

Interests

Climate change, energy economics, and carbon pricing mechanisms. Involved in climate, energy and development policies and low-carbon scenarios.

Academic qualifications

2014	New University of Lisbon, Faculty of Science and Technology, PT	Ph.D. in Climate Change and Sustainable Development Policies
2002	Technical University of Lisbon, Superior Institute of Economics, PT	MSc in Economics and Politics of Energy and Environment
1999	Minho University, Braga, PT	Degree in Economics

Other courses and visited institutions

2016	"Climate and Trade Policy Analysis with GAMS and MPSGE", University of Duisburg-Essen	12. Ruhr Graduate Summer School in Economics with Professors Christoph Böhringer, Edward J. Balistreri, and Volker Clausen
2010	"From Copenhagen to Cancun: State of play of climate talks", European Parliament, Brussels	Meeting at the European Parliament (10-12 Nov) by invitation of MEP Maria da Graça Carvalho.
2006	"Electricity Market Integration and Tariffs Harmonization", INESC Porto and ITT Madrid (Porto)	27 to 29 November 2006 Short course in energy markets integration and Iberian Electricity Markets issues.

Teaching experience

University of Minho School of Economics and Management – Department of Economics	Since 2014 Auxiliary Professor	Courses: .Energy Economics (since 2015) BSc. and MSc. .Economics and Environment (since 2015) BSc. .Energy and Environment Economics (since 2014) MSc. .Public Finance (since 2014) BSc. .Macroeconomics (since 2017) BSc. .Political Economics (14-16) BSc. .Other statistics and quantitative methods courses (07-14) BSc.
	2007-2014 Visiting Teacher Assistant	
University of Porto Engineering Faculty	2008-2013 Visiting Teacher Assistant	At the MIT Doctoral Program of "Sustainable Energy Systems" in subjects: .Introduction to Economics (11-12 and 12-13) Ph.D. .Econometrics (10-11 and 11-12) Ph.D. .Energy Economics (09-10) Ph.D. .Economics of Natural Resources and Environment (08-09) Ph.D.
National Institute of Administration	2005 and 2006 Teacher	Teacher of "Environmental Managing Systems in Public Services" (05 e 06), "Integrated Systems" in "Environmental Managing Systems."

Thesis supervisor (on energy and climate issues)

MSc Thesis “Economic analysis of the energy matrix - the case of renewable energies in Brazil”	2018-2019 (work in progress) Supervisor of Maira Tanaka, MsC in Social Economics, University of Minho.
MSc Thesis “Analysis of generation and regulation of renewable electricity in Portugal”	2018 Supervisor of Dário Dias, MsC in Industrial Economics, University of Minho.
MSc Thesis “Institutional carbon footprint – an application of the MC3 method to DST SA”	2017 Supervisor of Bruno Veiga, MsC in Industrial Economics, University of Minho.
MSc Thesis “Energy and Carbon: Relations between prices of natural gas, electricity, and carbon.”	2013 Co-supervisor of Nuno Gonçalo da Silva Marques, MsC in Economics, Beira Interior University.

Professional experience

European Commission (REA)	Since 2015 Expert	(currently) Research Executive Agency – Consulting evaluator for H2020 tasks.
University of Minho	Since 2011 Researcher Consultant	<p>(currently) Development of low-carbon macroeconomic, energy and carbon scenarios. Design, regulatory validation and economic and financial analysis of environmental technology projects. Including:</p> <p>#1 Revision of Mozambique’s Nationally Determined Contribution - Implementation Plan in the Sectors of Agriculture, Water, Energy, Early Warning Systems and Transport - 2018-ongoing. In Mozambique/Portugal, for CAOS, under a World Bank project, as mitigation expert and coordinator. Development of scenarios and analysis of measures. Design of a NAMA registry application for the Environment Ministry of Mozambique.</p> <p>#2 Intermunicipal Plan for Climate Change Adaptation at the Tâmega and Sousa Region - 2017-ongoing. Climate change economics expert. Includes the development of a socio-economic analysis of the region and scenario development up to 2050. Project by the Intermunicipal Community, coordinated by the Institute for Agricultural Development of the North Region of Portugal.</p> <p>#3 Roadmap for Carbon Neutrality 2050 - 2017-ongoing. Team coordinator at the University of Minho. Includes the expert advising in the development of macroeconomic scenarios for 2050 to the project coordinator Get2C. Project by the Portuguese State financed by the Environmental Fund.</p> <p>#4 International Trade in Renewable Energy with Cooperation Mechanisms: A CGE Analysis - 2015-ongoing. Principal Investigator, with co-investigator from the Public University of Navarre - Department of Economics, Spain. Includes the development of a static, multi-regional, CGE, for a European linkage of electricity from renewable sources.</p> <p>#5 PMR Colombia - Macro-economic assessment of price-based instruments to implement national emissions reductions targets in Colombia - 2016-2017, in Colombia/Portugal, for Get2C - World Bank project, as lead modelling expert. Adaptation of MEG4C, Colombia’s dynamic computable general equilibrium model to include a carbon market and taxes.</p> <p>#6 R3E in Euros - 2016-2017. Project for Amb3E, as principal investigator. Data gathering and econometric model development to explain the connection between European EEE fees and countries’ income per capita, and efficiency of the WEEE management process.</p> <p>#7 Economic study for the development of low-carbon options for Cape Verde, Mozambique and Sao Tome and Principe - 2014-2016, in Mozambique/Portugal, for CAOS, as consultant/lead expert. Supporting the validation of low carbon scenarios in a study on the feasibility of opportunities for low carbon and resilient development, with bottom-up modelling of energy scenarios. Support to the drafting of the first version of the INDC in the provision of services to CAOS to the Ministry of Environment of Mozambique.</p> <p>#8 Waste Roadmap in Cape Verde, and #9 Bioenergy at Sao Tome and Principe - 2015-2017 (expected), in Portugal/Cape Verde/Sao Tome and Principe, for Ecovisão, as carbon expert. Projects proponents include the Directorate of Environment from Cape Verde and Sao Tome and Principe. Includes the initial co-design of the projects, evaluation of GHG emissions of waste treatment options, and local training in waste and climate change issues.</p>

Euronatura Centre for Environmental Law and Sustainable Development (ENGO)	(since 2014) President (2006-2013) Director (2004-2005) Economist	(2015-2016) Co-organization and presentation of side events at COP21 and COP22, UNFCCC, Paris and Marrakech, of the projects "Bioenergy at Sao Tome and Principe" and "Waste Roadmap", with Ecovisão. (2009) Participation in the «finance experts» EU group at UNFCCC Conference – Copenhagen. Project management for: «Climate and Development at Santarém Municipality»; «EU CO2 80/50» with Manchester University; «AmbiCities» (concept and supervision); «Climate Change and Management» . Participation in projects: «Portuguese Post-Kyoto Forum»; «Environmental Harmful Subsidies.»
Smartwatt SA (Climate & Sustainability Dep.)	2008-2010 Executive Director	Conception and management of the Climate and Sustainability Department. Responsible for carbon markets and sustainability strategies, including client account management, project management. Relevant climate projects include the revision of the national mitigation strategy of Angola, as lead expert.
Ecoprogresso SA – (Portuguese Delegation to the UNFCCC)	2007 Consultant	(2007) Co-ordination of the EU Negotiations team «Expert Group on Kyoto Protocol Mechanisms» (under Ecoprogresso's work). Work in carbon issues – inventories and finance.
EDP Generation SA	2001-02 Economist	Investment analysis for power plants projects (wind, biomass and wave power plants). Participation in a carbon market simulation.
National Park Peneda-Gerês	2001 Economist	Participation in projects: «Strategic Restructuring Plan of Gerês Valley», «Doors» and «Planning and Management of Tourism in the NPPG».

Fellowships, grants, and awards

Climate Network Bronze Prize for "EU CO2 80/50 @AMP" project		(2010) Coordination of Metropolitan Area of Porto application to the Environmental Engineering Portuguese Association premium.
Bergen University, Norway	Bergen Univ. Scholarship	(2009) Researcher at «Bergen Summer Research School: Climate, Environment and Energy.»
INESC Porto, Power Unit	FCT Scholarship	(2005-08) MILES Project «The impact of the Iberian electricity market in companies' profits and supply security: a simulation analysis», including GAMS simulation for CO2 impacts.
SW 15 th Best Portuguese Small Company to Work, 2009		Coordination of SW application to Heidrick & Struggles and Exame magazine premium, while HR director.
Aveiro University	INAG Scholarship	(2003-04) Researcher at INSAAR Project (National Inventory of Water and Wastewater Systems).

Published peer-reviewed scientific work

"EEE fees and the WEEE system – A model of efficiency and income in European countries." 2018		Sousa, R., Agante, E., Cerejeira, J., & Portela, M. (2018). EEE fees and the WEEE system – A model of efficiency and income in European countries. Waste Management 79C, 770-780.
"California's carbon market and energy prices: a wavelet analysis." 2018		Aguiar-Conraria, L., Soares, M. J. and Sousa, R. (2018). California's carbon market and energy prices: a wavelet analysis. Phil. Trans. R. Soc. A, 376(2126), 20170256.
"Energy and carbon prices: a comparison of interactions in the EU ETS and the WCI market." 2015		Sousa, R. and Aguiar-Conraria, L. (2015). Energy and carbon prices: a comparison of interactions in the European Union Emissions Trading Scheme and the Western Climate Initiative market. Carbon Management 6(3-4): 129-140.
"Carbon financial markets: A time–frequency analysis of CO ₂ prices." 2014		Sousa, R., Aguiar-Conraria, L. and Soares, M. J. (2014). Carbon financial markets: A time–frequency analysis of CO ₂ prices. Physica A: Statistical Mechanics and its Applications 414(0): 118-127.

Academic peer-reviewed conferences proceedings publication

ICOPEV 2018 - 4th Int. Conf. on Production Econ. and Project Evaluation, Univ. of Minho, PT	2018 "Municipal solid waste climate change mitigation measures <i>vis-à-vis</i> the waste roadmap of Cabo Verde"
EAERE 23 - European Ass. of Environmental and Resource Economists, Athens, GR	2017 "International Trade in Renewable Energy with Cooperation Mechanisms: A CGE Analysis"
EEM 2016 - 13th European Energy Market Conference, University of Porto, PT	2016 "International Trade in Renewable Energy with Cooperation Mechanisms: A CGE Analysis" http://goo.gl/JSGBnx
EAERE 21 - European Ass. of Environmental and Resource Economists, University of Helsinki, FI	2015 "CO ₂ Price Dynamics in the Carbon Market of California"
III Congresso de Ciência e Desenvolvimento dos Açores, University of Açores, PT	2015 "Low carbon and resilient development scenarios in small island developing states in the long run: the case of São Tomé e Príncipe"
1st Meeting on Energy and Environmental Economics, University of Aveiro, Aveiro, PT	2014 "Carbon prices short-run dynamics – Results from Europe and California"
8th Meeting of the Portuguese Economic Journal, University of Minho, Braga, PT	2014 "Carbon Financial Markets: a time-frequency analysis of CO ₂ price drivers"
10th Seminar Day, FEP, Univ. of Porto, PT	2014 "Carbon Financial Markets: a time-frequency analysis of CO ₂ price drivers"
2014 EEG Research Day, Univ. of Minho, PT	2014 "California Carbon Allowances Price Drivers - First Evidences"
2013 EEG Research Day, Univ. of Minho, PT	2013 "Dynamics of CO ₂ Prices"
II Seminar - From Models to the Reality of Electricity and Natural Gas Markets, FEP, PT	2009 "The Impact of CO ₂ Prices on the Generation of the Oligopolistic Iberian Electricity Market" (MILES)
Optimization 2007, 6th International Conference on Optimization, FEP, Porto, PT	2007 "The Electricity Market Agents Decisions within the New Iberian Electricity Market and the EU Emissions Trading Scheme" (MILES)
EUROXXII, 22nd Conference on Operational Research Prague, CZ.	2007 "The Iberian Electricity Market Agents Decisions Concerning CO ₂ Prices in Kyoto and Post-Kyoto Periods" (MILES)
9th IAEE European Energy Conference, Florence, IT	2007 "The Impact of Kyoto and Post-Kyoto CO ₂ Prices on the Iberian Electricity Market Agents Decisions" (MILES) (co-author)
ORMMES'06, 19th Mini EURO Conference on "Operational Research Models and Methods in Energy Sector", Coimbra, PT	2006 "Modelling the Impact of Emissions Trading on the Iberian Electricity Market" (MILES) (co-author) ISBN 989-95055-0-1

Scientific conferences – Committees

3rd APEEN & 5th ME3 Challenges for Energy and Environmental Economics beyond 2030	October 18-19, 2018 3rd Annual Conference of the Portuguese Association of Energy Economics – APEEN and ME3 - International Meeting on Energy and Environmental Economics Member of the Scientific Committee and of the Organizing Committee
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Complementary knowledge

Software	Specific software, as a user.	Statistics and econometrics: EViews, others. Modelling and optimization: GAMs, LEAP, GACMO.
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Affiliations: Energy and Environmental Agency of Minho University (Member of the expert group), PT; European Association of Environmental and Resource Economists (EAERE); Portuguese Association of Energy Economists (APEEN).

Several presentations in other speciality events, radio and television since 2005, highlighting the monthly opinion column in the online "Economics Journal" (<http://www.jornaleconomico.sapo.pt/noticias/autor/rita-sousa-professora-na-universidade-do-minho>)