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REFEREES

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Senior Research Leader, CSIRO Sustainable Ecosystems, Commonwealth
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CURRENT EMPLOYMENT

Assistant Professor at the Department of Economics and Economic History,
Autonomous University of Barcelona. Secretary of the Unit of Economic History.
Coordinator of the study area Ecological Economics, Master in Environmental
Studies. My main research focuses on societal metabolism, with emphasis on
household metabolism from the point of view of energy, and its relation with
sustainability. I also teach, supervise graduate students, and coordinate projects.

CURRENT EMPLOYER

Departament d'Economia i Història Econòmica, Universitat Autònoma de
Barcelona, Edifici B, Campus UAB, 08193 Bellaterra, Tel: +34 935811203, contact:
Maite Núñez: Maite.Nunez@uab.cat

EDUCATIONAL QUALIFICATIONS

- 2001-2005: PhD in Environmental Sciences (Ecological Economics) at Autonomous University of Barcelona (Spain). Title of the Thesis: “*Complex systems and exosomatic energy metabolism of human societies*”. Completed *cum laude*.
- 2000-2001: MPhil at Keele University (UK). Topic of the dissertation: “Analysing Energy Metabolism of Societies from a Complex-Systems Perspective”. Scholarship given by Caja de Ahorros del Mediterraneo (CAM, Savings Bank of the Mediterranean) and the British Council.
- 1999-2000: MA in “Environmental Politics” at Keele University (UK). Topic of the dissertation: “Equity issues regarding the CO₂ emissions property rights under the FCCC”. Scholarship given by Caja de Ahorros del Mediterraneo (CAM, Savings Bank of the Mediterranean) and the British Council.
- 1998-1999: MSc in “Ecological Economics, Territory and Environmental Management” at the Autonomous University of Barcelona. My research and dissertation focused on Climate Change, mainly GHGs abatement measures in the Metropolitan Area of Barcelona through Joint Implementation projects.
- 1992-1996: “Economics” degree (Development and International Economics) at the Autonomous University of Barcelona.

LANGUAGES

Spanish and Catalan are my mother tongue. I am fluent in reading, writing and speaking in both English and Italian, and I spent two years working and living in the UK, two years in Italy, and one year in Austria.

WORK EXPERIENCE

- Since September 2008: Assistant Professor at the Department of Economics and Economic History, Autonomous University of Barcelona.
- June 2008: Lecturer of the course “Ecological Economics”, 4 ECTS, in the Master Study Programme Social and Human Ecology, at the Institute of Social Ecology, Klagenfurt University, Vienna, Austria.
- November 2007: Lecturer of the course “Economics and Natural Resources: Methodological Issues”, 4 ECTS, in the Joint European Master in Environmental Studies (JEMES), Autonomous University of Barcelona.
- September 2007 – September 2008: Assistant Professor at the Department of Applied Economics, Autonomous University of Barcelona.
- June 2007: Lecturer of the course “Ecological Economics”, 4 ECTS, in the Master Study Programme Social and Human Ecology, at the Institute of Social Ecology, Klagenfurt University, Vienna, Austria.
- May 2007: Lecturer of the course “Economics and Natural Resources: Methodological Issues”, 4 ECTS, in the Master of Environmental Studies, Autonomous University of Barcelona.
- May 2007 – September 2007: *Juan de la Cierva* researcher at the Institute for Environmental Science and Technology, Autonomous University of Barcelona.
- May 2006 – May 2007: Main researcher and coordinator of the project “Analysis of the Energy Metabolism of the Catalan Economy”, commissioned by the Catalan Government’s Advisory Council for Sustainable Development. Avinguda de Sarrià 30, 1er 3a, 08029 Barcelona, Tel: +34 933633867, <http://www.cat-sostenible.org>
- May 2005 – April 2006: Researcher and lecturer at the Institute for Social Ecology, Faculty for Interdisciplinary Studies of the University of Klagenfurt, Austria. My main duties were twofold. From a research perspective, I was member

of the Transition Studies Group, where I contributed to data analysis, publishing, report drafting and fund raising activities for research in the fields of energy and integrated assessment of sustainability (like in the Nicobar Islands project mentioned below). From an institutional/administrative perspective I coordinated all the activities of the EU-funded IP project Matisse, comprising of reporting to the EU and communicating with partners. My position also included representing the Institute to our Latin American partners.

- September 2003 – April 2005: Researcher at the Istituto Nazionale di Ricerca per gli Alimenti e la Nutrizione (Italian National Institute of Research on Food and Nutrition), Roma, Italy. I was both coordinator of the Work Package Participatory Integrated Assessment of the use of GMOs in agriculture, and main researcher. This involved organising focus groups with stakeholders; monitoring and analysing data from surveys; coordinating two internal collaborators; coordinating the participation of five external collaborators; maintaining the website of the project, and other communication strategies; and reporting.
- October – December 2002: Online course on “Ecological Economics” for the Department of Economics and Economic History of the Autonomous University of Barcelona.
- August 2002: Associated lecturer of “Ecological Economics” and “Economics and Politics of Climate Change” at Latin American Faculty of Social Sciences (Facultad Latinoamericana de Ciencias Sociales, FLACSO), in Quito, Ecuador. I gave an introductory course on Ecological Economics, from which three master theses dealing with material and energy flows in Ecuador resulted, with myself acting as either supervisor (in two of them) or reviewer (one of them).
- February 2002 – September 2003: Founding partner and Manager of the environmental consultancy **ENT Environment and Management** (<http://www.ent-consulting.com>). My duties in the company comprise of representing, public relations, human resource management (7 employees), as well as payroll, accountancy and general administration. Moreover, I acted as renewable energy and energy policy consultant, in some of the projects.
- October 2000 – September 2003 and October 1998 - September 1999: associated lecturer of the degree course subject “Economics of Natural Resources” to both Economics and Environmental Sciences students at the Autonomous University of Barcelona. My tasks comprised of lecturing, advising students on research topics, re-drafting the syllabus of the subject for the University, and supervising final degree’s dissertations.
- August 1998: Co-ordinator and lecturer of the subject “Environmental Management Systems”, in the Summer Courses of the Open University of Catalonia (Universitat Oberta de Catalunya), dealing with the relationship between the environment and firms in general, and the environmental standards EMAS and ISO 14001 in particular. My tasks included developing the course materials to be distributed online, acting as consultant for the students and supervisor for their final assignments and developing the structure of the online platform to be used.
- March-June 1998: assistant lecturer of the degree course subject “Economics of Natural Resources” in the framework of the “New Project of Joint Subjects in Videoconference between the Polytechnic University of Madrid and the Autonomous University of Barcelona”. My main task was to develop multimedia contents for supporting the courses, as well as monitoring and assessing the students of the Polytechnic University of Madrid.
- February-June 1998: Rugby instructor in some primary and secondary schools of

Santa Coloma de Gramenet, within the Rugby Sport Club Puig Castellar and Santa Coloma City Council Joint Programme on “Initiation and Promotion of Rugby in Primary Schools 1998”.

- March-April 1998: Co-author and chairperson of the virtual discussion forum on “Industry and the Environment” in the Open University of Catalonia (Universitat Oberta de Catalunya) web page within the framework of the ECOCAMPUS project.

LIST OF PUBLICATIONS

(36) Ramos-Martin, J., Giampietro, M., Ulgiati, S. (in press): “Can we break the addiction to fossil energy?”, *Ecological Modelling*.
<http://dx.doi.org/10.1016/j.ecolmodel.2011.10.024>

(35) Mestre, M., Ortega, M., Musoles, L., Ramos, J. (2011): *Conflictos socio-ambientales de la acuicultura del camarón en Centroamérica. Un análisis desde la justicia ambiental*. Colección DOCS Núm.1. Vilanova i la Geltrú: Fundació Ent.

http://www.lulu.com/items/volume_70/10779000/10779483/1/print/Num.1_DOC_S.pdf

(34) Recalde, M., Ramos-Martin, J. (in press): “Going beyond energy intensity to understand the energy metabolism of nations: The case of Argentina”. *Energy*.
<http://dx.doi.org/10.1016/j.energy.2011.07.011>

(33) Arizpe, N., Giampietro, M., Ramos-Martin, J. (2011): “Food security and fossil energy dependence: an international comparison of the use of fossil energy in agriculture (1991-2003)”, *Critical Reviews in Plant Sciences*, Vol.30: 45-63.
<http://dx.doi.org/10.1080/07352689.2011.554352>

(32) Giampietro, M. and Ramos-Martin, J. (2010): “Algunes reflexions sobre el futur del cotxe elèctric”, *Tecnodebats*, núm. 5: 8-13.

(31) Ramos-Martin, J. (2009): Review of the book “El final de la era del petróleo barato, por Joaquim Tempere y Enric Tello (Coords.), Icaria, Barcelona, 2007”, *Revista de Economía Crítica*, Vol. 8: 206-209,
http://econpapers.repec.org/article/retecocri/rec08_5f15.htm

(30) Ramos-Martin, J. (2009): “Metabolisme energètic de l’economia catalana”, in Universitat Internacional de la Pau (Ed.): *Conflictos pel control de l’energia*. Sant Cugat del Vallès, UIP, 294 pp. ISBN: 9-788461-325627, pages 241-265.

(29) Ramos-Martin, J., Cañellas-Boltà, S., Giampietro, M., Gamboa, G. (2009): “Catalonia’s energy metabolism: using the MuSIASEM approach at different scales”, *Energy Policy*, Vol. 37 (11): 4658-4671,
<http://dx.doi.org/10.1016/j.enpol.2009.06.028>

(28) Ramos-Martin, J. (Coord.) (2009): *Ús de l’energia a Catalunya. Anàlisi del Metabolisme energètic de l’Economia Catalana (AMEEC)*. Informes del CADS, número 8, volum 2. Consell Assessor per al Desenvolupament Sostenible. Generalitat de Catalunya, Barcelona.
http://www15.gencat.cat/cads/AppPHP/images/stories/publicacions/informesespecials/2009/informe_complet_def.pdf

(27) Gowdy, J., Giampietro, M., Ramos-Martin, J., Mayumi, K. (2009): “Incorporating biophysical foundations in a hierarchical model of societal metabolism”, in Holt, R.P.F., Spash, C.L., and Pressman, S. (Eds.) *Post Keynesian and Ecological Economics: Confronting Environmental Issues*. Cheltenham: Edward Elgar, 224 pp. [ISBN: 978-1-84720-668-8](http://www.edwardelgar.com/ISBN/978-1-84720-668-8) pp. 203-220.

- (26) Giampietro, M., Mayumi, K., and Ramos-Martin, J. (2009): Two conceptual tools for Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MuSIASEM): “Multi-Purpose Grammars” and “Impredicative Loop Analysis”, in Farrell, K.; van den Hove, S.; Luzzati, T (eds.): *Beyond Reductionism: Interdisciplinary Research in Ecological Economics*, Routledge, London, 288 pp. Chapter 8. [ISBN: 978-0-415-47014-8](https://doi.org/10.1016/j.ecolecon.2006.10.020)
- (25) Giampietro, M., Mayumi, K., and Ramos-Martin, J. (2009): “Multi-scale integrated analysis of societal and eco system metabolism (MuSIASEM): Theoretical concepts and basic rationale”, *Energy*, Vol. 34 (3): 313-322. <http://dx.doi.org/10.1016/j.energy.2008.07.020>
- (24) Ramos-Martin, J. (2008): “Consumo de recursos naturales en China y su impacto en el debate sobre el decrecimiento”, *Ecología Política*. Núm. 35: 105-107. <http://www.ecologiapolitica.info/ep/35.pdf>
- (23) Ramos-Martin, J., Cañellas-Boltà, S. (2008): “Why Catalonia will see its energy metabolism increase in the near future: an application of MuSIASEM”, in H. Schnitzer, S. Ulgiati, (Eds.): *Advances in Energy Studies: Towards a Holistic Approach Based on Science and Humanity*. Graz University of Technology, Graz, Austria. 604 pp. ISBN: 978-3-85125-018-3. Pages 380-389.
- (22) Ramos-Martin, J., Giampietro, M., and Mayumi, K. (2007): “On China’s exosomatic energy metabolism: an application of multi-scale integrated analysis of societal metabolism (MSIASM)”, *Ecological Economics*, Vol. 63(1): 174-191. <http://dx.doi.org/10.1016/j.ecolecon.2006.10.020> Reprinted in Martínez-Alier, J., and Røpke, I. (editors) (2008): *Recent Developments in Ecological Economics*, Edward Elgar, Cheltenham, 1336 pp. [ISBN: 9781843767831](https://doi.org/10.1016/j.ecolecon.2006.10.020)
- (21) Giampietro, M., Mayumi, K., and Ramos-Martin, J. (2007): “How serious is the addiction to oil of developed society? A multi-scale integrated analysis based on the concept of societal and ecosystem metabolism: Part 2”, *International Journal of Transdisciplinary Research*, [Vol. 2 \(1\): 42-92](https://doi.org/10.1016/j.ecolecon.2006.10.020).
- (20) Eisenmenger, N., Ramos-Martin, J., and Schandl, H. (2007): Transition in a changed context: patterns of development in a globalizing world. In M. Fischer-Kowalski and H. Haberl (Editors): *Socio-Ecological Transitions and Global Change. Trajectories of Societal Metabolism and Land Use*. Edward Elgar, Cheltenham, 384pp. [ISBN 978 1 84720 340 3](https://doi.org/10.1016/j.ecolecon.2006.10.020) pp. 179-222.
- (19) Eisenmenger, N., Ramos-Martin, J., and Schandl, H. (2007):” Análisis del metabolismo energético y de materiales de Brasil, Chile y Venezuela”, *Revista Iberoamericana de Economía Ecológica*, [Vol 6: 17-39](https://doi.org/10.1016/j.ecolecon.2006.10.020).
- (18) Giampietro, M., Mayumi, K., and Ramos-Martin, J. (2006): “Can biofuels replace fossil energy fuels? A multi-scale integrated analysis based on the concept of societal and ecosystem metabolism: Part 1”, *International Journal of Transdisciplinary Research*, [Vol. 1, num. 1: 51-87](https://doi.org/10.1016/j.ecolecon.2006.10.020).
- (17) Eisenmenger, N., Ramos-Martin, J., Schandl, H. (2005): “The environmental pillar of sustainability”, in Schoder, T., et al. (Eds.) *MARS: Monitoring the Alpine Regions’ Sustainability*. BAK Basel Economics, Switzerland.
- (16) Ramos-Martin, J., and Giampietro, M. (2005): “Multi-Scale Integrated Analysis of Societal Metabolism: Learning from trajectories of development and building robust scenarios”, *International Journal of Global Environmental Issues*, Vol. 5 Num. 3/4: 225-263.
- (15) Giampietro, M., and Ramos-Martin, J. (2005): “Multi-Scale Integrated Analysis of Sustainability: a methodological tool to improve the quality of narratives”, *International Journal of Global Environmental Issues*, Vol. 5 Num. 3/4: 119-141.

- (14) Iraegui, J., and Ramos-Martin, J. (2004). *Gestió Local de l'Energia [Local Energy Management]*. Fundació Pi i Sunyer i Diputació de Barcelona.
- (13) Ramos-Martin, J. (2004b): "La perspectiva biofísica de la relació home-natura: Economia Ecològica" [The biophysical perspective in the relationship between human beings and nature: Ecological Economics], in J. Valdivielso (Ed.), *Les dimensions socials de la crisi ecològica [The Social Dimensions of the Ecological Crisis]*, Edicions UIB, Palma de Mallorca, Spain, 2004.
- (12) Ramos-Martin, J. (2004a): "La perspectiva biofísica del proceso económico: Economía Ecológica" [The biophysical perspective in the economic process: Ecological Economics]. In F. Falconi, M. Hercowitz, R. Muradian (Eds.): *Globalización y Desarrollo en América Latina [Globalisation and Development in Latin America]*. FLACSO, Quito, Ecuador, pp. 19/47.
- (11) Ramos-Martin, J., Russi, D., Puig, I., Ortega, M., and Ungar, P. (2003): *Deuda Ecológica. ¿Quién debe a quién? [Ecological Debt. Who owes whom?]* Icaria Editorial, Barcelona. Also published in Catalan by the same Publisher, and in Italian (DEBITO ECOLOGICO Chi deve a chi? Editrice Missionaria Italiana. 2003).
- (10) Falconí, F., Ramos-Martin, J. (2003). "Societal Metabolism of Societies: The bifurcation between Spain and Ecuador". In: *Advances in Energy Studies. Reconsidering the Importance of Energy*, S. Ulgiati, M.T. Brown, M. Giampietro, R.A. Herendeen, and K. Mayumi, Editors. SGE Publisher Padova, Italy, 2003, pp.45/61.
- (9) Ramos-Martin, J. (2003c): "Empirismo en economía ecológica: una visión desde la teoría de sistemas complejos" [Empiricism in ecological economics: a vision from complex systems theory], *Revista de Economía Crítica*. Vol. 1: 75-93.
- (8) Ramos-Martin, J. (2003b). "Intensidad energética de la economía española: una perspectiva integrada" [Energy intensity of the Spanish economy: an integrated perspective], *Revista de Economía Industrial*. Number 351(III): 59-72.
- (7) Ramos-Martin, J. (2003a): "Empiricism in Ecological Economics: A Perspective from Complex Systems Theory", *Ecological Economics* Vol 46/3 pp 387-398.
- (6) Ramos-Martin, J. (2001c): "De Kyoto a Marrakech: historia de una flexibilización anunciada" [From Kyoto to Marrakech: history of a flexibilisation foretold], *Ecología Política* 22: 45-56.
- (5) Ramos-Martin, J. and J. Proops (2001): "Empiricism in ecological economics: can there be a predictive ecological econometrics?". *ISEE Working Paper*.
- (4) Ramos-Martin, J. (2001b): "Non-linearity in energy metabolism of Spain: "Attractor Points" for the Development of Energy Intensity", in S. Ulgiati et al. (eds), *Advances in Energy Studies. Exploring Supplies, Constraints, and Strategies*, Padova (Italy), SGE Editoriali. Pp: 535-542.
- (3) Ramos-Martin, J. (2001a): "Historical analysis of energy intensity of Spain: from a "conventional view" to an "integrated assessment", *Population and Environment*, 22 (3): 281-313.
- (2) Ramos-Martin, J. (1999a): "Breve comentario sobre la desmaterialización en el estado español" [Brief comment on dematerialisation in Spain], *Ecología Política*, 18: 61-64.
- (1) Ramos-Martin, J. (1999b): "New role of Flexibility Mechanisms for improving equity under a new burden sharing scheme", *Joint Implementation Quarterly*, Vol. 5 (4).

RESEARCH PROJECTS

- 2011 – 2013: Researcher at the project *Salud, alimentación y Mortalidad: Los niveles de vida en España, SS. XIX-XX (Health, food and mortality: living standards in Spain XIX and XX centuries)*, funded by the Spanish Ministry of Science and Innovation, contract HAR2010-20684-C02-01.
- 2010-2011: Principal Investigator and coordinator of the project *Anàlisi i propostes per a la resolució de conflictes socio-ambientals pesquers a Centreamèrica (Analysis and proposals for resolution of fishery-related socio-environmental conflicts in Central America)*, funded by the Institut Català per a la Pau (Catalan Institute for Peace).
- 2009-2010: Principal Investigator and coordinator of the Special Action of the Spanish Ministry for Science and Innovation *IV Congreso Iberoamericano sobre Desarrollo y Ambiente (CISDA IV)*, ECO2009-06555-E.
- 2009-2014: Researcher of the project *UHE: Institucions Econòmiques, Nivells de Vida i Medi Ambient (Economic Institutions, Quality of life and the environment)*, Generalitat de Catalunya, 2009SGR962.
- 2007 – 2010: Coordinator of ICTA-UAB activities in the EU-funded cooperation project “Sustainable Use of Photosynthesis Products & Optimum Resource Transformation (SUPPORT)”, EuropeAid Co-operation Office, alfa project, academic co-operation between the EU and Latin America. Contract number: AML/19.0901/06/18414/II-0545-FA-FCD-FI
- 2007 – 2010: Researcher at the EU-funded project, “Synergies in Multi-scale Inter-Linkages of Eco-social systems (SMILE)”, under the supervision of Dr. Mario Giampietro. Contract number: 217213-FP7-2007-SSH-1.
- 2005 – 2008: Researcher at the project “Nivells de vida, alimentació i economia ecològica”[Quality of life, food and ecological economics], funded by the Government of Catalonia, SGR2005-00571.
- 2006 - 2007: Main researcher and project coordinator of the project “Analysis of the Energy Metabolism of the Catalan Economy”, commissioned and funded by the Advisory Council for Sustainable Development of the Catalan Government.
- 2005: Researcher for the project “The meaning of natural resources for explaining economic growth, REXECO”, funded by the Austrian national Bank science fund.
- 2005: Researcher and Work Package leader for the EU funded project “MATISSE: Methods and Tools for Integrated Sustainability Assessment”. Contract no.: 004059 (GOCE) MATISSE
- 2005: Researcher for the EU funded project (INTERREG IIIB Programme) “MARS: Monitoring the Alpine Region’s Sustainability”.
- 2005: Researcher for the project “Practicing Sustainability. An Application of Integrated Analysis in the Nicobar Archipelago”, funded by the Austrian National Bank science fund.
- 2003-2004: Researcher for the Italian Ministry of Agriculture project “Developing procedures for improving the quality of scientific information used for diffusion on GMOs”.
- 2002-2003: Researcher for the EU funded project “Development and application of a multi-criteria software decision analysis tool for renewable

energy sources”, contract NNE5-1999-NNE5/273/2001.

- 2002: Special Action of the Spanish Ministry of Science and Education, contract number REN2002-10168-E (Acción Especial, Semana Iberoamericana de Desarrollo y Medio Ambiente).
- 2002: Integrated Action between the Spanish Ministry for Science and Technology and the Austrian Government, contract HU2000-0025: “Integración del análisis de flujos de materia y energía en el análisis multicriterial (Integrating materials and energy flows analysis into multicriteria analysis)”.
- 2002: EASY-ECO (Evaluation of Sustainability in Europe), coordinated by the University of Economics and business Administration of Vienna, and funded by the European Commission (Contract HPCF-CT-2001-00286).
- 1999-2002: “Evaluación económico-ambiental en un marco internacional (Environmental-economic evaluation in an international framework)”, funded by the Spanish Ministry of Education and Science, DGICYT (Sectorial Program of General Promotion of Knowledge), contract P98-0868.

CONFERENCES AND WORKSHOPS

- 12th – 14th September 2011, 1 poster, 1 oral communication and 1 plenary session at the V Congreso Iberoamericano sobre Desarrollo y Ambiente (CISDA V). Poster with Marina Recalde entitled “Más allá de la intensidad energética: Un análisis del metabolismo energético Argentino”. Oral communication with Nancy Arizpe and Mario Giampietro entitled “Caracterización integral y manejo sustentable de recursos en dos comunidades afectadas por la expansión de la soja”. Plenary sesión with the title “Conclusiones del congreso y “Declaración de Santa Fe”. Universidad Nacional del Litoral, Santa Fe, Argentina.
- 14th – 17th June 2011, 2 oral presentations at the “9th International Conference of the European Society for Ecological Economics: Advancing Ecological Economics”. With Mario Giampietro and Kozo Mayumi “The Multi-Scale Integrated Assessment of Societal and Ecosystem Metabolism approach: Theoretical relevance and practical applications within different environmental realms”. With Nancy Arizpe, “Could mechanization be a solution for poverty in a Mayan community? Mennonite’s vs Maya’s agricultural production systems”. Bogazici University, Istanbul, Turkey.
- 19th – 21st October 2010, poster presented at the “7th Biennial International Workshop: Advances in Energy Studies 2010: Can we break the addiction to fossil energy?”, Title: “On why Argentina is increasing its energy intensity: a multi-scale integrated analysis of its energy metabolism”, jointly with Marina Recalde. Universitat Autònoma de Barcelona, Spain.
- 21st October 2009, seminar at the course Climate Change and Business: Challenges and opportunities in a decarbonising future. Title: “Energy trends, economic growth and technology”. Universitat Pompeu Fabra, Barcelona, Spain.
- 9th – 10th October 2009, presentation given at the IV Congreso Iberoamericano sobre Desarrollo y Ambiente “Construyendo modelos alternativos de desarrollo”. Título: “El análisis de usos del tiempo y suelo para el estudio del conflicto de la expansión de la soja en dos comunidades de Formosa, Argentina”, jointly with Nancy Guadalupe Arizpe Ramos. Universidad Pontificia Javeriana, Bogotá, Colombia.
- 7th – 8th October 2009, Curso Internacional de Economía Ecológica. La economía

ecològica como propuesta analítica a la crisis ambiental y al modelo de desarrollo. Title: “Análisis integrado multiescalar del metabolismo social”. Universidad Nacional, Bogotá, Colombia.

- 14th – 18th September 2009, II Curso de verano de Economía Ecológica: ¿Es posible otra interpretación de la crisis económica? La visión desde la economía ecológica. Title: “Análisis integrado del metabolismo social”. Universidad Pablo de Olavide, Carmona, Spain.
- 13th – 17th October 2008, 6th Liphe4 Fall School on Integrated Analysis of Sustainability. Title: “Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MuSIASEM): Examples of applications”. West University of Timisoara, Romania.
- 17th – 23rd July 2008, presentation given at the XXIII Summer Course of the Universitat Internacional de la Pau, “Conflictes pel control de l’Energia”. Title: “Metabolisme energetic de l’economia catalana”. Universitat Internacional de la Pau, Sant Cugat del Vallès, Spain.
- 14th – 18th July 2008, presentation given at the 5th Liphe4 Summer School on Integrated Analysis of Sustainability. Title: “Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MuSIASEM): Examples of applications”. Universitat Autònoma de Barcelona, Bellaterra, Spain.
- 1st July 2008, presentation given at the 6th Biennial International Workshop Advances in Energy Studies “Towards a holistic approach based on science and humanity”, held in Graz, Austria, from June 29th to July 2nd. Title: “Why Catalonia will see its energy metabolism increase in the near future: an application of MuSIASEM”, jointly with Sílvia Cañellas-Boltà.
- 1st December 2007, presentation given at the workshop “Canvi climàtic i crisi energètica: sol·lucions comunes” [Climate change and the energy crisis: common solutions], organised by OCEAS (Observatori de la crisi energètica i les alternatives de societat). Title: “El metabolisme energètic de Catalunya, l’informe AMEEC” [The energy metabolism of Catalonia, the AMEEC report].
- 26th April 2007, presentation given at the workshop “L’energia è nelle nostre mani” [Energy is at our hands], University of Pisa, Italy. Title: “Energia e limiti: il metabolismo sociale” [Energy and limits: social metabolism].
- 27th February 2007, presentation given at the conferences cycle “Aula d’Ecologia 2007”, organised by the City Council of Barcelona. Title: “Metabolisme energetic i economia” [Energy metabolism and the economy].
- 15th – 18th December 2006, 3 papers presented jointly with Mario Giampietro and Kozo Mayumi at the 9th Biennial Conference of the International Society for Ecological Economics, “Ecological Sustainability and Human Well-Being”, Delhi, India. Titles: “Multi-Scale Integrated Analysis of Societal Metabolism (MSIASM): an overview of rationale and theory”, “An Application of MSIASM to Chinese exosomatic energy metabolism”, “Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MSIASEM): An application to viability of large scale biofuels production”.
- 12th – 16th September 2006, 2 presentations jointly with Mario Giampietro and Kozo Mayumi and 1 presentation with Nina Eisenmenger and Heinz Schandl at the 5th Edition of the Biennial International Workshop Advances in Energy Studies, “Perspectives on Energy Future”, Portovenere, Italy. Titles: “The energy metabolism of China, India and other world countries in relation to the Kyoto protocol and the possible role of biomass and other alternative energy sources”, “Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MSIASEM) for

checking the feasibility and desirability of alternatives to fossil energy. How serious is the addiction to oil of modern societies?”, and “Multi-scale Integrated Assessment of Sustainability in Latin America – a comparison of different trajectories of development for different countries”.

- 10th – 14th July 2006, 2 presentations at the Universitat Rovira i Virgili summer course “Energia i Sostenibilitat: del canvi climàtic al pic del petroli”. Titles: “Desenvolupament econòmic i consum d’energia. El miratge del desacoblament energètic i la paradoxa de Jevons”, and “Metabolisme energètic exosomàtic de les societats. Comparació entre països desenvolupats i en desenvolupament, i perspectives de futur”.
- 17th – 23rd July 2005, presentation at the “2nd Liphe4 Summer School on Participatory Integrated Assessment of Sustainability”. Title: “Multi-Scale Integrated Analysis of Societal Metabolism (MSIASM): Examples of applications at the national level”.
- June 2005, 2 presentations jointly with Mario Giampietro and Kozo Mayumi at the 6th International Conference of the European Society for Ecological Economics “Science & Governance: The Ecological Economics Perspective”, held in Lisbon 14th to 17th June 2005. Titles, “Using quantitative analysis to improve the quality of the narratives about sustainability: Multi-Scale Integrated Analysis of Societal Metabolism (MSIASM)”, and “Addressing the Implications of Scales when analysing the evolution of economies using Multi-Scale Integrated Analysis of Societal Metabolism (MSIASM): The case of China”.
- 20th – 27th August 2004, presentation at the “Liphe4 Summer Workshop on Participatory Integrated Assessment of Sustainability”. Title: “Multi-Scale Integrated Analysis of Societal Metabolism”.
- 17th – 20th March 2004, paper presented at the International Conference “Bridging Scales and Epistemologies: Linking Local Knowledge and Global Science in Multi-Scale Assessments” within the activities of the UN Millennium Ecosystem Assessment held in Alexandria, Egypt. Title: “Multi-Scale Integrated Analysis of Societal Metabolism: Learning from Trajectories of Development and Building Robust Scenarios”.
- 3rd March 2004, seminar at the University of Pisa (Italy) on “Multi-Scale Integrated Analysis of Societal Metabolism: The Theory and Practice”
- 27th – 28th November 2003, seminar given at the International Workshop “Interfaces between Science & Society”, organised by the Joint Research Centre of the European Commission at Ispra, held in Milano. Title: “Multiple-Scale Integrated Analysis of Societal Metabolism: Examples of Applications”.
- 12th to 15th of February 2003, paper presented jointly with Miquel Ortega Cerdà at the ESEE Conference Frontiers 2, held in Tenerife, Spain. Title: “Non-linear relationship between energy intensity and economic growth”.
- 18th - 20th of November 2002, paper presented at the Encuentro Nacional Rio + 10: II Cumbre de la Tierra held at the University of Almeria. Title: "Johannesburg '02: La política ambiental en venta".
- 6th and 7th of June 2002, paper presented jointly with Miquel Ortega Cerdà at the IX Symposium on Economic History held at the Autonomous University of Barcelona. Title: “Energy intensity and economic growth: attractor points for both developed and developing countries”.
- 25th-29th of April 2002, seminar given at the workshop SOCIAL METABOLISM. Physical indicators of unsustainability Universitat Autònoma de Barcelona. Title: “Multiple-Scale Integrated Assessment of Societal Metabolism”.

- From 6th to 9th March 2002, two papers given at the 7th Biennial Conference of the ISEE (International Society for Ecological Economics), held in Sousse, Tunisia. Titles: “Grandfathering vs. equitable allocations: The case for CO₂ emission rights”, and “Integrated assessment of development trajectories: the two sides of the bifurcation of economic development (Spain versus Ecuador)”, this latter jointly with Fander Falconí.
- 30th- 31st August 2001, paper given at the Conservation and Sustainable Development – Comparative Perspectives workshop, held at the Yale Center for Comparative Research, Yale University, New Haven, USA. Title: “Empiricism in Ecological Economics: A Vision from Complex Systems Theory”.
- From 4th to 7th of July 2001, paper given with John Proops at the EC High Level Scientific Conference, “Frontiers 1: Fundamental Issues of Ecological Economics”, organised by the ESEE (European Society for Ecological Economics), Cambridge, UK. Title: “Empiricism in ecological economics: can there be a predictive ecological econometrics?”.
- From 18th to 22nd of June 2001, paper given at the Tercera Convención Internacional sobre Medio Ambiente y Desarrollo. Tercer Congreso de Economía y Medio Ambiente. La Habana, Cuba. Title: “Empirismo en economía ecológica: una visión desde la teoría de los sistemas complejos”.
- From 23rd to 27th of May 2000, poster presented at the Second International Workshop *Advances in Energy Studies* “Exploring Supplies, Constraints, and Strategies”. Porto Venere, Italy. Title: Non-linearity in energy metabolism of Spain: “Attractor Points” for the Development of Energy Intensity.
- From 3rd to 6th of May 2000, 2 communications presented at the Third International Conference of the *European Society for Ecological Economics* “Transitions to a Sustainable Europe: Ecology-Economy-Policy”, University of Vienna, Austria. Titles: “The Role of the Different Groups of Countries in the International Negotiations on Climate Change”, and “Brief comment on dematerialization and the energy intensity in Spain”.
- From 12th to 16th July 1999: communication, jointly with Professor Joan Subirats “Ejercicio de simulación de las negociaciones de Cambio Climático. Negociación de un protocolo que limite las emisiones de gases de efecto invernadero”, at the *I Curs Internacional d'Estiu de Medi Ambient. Medi i societat: noves tendències*, Canillo, Andorra. Organised by the Institut d'Estudis Andorrans.
- January 1999: “Workshop on Complex Systems Analysis, European Project “Environmental Valuation in Europe”. Barcelona.

ORGANISATION OF EVENTS

- Member of the International Organizing Committee of the 8th Biennial International Workshop *Advances in Energy Studies*, Energy Security and Development – The Changing Global Context, to be held in Mumbai, India, 25th-27th October 2012.
- Member of the Organizing Committee of the V Congreso Iberoamericano de Desarrollo y Ambiente (CISDA V), Santa Fé, Argentina, 12th –14th September 2011 (<http://fich.unl.edu.ar/CISDAV/index.php>).
- Member of the Scientific Committee of the 9th International Conference of the European Society for Ecological Economics: Advancing Ecological Economics, Theory and Practice, Bogazici University, Istanbul, 14th-17th June 2011

(<http://www.esee2011.org/>).

- Member of the Organizing Committee of the 7th Biennial International Workshop *Advances in Energy Studies*, Can we break the addiction to fossil energy?, Universitat Autònoma de Barcelona, Bellaterra, Spain, 19th- 21st October 2010 (<http://www.societalmetabolism.org/aes2010.html>).
- Member of the Scientific Committee of the “Cuartas Jornadas de la Asociación Argentino-Uruguaya de Economía Ecológica, ASAUEE, *Nuevos escenarios globales y alternativas para un desarrollo local sostenible. La Economía Ecológica como oportunidad*, San Miguel de Tucumán, Argentina, 27 - 28 de November 2009 (<http://www.ungs.edu.ar/ecoeco>).
- Member of the Organising Committee of the Fourth *Iberoamerican Congress on Development and Environment* (CISDA IV), Bogotá, Colombia, 5 - 10 October 2009 (<http://www.cisdaiiv.unal.edu.co/>).
- Member of the Organising Committee of the Third *Iberoamerican Congress on Development and Environment*, Heredia, Costa Rica, 5th-9th November 2007 (<http://www.una.ac.cr/redibec-cisda/>).
- Member of the Organising Committee and main Organiser of the 3rd Liphe4 *Summer School on Developing Toolkits on Integrated and Participatory Analyses of Sustainability* (www.liphe4.org/school.html), held in Sangonera la Verde (Murcia, Spain), from 16th to 22nd July 2006.
- Member of the Organising Committee and main Organiser of the 2nd Liphe4 *Summer School on Participatory Integrated Assessment of Sustainability*, held in Sangonera la Verde (Murcia, Spain), from 17th to 23rd July 2005.
- Member of the Scientific Committee of the 6th *International Conference of the European Society for Ecological Economics* (<http://www.esee2005.org/>), held in Lisbon, 14th-17th June 2005.
- Member of the Scientific Committee of the International Conference *Complexity, Science & Society* (http://www.liv.ac.uk/ccr/2005_conf/), organised by the Center for Complexity Research, The University of Liverpool, held in Liverpool, 11th-14th September 2005.
- Member of the Organising Committee of the Second *Iberoamerican Congress on Development and Environment*, held in Puebla, Mexico, 24th-28th October 2005.
- Member of the Organising Committee of the Liphe4 *Summer Workshop on Participatory Integrated Assessment of Sustainability* (www.liphe4.org/school), held in Deutschlandsberg (Austria), from 20th to 27th August 2004.
- Member of the Organising Committee and main Organiser of the *Iberoamerican Congress on Development and Environment* (<http://www.entconsulting.com/cidma>), held in Quito, Ecuador, from 9th to 12th April 2003.

SCIENTIFIC ASSOCIATIONS AND REVIEWING

Reviewer of research proposals for the French Agence Nationale de la Recherche, 2011 call.

Reviewer of research proposals for the Spanish National Plan on R+D, Agencia Nacional de Evaluación y Prospectiva (ANEP), 2011 call.

Reviewer of research proposals for the EU call NEST, march 2006.

Reviewer of research proposals for The Asia-Pacific Network for Global Change Research, 2005-2006, 2007-2008, 2010-2011.

Member of the Consolidated Research Group on Economic Institutions, Quality of Life and the Environment, SGR2005 – 00571.

Member of the Academic Council of the *I Diplomado de Economía Ecológica*, FLACSO Guatemala.

Member of the Board of the European Society for Ecological Economics (2003-2006).

Member of the International Society for Ecological Economics.

Member of the European Working Group “Multiple Criteria Decision Aiding”.

Founding member of the Asociación Hispano Portuguesa de Economía de los Recursos Naturales (Portuguese-Spanish Association of Natural Resource Economics), AERNA.

Founding member of the Red Iberoamericana de Economía Ecológica (Iberoamerican Network for Ecological Economics), REDIBEC.

Founding member of the Scientific Society LIPHE⁴

Member of the Editorial Board of the *Revista Iberoamericana de Economía Ecológica* (Iberoamerican Journal of Ecological Economics), and of *Ecología Política* (Political Ecology).

Reviewer for the journals *Ecological Economics*; *Energy Policy*; *Energy*; *Journal of Industrial Ecology*; *Journal of Cleaner Production*; *Journal of Environmental Management*; *Ecological Modelling*; *Environment, Development and Sustainability*; *Ecological Indicators*; *International Journal of Global Environmental Issues*; *Sustainability: Science, Practice, and Policy*; *The Philippine Scientist*; *Revista Iberoamericana de Economía Ecológica*; *Historia Agraria*; *Ecología Política*.