *Economia Politica*, 2, pp.311-314.

§ Pareglio S., 2006, *Rivista Internazionale di Scienze Sociali*, 4, pp.613-621.

Articles on newspapers and magazines

54. “Come e dove si può uscire dal labirinto della crisi”, (How and where to get out of the crisis maze) with A. Vercelli, *Corriere della Sera* edizione di Firenze, 17/4/2012, p.12.
55. “Rio+20, la crisi è qui” (Rio+20, here is the crisis), with A. Vercelli, *Sbilanciamoci.info*, 21/6/2012.
56. “L'eco della (in)sostenibilità: nuove politiche ecologiche tra indicatori e comunicazione” (The echo of unsustainability: new ecological policies between indicators and communication), *Greenreport.it*, 5/10/2012.
57. “Cambiamenti climatici e CO2: a ciascuno il suo Emission Trading” (Climate change and CO2: to each his own Emission Trading), *Greenreport.it*, 12/11/2013.
58. “Aspettando il vento dell'est: diario di viaggio di un economista in Cina. L'allarme inquinamento ed il ruolo di Pechino alla COP-19 di Varsavia” (Waiting for the Eastern wind: an economist's diary in China. The pollution alarm and the role of Beijing at the COP-19 in Warsaw), *Greenreport.it*, 21/11/2013.
59. “Economia ambientale: l'erba del vicino non è sempre più verde.” (Environmental economics: the grass is not always greener on the other side”), *Greenreport.it*, 25/2/2014.
60. “R4S: una torre con vista (sull'ambiente). Nascita, crescita e prospettive di un gruppo di ricerca interdisciplinare (R4S: a tower with a view (on the environment): genesis, growth and prospects of an interdisciplinary research group)”, *Greenreport.it*, 16/1/2015.
61. “Sulle orme di Keynes. Riflessioni ambientali semiserie in viaggio tra Cambridge e Londra (On Keynes' footprints: Half-serious environmental thoughts on a trip from Cambridge to London)”, *Greenreport.it*, 29/5/2015.
62. “Clima, a Parigi il giorno della marmotta o l'alba di un nuovo giorno? Dubbi e speranze all'indomani della conferenza di Helsinki degli economisti ambientali europei” (Groundhog Day or the dawn of a new day? Doubts and hopes on the next COP after the EAERE conference in Helsinki), *Greenreport.it*, 27/8/2015.
63. “Parigi val bene una messa (da Requiem per Kyoto)” (Paris is well worth a mass (Requiem for Kyoto)), *Greenreport.it*, 27/8/2015.
64. “The Challenges of Decarbonization in Italy” con Alloisio I., Antimiani A., De Cian E., Gaeta M., Martini C., Parrado R., Tommasino M.C., Verdolini E., Viridis M.R., *Review of Environment Energy and Economics – RE3*, FEEM, 15/10/2015.

REFEREE AND EDITORIAL BOARDS:

Referee for the following journals:

Applied Economics, Routledge; *Computational Economics*, Springer; *Decision in Economics and Finance*, Springer; *Ecological Economics*, Elsevier Science Ltd.; *Ecological Modelling*, Elsevier Science Ltd.; *Economia Politica*, il Mulino; *Economics Letters*, Elsevier Ltd.; *Economic Modelling*, Elsevier Science Ltd.; *Energy Economics*, Elsevier Science Ltd.; *Environment and Development Economics*, Cambridge University Press; *Environmental & Resource Economics*, Springer; *Environmental Economics and Policy Studies*, Springer; *International Journal of Global Environmental Issues*, Inderscience Enterprises Ltd.; *International Journal of Sustainable Economy*, Inderscience Enterprises Ltd.; *International Review of Economics*, Springer; *Journal of Economic Inequality*, Springer; *Journal of Economic Surveys*, Wiley-Blackwell Publishing; *Journal*

of Entrepreneurial and Organizational Diversity; Journal of Environmental Planning and Management, Routledge; *Journal of Evolutionary Economics*, Springer; *L'Industria – Rivista di Economia e Politica Industriale*, Il Mulino; *Modern Economy*, Scientific Research Publishing; *Research Policy*, Elsevier; *Resource and Energy Economics*, Elsevier; *Review of Environmental Economics and Policy*, Springer; *Rivista Internazionale di Scienze Sociali*, Università Cattolica di Milano; *Rivista Italiana degli Economisti*, il Mulino.

Referee for the following working paper series:

Dept of Political Economy, *University of Siena*; Working Papers Dept. of Economics, *University Roma Tre*; Working Papers *Fondazione ENI Enrico Mattei (FEEM)*, Milano; Working Papers *Grantham Research Institute - London School of Economics*

Referee of books for the following editors:

Routledge, Taylor&Francis Group, UK

Member of the Editorial Board of:

International Journal of Sustainable Economy, Inderscience Enterprises Ltd.;

Journal of Entrepreneurial and Organizational Diversity;

Frontiers in Energy Systems and Policy (Review Editor 2013-2015; Associate Editor dal 2015)

TEACHING EXPERIENCE

UNIVERSITY COURSES

Abroad

- 2013 Courses in the *Advanced Training Program on Eco-Management: Strategy and Policy*, Chinese Academy of Social Sciences (CASS) and in the *Training Program on Industrial Energy Efficiency*, Chinese Ministry for Environmental Protection (MOST), Beijing.
- 2012 Courses at the Summer School on “*Knowledge dynamics, industry evolution and economic development*”, CNRS - GREDEG/Universite de Nice Sophia Antipolis, Nice.

In Italy

- 2012-today Professorship in “*Environmental Economics*”, Department of Political and International Sciences, University of Siena.
- 2006-today Courses at the “*Advanced Training Program on Environmental Management and Sustainable Development*”, Venice International University (in collaboration with the Italian Environmental Ministry and the State Environmental Protection Agency of China)
- 2014-2016 Professorship in “*Cultural Economics*”, University for Foreigners of Siena.
- 2014 Courses in the *Master in International Management (MIEX)*, University of Bologna.
- 2006-2012 Professorship in “*Applied Economics*”, Faculty of Political Science, University of Siena.
- 2006-2011 Professorship in “*Political Economy*”, Faculty of Political Science, University of Siena.
- 2011-2013 Course on “*The political economy of the EU*” at the Master in “*Politics&Society in Europe*”, University of Siena.

- 2008-2013 Course on “*Globalization and the European energy policies*” at the “Master in European Studies”, University of Siena.
- 2004-2008 Professorship in “*Economic policy and European Integration*”, “*Development Economics*” and “*Regional Economics and Fiscal Federalism*”, University of Chieti-Pescara.
- 2005-2006 Professorship in “*Applied Economics*” Faculty of Political Science, University of Siena.
- 2004-2005 Professorship in “*Public Economics*”, Faculty of Political Science, University of Siena.
- 2003-2004 Professorship in “*Development Economics*” and “*Public Economics*”, University of Chieti-Pescara.
Professorship in “*Environmental and health policies*”, “*Economics of emerging markets*”, Faculty of Economics, University of Siena.
Courses at the Ph.D. programme in “*Development Economics*”, University of Florence.
- 2002-2003 Professorship in “*International Economics*”, Faculty of Economics, University of Siena.
Professorship in “*Environmental Economics*”, Faculty of Economics and Engineering, University of Florence.
Classes in the course on “*Development Economics*”, Prof. Lionello Punzo, University of Siena.
- 2001-2002 Professorship in “*Development Economics*”, Faculty of Economics, University of Siena.
Classes in the course on “*Environmental Economics*”, Prof. Alessandro Vercelli, University of Siena.
- 1998-2001 Professorship in “*Mathematical models for environmental economics*”, Faculty of Economics, University of Florence.
- 1997 Classes in the course on “*Mathematical models for environmental economics*”, Prof. Angelo Antoci, University of Florence.
- 1996 Classes in the course on “*Growth and development*”, Prof. Serena Sordi, University of Siena.

OTHER COURSES

- 2002-today teaching of “*Environmental Economics*” at the Master course on Environmental Law, University of Siena.
- 2014-today teaching of “*Globalization, growth and sustainability*” in the course “*Sustainability*”, Degree in Ecotoxicology and Environmental Sustainability, University of Siena.
- 2013-today classes in the course “*Education to Development*”, UNICEF, University of Siena.
- 2002-03 teaching of “*Economics*” at the Master course on Water Risk, Faculty of Engineering, University of Florence.
- 2001-2005 teaching of “*Growth and development*” and “*Natural Resource Economics*” at the advanced training course for secondary school teachers, Siena.
- 1998-2003 teaching of “*Economics and environmental policy*” for the “Master course for environmental education”, Institute 'P. Calamandrei', Florence.
- 1997-1999 teaching of “*Matrix Algebra*” and “*Economics of Natural Resources*” for the “Master in Environmental Economics” organized by ELEA, Florence and Città di Castello.

OTHER ACTIVITIES

Membership and Direction of National and International Research Projects:

- 2013-2015 Scientific Coordinator of the Economic Research Area in the project “The future of Carbon Trading regulation in the post-2012 international climate change negotiations”, Venice International University and ENEL Foundation.
- 2013-today Member of the Board of Directors of the University of Siena for the UNITED NATIONS MED SOLUTIONS (*Mediterranean Sustainable Development Solutions Network*)
- 2012-2016 Scientific Coordinator of the Research Unit of the University of Siena for the national research project on “Climate change in the Mediterranean area: scenarios, economic impacts, mitigation policies and technological innovation” financed by the Italian Ministry of the University and Research (PRIN 2010-11)
- 2012-2015 Member of the European Union research programme on: “Transworld”, WP4 on Environmental Governance, Research Unit: European University Institute (VII Framework Programme).
- 2012-2015 Member of the European Union research programme on: “Efficient mix of policy Instruments for Low-carbon development and Innovation – CECILIA”, Research Unit: University of Ferrara (VII Framework Programme).
- 2011-2016 Member of the European Union research programme on: "Financialisation, economy, society and sustainable development – FESSUD" Research Unit: University of Siena (VII Framework Programme).
- 2006-2008 Member of the research programme of the University of Siena (PAR-2006) on “Global Warming, the Kyoto Protocol and sustainable development: methodological, economic and institutional aspects”
- 2004-2006 Scientific coordinator of the project on “Methodological foundations and instruments for the economic valuation of natural resources”, Interdepartmental Centre on Complex Systems, University of Siena, and Italian Environmental Protection Agency, Roma.
- 2003-2004 Member of the European Community research programme on “Development of an Information Technology Tool for the Management of European Southern Lagoons”; Specific Program: "Energy, Environment and Sustainable Development"; Area: "Sustainable Marine Ecosystems".
- 2001-2003 Member of the national research project (PRIN) on “Interaction among heterogeneous agents, imperfect markets, financial fragility and monetary policy” (coordinator: Prof. Delli Gatti) financed by the Italian Ministry of University and Research. Title of the research unit: “Financial fragility, interaction among heterogeneous financial units and complex dynamics of the economic system”
- 2000 University of Florence, Faculty of Economics
Member of the research group on “Environmental goods, self-protection choices and economic growth” (coordinator: Prof. Tinacci)

Membership and Directions of Research Centres, Boards and Associations

- President Elect of the *Italian Association of Environmental and Resource Economics* (IAERE) (February 2015)
- Co-Director of the research group R4S (Regulation for Sustainability), University of Siena (2013-today).
- Deputy Director of the research centre REPROS (Regulation, Protection of the environment and Sustainable Development), University of Siena (2008-2013).
- Member of the Regional Observatory on Safe Mobility, Tuscan Region (2016-today)

Research Affiliate of the Interuniversity Research Centre SEEDS – Sustainability Environmental Economics and Dynamics Studies (2014-today)

Member of the delegation of the city of Siena at the Ministry of Culture at the preliminary round (Roma, 14/11/2013) and at the finals (Roma, 17/10/2014) for the European Capital of Culture.

Member of the International Relations Commission of the University of Siena (2014-today).

Member of the Commission for the allocation of the research funds, Dept. International and Political Sciences, University of Siena (2016-today)

Member of Executive Committee of Ne.S.SO. – Network Siena Sustainability, University of Siena (2011-today)

Member of the Reading Committee and of the Examining Board of the PhD in Economics at the University of Tor Vergata, Rome (2010, 2011, 2016), PhD in Analysis and Governance of Sustainable Development, University of Ca' Foscari, Venice (2011), PhD in Environmental and Development Economics, University Roma Tre (2014), PhD in Economics, University of Florence (2016).

Member of the Board of directors of MEGAT - Master in Economics and Environmental Management, Faculty of Economics, University of Rome Tor Vergata.

Member of the Board of Lecturers of the Ph.D. programmes in "Knowledge Economics and Development", University of Chieti-Pescara and "Environmental Economics and Law", Faculty of Economics, University of Rome Tor Vergata (2005-2008).

Member of the *Italian Economic Association* (SIE)

Member of the *European Association of Environmental and Resource Economics* (EAERE) (2011-today)

Member of the Interdepartmental Center on Complex Systems, University of Siena (2001-today).

Organization of Workshops and Conferences

- 2016 Member of the Scientific Program Committee of the 22nd Annual Conference of the European Association of Resource and Environmental Economists (EAERE)
Member of the Programme Committee of the IV Annual Conference of the Italian Association of Environmental and Resource Economists (IAERE)
Co-Chairman of the Workshop “Finance, Environment & Sustainability”, EU-FP7 Project FESSUD, Department of Political Economy and Statistics, University of Siena (November 11-12, 2016).
Co-Chairman of the Second Goodwin Lecture on Sustainability, Department of Political Economy and Statistics, University of Siena (May 12, 2016).
- 2015 Organizer of the Workshop “Sustainable and soft mobility: information and education”, University of Siena, 16/1/2015.
- 2014 Member of the Scientific Committee of the Workshop “Financialisation and Sustainability”, EU FP7 Project, University of Siena, 8-9/9/2014.
- 2013 Organizer of the IV edition of the course “European Lectures”, University of Siena (in collaboration with the Tuscany Region and the European Commission).
- 2011 Member of the Organizing Committee of the 18th Annual Conference of the *European Association of Environmental and Resource Economics* (EAERE), Rome, 29/6-2/7/2011.

- 2008 Member of the organizing committee of the special session on “Environmental innovations and socio-economic dynamics in institutional and policy contexts” at the XX EAEPE conference (*European Association for Evolutionary Political Economy*).
- 2003 Member of the organizing committee for the 2003 International School on Economic Research of the University of Siena on “Inequality and economic integration”.
- 2002 Member of the organizing committee for the 2002 International School on Economic Research of the University of Siena on “Environment, inequality and collective action”.

SEMINARS

Distinguished invited speaker at national and international conferences:

- 2012 Invited speaker by the Director of the Earth Institute at Columbia University, Prof. Jeffrey D. Sachs, at the Workshop on *Happiness, Wellbeing and Sustainable Development*, Columbia University, New York, 1/4/2012. Title of the seminar: “Globalization, development and sustainability: Defending from Kuznets”
Invited speaker at the World Ecosummit, at the Workshop “Modelling unsustainability reduction in the current century: Indicators and policies”, Columbus, Ohio, 1/10/2012. Title of the seminar: “Modelling unsustainability: An economist’s viewpoint”
- 2014 Invited speaker at the inaugural day of the *Master in International Management (MIEX)*, University of Bologna. Title of the seminar: “Sustainable Development: A multidimensional concept in an economic perspective”
Invited speaker at the *inaugural Lecture of the Academic Year 2014-15 of the Laurea Magistrale in Environmental and Development Economics, Dept of Economics, University Roma Tre*, 29/9/2014. Title of the seminar: “Climate Change and Sustainable Development: The Unbearable Lightness of the UN”

Seminars at selected conferences and international institutions

European Association of Environmental and Resource Economists (Helsinki 2015, Prague 2012, Rome 2011), European University Institute (2015), United Nations 2nd Med Solutions Conference (2015), Italian Economists Society, (Trento 2014, Rome 2009), Italian Association of Environmental and Resource Economists (Bologna 2016, Milan, 2014, Ferrara 2013), School of Environment, Tsinghua University (Beijing, 2013), SOAS (London, 2013), 9th International Conference of the European Energy Market (EEM12, Florence, 2012), International Energy Workshop, (Venice, 2009), European Association for Evolutionary Political Economy, (Rome, 2008), SURED – Sustainable Resource Use and Economic Dynamics (Ascona, Switzerland, 2006), Swiss Society of Economics and Statistics, (Zürich, 2005), Society for Computational Economics (Aix-en-Provence, 2003), MDEF – Mathematical Dynamics in Economics and Finance (Urbino, 2008, 2006, 2000).

List of seminars

Title of the seminar: “The EU ETS and its followers: Comparative analysis and linking perspectives”, University Rome Tor Vergata, Rome, 22/3/2016.

Title of the seminar: “Water-resource use and conflict in a two-sector evolutionary model” (with A. Antoci and M. Sodini), *4th Annual Conference of the Italian Association of Environmental and Resource Economists (IAERE)*, Bologna, 11-12/2/2016.

Title of the seminar: “To link or not to link? Problems and perspectives of the EU ETS”, Italian Ministry of the Environment, Rome, 21/12/2015.

Title of the seminar: “Paris is well worth a mass (...Requiem for Kyoto)” at the Workshop “Climate change: politics, ethics, institutions. Towards the COP-21 in Paris”, Dept. of Political and Social Sciences, University of Florence, 2/12/2015.

Title of the seminar: “Outward Foreign Direct Investments Patterns of Italian Firms in the EU-ETS” (with C. Franco and G. Marin), at FSR Climate Annual Conference “Economic Assessment of European Climate Policies”, *European University Institute*, Firenze, 22-23/10/2015.

Title of the seminar: “Outward Foreign Direct Investments Patterns of Italian Firms in the EU-ETS” (with C. Franco and G. Marin), 21st Annual conference of the *European Association of Environmental and Resource Economists*, Helsinki, 25/6/2015.

Discussant of the paper “The impact of the European Union Emission Trading Scheme on market power: an empirical analysis” by Pellegrin C, Marino M. and Marin G., *European Association of Environmental and Resource Economists*, 21st Annual Conference, Helsinki, 25/6/2015.

Title of the seminar: “Outward Foreign Direct Investments Patterns of Italian Firms in the EU-ETS” (with C. Franco and G. Marin), *European University Institute*, Florence, 15/4/2015.

Title of the seminar: “FDI, environmental externalities and capital segmentation in a poor rural economy” (with A. Antoci, E. Ticci and P. Russu) at the *United Nations 2nd Med Solutions Conference*, Siena, 6/3/2015.

Title of the seminar: “Sustainable and soft mobility: education, information and deformations”, University of Siena, 16/1/2015.

Title of the seminar: “Globalization, sustainability and growth”, Second Cycle Degree in Resource Economics and Sustainable Development, University of Rimini, 4/11/2014.

Title of the seminar: “Are Regional systems greening the economy? The role of environmental innovations and agglomeration forces” (with D. Antonioli and M. Mazzanti), poster session at the 55th Workshop of the *Italian Economists Society*, Trento, 23/10/2014.

Title of the seminar: “The Mediterranean Sustainable Development Solutions Network and the Challenge to Climate Change: From Cradle of Civilization to Cradle of Sustainability?”, *MED7 - Euro-Mediterranean Public Management Dialogue* conference, MED 7 Institutional platform, University Tor Vergata, Rome, 9/10/2014.

Title of the seminar: “Climate change and sustainable development: the unsustainable lightness of the United Nations”, *inaugural lecture of the academic year 2014-15*, *University Roma Tre*, Second Cycle Degree on Environmental and Development Economics, Dept. of Economics, Rome, 29/9/2014.

Title of the seminar: “The best (and worst) of air-emission trading schemes: Comparing the EU ETS with its followers” (with M. Montini), *FESSUD (Financialisation, Economy, Society and Sustainable Development, EU FP7) Workshop on: Financialisation and Sustainability*, Department of Economics and Statistics, University of Siena, 8/9/2014.

Title of the seminar: “Sustainability, economic growth and responsible consumption”, at the Workshop “Sustainability and responsible consumption”, University of Siena, Arezzo, 28/4/2014.

Title of the seminar: “FDI, environmental externalities and capital segmentation in a poor rural economy” (with A. Antoci, E. Ticci and P. Russu), 2nd Annual Conference of the *Italian Association of Environmental and Resource Economists (IAERE)*, Milan, 13-14/2/2014.

Title of the seminar: “Toward a different emission allocation method in national GHG” (with D. Caro, F. Pulselli and S. Bastianoni), *e-Frame (European Framework for Measuring Progress, EU FP7) Workshop on: Environmental Indicators*, Fondazione ENI Enrico Mattei, 5-6/12/2013, Venice.

Title of the seminar: “Linking the EU Emission Trading Scheme (EU ETS) with other existing Emission Trading Schemes: an economist perspective”, *School of Environment, Tsinghua University (Beijing)*, 23/10/2013.

Title of the seminar: “In and out of the market: ETS and technological innovation in a dynamic evolutionary model” (with A. Antoci and P. Russu), *Workshop Eco Innovation in the EU – Conceptual and Empirical Perspectives*, University of Ferrara, 24-25/9/2013.

Title of the seminar: “Evolution of the EU-ETS and prospects for the future: global ETS or interacting blocks?” (with M. Montini), *Workshop EU-FP7 Project FESSUD on Finance, Environment and Sustainability*, School of Oriental and African Studies, London, 1/3/2013.

Title of the seminar: “To drive or not to drive? A simple evolutionary model” (with A. Antoci and G. Marletto), 1st Annual Conference of the *Italian Association of Environmental and Resource Economists (IAERE)*, Ferrara, 8-9/2/2013.

Discussant of the paper “Drivers and Effects of Eco-innovations Using Data on Eco-patents” by Marin G. (CNR) and Lotti F. (Bank of Italy) at the *Workshop on Innovation in Italy*, Bank of Italy, SADIBA, Perugia, 13-14/12/2012.

Title of the seminar: “Modelling unsustainability: an economist's viewpoint”, invited speech at the Workshop “Modelling unsustainability reduction in the current century: Indicators and policies”, *EcoSummit 2012*, Columbus (Ohio), 1/10/2012.

Title of the seminar: “ETS and technological innovation: theoretical foundations and empirical evidence” at the Summer School on “*Knowledge dynamics, industry evolution and economic development*”, CNRS - GREDEG/Universite de Nice Sophia Antipolis, Nice, 10/7/2012.

Title of the seminar: “Brown sunsets and green dawns in the industrial sector: environmental innovations, firm behavior and the European emission trading” (with G. Cainelli and M. Mazzanti), *European Association of Environmental and Resource Economists*, 19th Annual Conference, Prague, 28/6/2012.

Discussant of the paper “Augmenting the production function with knowledge capital to test the Porter hypothesis: an econometric investigation for the French food industries” by Huiban J.P. and Musolesi A., *European Association of Environmental and Resource Economists*, 19th Annual Conference, Prague, 28/6/2012.

Title of the seminar: “Financial instruments and technological innovations for climate change: from the European Emission Trading Scheme to the Rio+20 Conference”, University of Florence, 15/6/2012.

Title of the seminar: “Innovation Effects of the ETS on the Italian Manufacturing Firms”, (with G. Cainelli and M. Mazzanti) at the Workshop of Environmental Economics, University of Bologna, 1/6/2012.

Discussant of the paper “The economics of water resources: a computable general equilibrium analysis”, Berrittella M. et al., at the Workshop: *CGE Models for Assessing Economic Impacts of Environmental Issues*, University Roma Tre, Rome, 30/5/2012

Title of the seminar: “Environmental innovations in the Italian industry: policy and sector effects” at the 9th *International Conference of the European Energy Market (EEM12)*, European University Institute, Florence, 10-12/5/2012.

Title of the seminar: “From Rio 1992 to Rio+20: twenty (un)sustainable years” at the Workshop “Sustainability as development driver: proposals and experiences”, University of Siena, 18/4/2012.

Title of the seminar: “Globalization, development and sustainability: defending from Kuznets” at the Workshop on *Happiness, Wellbeing and Sustainable Development*, Columbia University, New York, 1/4/2012.

Title of the seminar: “Emission Trading System and technological innovation: a random matching model”, (with A. Antoci and M. Sodini) at the Workshop *Present and Future of Environmental and Natural Resource Economics in Italy*, University Tor Vergata, Roma, 20/02/2012.

Title of the seminar: “Brown sunsets and green dawns in the industrial sector: environmental innovations, firm behavior and the European emission trading”, (with G. Cainelli and M. Mazzanti) at the 52nd Workshop of the *Italian Economists Society*, Rome, 14/10/2011.

Title of the seminar: “Preserving or escaping? On the welfare effects of environmental self-protective choices” (with A. Antoci), *European Association of Environmental and Resource Economists*, 18th Annual Conference, Rome, 2/7/2011.

Discussant of the paper “Implementing a Biofuels Economy in the EU: Lessons from the SUSTOIL project” (by De Lucia C. and Bartlett), *European Association of Environmental and Resource Economists*, 18th Annual Conference, Rome, 1/7/2011.

Title of the seminar: “The European emission trading scheme and renewable energy policies: credible targets for incredible results?”, *European Association of Environmental and Resource Economists*, 18th Annual Conference, Rome, 1/7/2011.

Title of the seminar: “The EU-ETS: emission targets and technological change”, University of Ferrara, Dept. of Economics, Institutions and Territory, Ferrara, 9/3/2011.

Discussant of the 2010 Caritas Report “Old and new poverty. Towards which welfare model?”, Tuscany Region and Regional Social Observatory, 22/10/2010, Florence.

Title of the seminar: “The European Emission Trading Scheme and renewable energy policies: credible targets for incredible results?” University Roma Tre, Dept. of Economics, Rome, 10/2/2010.

Title of the seminar: “Greenhouse gas emissions and the energy system: are current trends sustainable?” (with A. Vercelli), *50th Congress of the Italian Economists Society*, Rome, 22-24/10/2009.

Title of the seminar: “Climate change and energy policy: a European perspective”, 2009 *International Energy Workshop*, FEEM (Fondazione ENI Enrico Mattei), Venice, 17-19/6/2009.

Discussant of the ISAE Report “Middle- and long-run scenarios for sustainable development”, Istituto di Studi ed Analisi Economica (ISAE), Rome, 20/5/2009.

Presentation of the book “Global Sustainability” (with A. Vercelli, Palgrave-Macmillan, 2008)

Title of the seminar: “The Kyoto Protocol on climate change and the contribution to sustainable development”, in collaboration with VIU (Venice International University) and the Italian Environmental Ministry, Siena, 21/11/2008.

Title of the seminar: “Environmental options and technological innovation: an evolutionary game model” (with A. Antoci and M. Galeotti)

EAEPE (*European Association for Evolutionary Political Economy*), Rome, 7-9/11/2008.

Title of the seminar: “Defensive expenditures, welfare and growth” (with A. Antoci)

Workshop *MDEF (Mathematical Dynamics in Economics and Finance)* 2008, Urbino, 25-27/9/2008.

Title of the seminar: “Sustainable energy trends” (with A. Vercelli)

XX Villa Mondragone International Economic Seminar su “Europe, climate change and energy policies: a new industrial revolution?”, Rome, 1-2/7/2008.

Title of the seminar: “Climate change and energy policy: a European perspective”

Workshop “*European environmental policy and governance*”, European University Institute, Florence, 20-21/6/2008.

Title of the seminar: “Sustainable development and energy trends” (with A. Vercelli)

Workshop “Economic growth, social and institutional dynamics”, Lucca, 10-12/7/2007.

Title of the seminar: “From Hubbert to Kuznets: on the sustainability of the current energy system”

XIX Villa Mondragone International Economic Seminar, Rome, 25-26/6/2007.

Title of the seminar: “Inequality and poverty in a globalised world”

EUI Alumni Conference on “*Interpreting Globalisation: Evidence and Theories from the Four EUI Disciplines*”, European University Institute, Florence, 6-7/10/2006.

Title of the seminar: “Environmental preferences and ecological dynamics” with A. Antoci and P.

Russu (University of Sassari)

Workshop *MDEF (Mathematical Dynamics in Economics and Finance)*, Urbino, 21-23/9/2006.

Title of the seminar: “Fairness and sustainable development in an unequal world”

SURED (Sustainable Resource Use and Economic Dynamics) conference, Ascona, Switzerland, 5/6/2006

Title of the seminar: “On the sustainability of global development”, with A. Vercelli (University of Siena)

Department of Economics, University of Bergamo, 17/01/2006

Title of the seminar: “Sustainable globalization and energy”, with A. Vercelli and D. Verdesca (University of Siena)

Swiss Society of Economics and Statistics, Zürich, Switzerland, 17-18/03/2005.

Title of the seminar: “Globalization, social capital and health”

CLEONP Workshop on “Social capital, intrinsic motivations and no-profit organisations”, Faculty of Economics, Forlì, 19/06/04.

Title of the seminar: “Foreign Direct Investments, growth and institutions: the case of the Mediterranean Partner Countries”, with G. Giovannetti (University of Florence)

CNR conference on “Direct investments, outsourcing and competitiveness”, Florence, 14/11/2003.

Title of the seminar: “Biodiversity and economic growth: trade-offs between stabilization and preservation of natural dynamics” with A. Antoci and P. Russu (University of Sassari)

“Economic analysis of policies for biodiversity conservation”, 4th *BIOECON Workshop* on the Economics of Biodiversity Conservation, University College London e Fondazione ENI Enrico Mattei, Venice, 28-29/8/2003.

Title of the seminar: “Globalisation, inequality and health” with A. Vercelli (University of Siena)

International School on Economic Research on “Inequality and economic integration”, Siena, 4/7/2003.

Title of the seminar: “Inequality, growth and the environment: global dynamics implications of the Kuznets curves” with S. Sordi (University of Siena)

Second Workshop of the Society for Computational Economics on “Complex behavior in economics: modeling, computing and mastering complexity”, 8-11/5/2003, Aix-en-Provence, France.

Title of the seminar: “Working too much in a polluted world: a North-South evolutionary model”

International conference on “The paradoxes of happiness in economics”, University Bicocca, Milan, 21-23/3/2003. Previous versions presented at the EURESCO conference on “The international dimension of environmental policy”, Acquafredda di Maratea, 6-11/10/2001, and at the Department of Political Economy, University of Siena, 14/11/2001.

Discussant of the paper “Happiness and sustainability: a modern paradox” (S. Marzetti) at the conference “The paradoxes of happiness in economics”, University Bicocca, Milan, 21-23/3/2003.

Title of the seminar: “Sustainable globalisation” (with A. Vercelli)
 International School on Economic Research on “Environment, inequality and collective action”,
 Siena, 16/7/2002. Also presented at the conference on “Greenhouse effect: ethics and economics”,
 Siena, 16-18/11/2001, and at the Department of Economics, University of Perugia, 15/01/2003.

Title of the seminar: “Inequality, growth and the environment: a steady-state analysis with the
 Kuznets curve and the environmental Kuznets curve”
 EAEPE (European Association for Evolutionary Political Economy) conference, Siena, 8-
 10/11/2001.

Discussant of the paper “A non-parametric investigation of the environmental Kuznets curve
 hypothesis” (G. Baiocchi e S. Di Falco), FEEM conference on “Growth, environmental policies and
 sustainability”, Fondazione ENI Enrico Mattei, Venice, 1/6/2001.

Title of the seminar: “Income inequality and the environmental Kuznets curve”
 EURESCO conference on “The international dimension of environmental policy”, Kerkrade, The
 Netherlands, 7-12/10/2000. Also presented at the CIDE conference (Interuniversity Center of
 Econometrics, Venice, 3rd March 2000) and at the Third Year Student Forum of the European
 University Institute (Florence, 8th March 2000).

Title of the seminar: “Self-protection choices, consumption patterns and economic growth”
 MDEF (Mathematical Dynamics in Economics and Finance) Workshop, Urbino, 28-30/9/2000.

Title of the seminar: “Intergenerational altruism and sustainable development”
 ASSET (Association of Southern European Economic Theorists) meeting, Marseilles, November
 1997. Also presented at the Student Workshop of the European University Institute, October 1997.

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