

# Final Programme

## DAY 9 - 9:30

### Room 631 - Opening Session

Prof. João Proença - Dean of the School of Economics, University of Porto

Prof. Isabel Soares - General-Chair of ICEE, Full Professor, University of Porto

Prof. Paula Ferreira - Professor of the School of Engineering, University of Minho

## DAY 9 - 10:00

### Room 631 - Keynote Speakers Session

Prof. Henrik Lund - Aalborg University

Prof. Henrik G. Sol - University of Groningen

Prof. Niels von der Fehr - University of Oslo

Prof. Anil Markandaya - Director of the Basque Centre for Climate Change

## DAY 9 - 14:30

### Room 626 - Technological Change and the Environment 1

On the effects of environmental policy in an endogenous growth model with dirty versus ecological technology	Mónica Meireles <sup>1</sup> ; Isabel Soares <sup>2</sup> ; Óscar Afonso <sup>2</sup>	<sup>1</sup> ISCTE-IUL and BRU-IUL; <sup>2</sup> FEP and CEFUP
A critical analysis of the sustainable consumption of bitumen in hot mix asphalt made with recycled concrete aggregates	Ignacio Pérez Pérez <sup>1</sup> ; Ana Rodríguez Pasandín <sup>1</sup> ; Nuria Calvo <sup>1</sup> ; Jacobo Feás <sup>2</sup>	<sup>1</sup> University of A Coruña; <sup>2</sup> University of Santiago de Compostela
The technological and environmental efficiency of EU-27 power mix: an evaluation through MPT	Fernando de Llano Paz <sup>1</sup> ; Susana Iglesias Antelo <sup>1</sup> ; Anxo Calvo Silvosa <sup>1</sup> ; Isabel Soares <sup>2</sup>	<sup>1</sup> Faculty of Economics and Business (University of A Coruña); <sup>2</sup> School of Economics, University of Porto
Leapfrogging agriculture as usual: The potential contribution and sustainability benefits of organic farming to carbon sequestration in Portugal	Manuela Castro e Silva <sup>1</sup> ; Margarida Silva <sup>2</sup>	<sup>1</sup> Faculdade de Economia da Universidade do Porto; <sup>2</sup> CBQF/Escola Superior de Biotecnologia da Universidade Católica Portuguesa

### Room 613 - Energy Modelling 1

Electricity decarbonisation pathways for 2050: a TIMES based approach in closed versus open systems modelling	Filipa Amorim <sup>1</sup> ; André Pina <sup>1</sup> ; Hana Gerbelová <sup>1</sup> ; Patrícia Pereira da Silva <sup>2</sup> ; Jorge Vasconcelos <sup>1</sup> ; Victor Martins <sup>3</sup>	<sup>1</sup> MIT Portugal Program - Sustainable Energy Systems, IN+, Inst Sup Tecn, Universidade Técnica de Lisboa; <sup>2</sup> MIT Portugal Program - Sustainable Energy Systems, FEUC, Universidade de Coimbra and INESCC; <sup>3</sup> MIT Portugal Program - Sustainable Energy Systems, ISEG, Universidade Técnica de Lisboa
A multi-objective interactive approach to assess economic-energy-environment trade-offs in Brazil	Arioaldo Lopes de Carvalho <sup>1</sup> ; Carlos Henggeler Antunes <sup>1</sup> ; Fausto Freire <sup>1</sup> ; Carla Oliveira Henriques <sup>2</sup>	<sup>1</sup> University of Coimbra; <sup>2</sup> Polytechnic Institute of Coimbra
Renewable energy scenarios in the portuguese electricity system	Liliana Fernandes <sup>1</sup> ; Paula Ferreira <sup>2</sup>	<sup>1</sup> University of Minho; <sup>2</sup> University of Minho
Scaling Laws and Electricity Consumption in Cities: a sectoral view	Ana Gonçalves <sup>1</sup> ; Tiago Domingos <sup>1</sup>	<sup>1</sup> Instituto Superior Técnico

### Room 639 - Economic Growth and Sustainability 1

Useful work accounting: Final exergy-to-useful work analysis in Mexico from 1971 to 2009	Zeus Guevara <sup>1</sup> ; André Serrenho <sup>1</sup> ; Tânia Sousa <sup>1</sup> ; Tiago Domingos <sup>1</sup>	<sup>1</sup> Instituto Superior Técnico
Impact of Electricity Consumption on Output in Malaysian Manufacturing Sector	Dzul Hadzwan Husaini <sup>1</sup> ; Lean Hooi Hooi <sup>2</sup>	<sup>1</sup> Faculty of Economics and Business, Universiti Malaysia Sarawak; <sup>2</sup> Economics Program, School of Social Sciences, Universiti Sains Malaysia
Fuel wood use and Economic Growth in Ghana: Implications for Climate Change Mitigation	Jonathan D. Quartey <sup>1</sup>	<sup>1</sup> Department of Economics, Kwame Nkrumah University of Science and Technology
Analysis of green net national income and genuine saving: Portugal, 1991 - 2005	Rui Mota <sup>1</sup> ; Tiago Domingos <sup>1</sup>	<sup>1</sup> IST UNL

DAY 9 - 16:30

Room 626 - Energy System Analysis 1

Application of solar lighting energy system: Anadolu Airport in Turkey	Nilgun F. Bayraktar <sup>1</sup> ; Emre Kiyak <sup>1</sup>	<sup>1</sup> Anadolu University
Exergy-to-useful work analysis in Brazil from 1971 to 2009	Francisco Vieira de Sá <sup>1</sup> ; André Cabrera Serrenho <sup>2</sup> ; Tânia Sousa <sup>2</sup>	<sup>1</sup> Instituto Superior Técnico; <sup>2</sup> Department of Mechanical Engineering and IN+, Instituto Superior Técnico
Measuring the Impact of Renewable Energy Sources on the Optimal Generation Mix: An Application to the Iberian Electricity Market	Carla Manuela Tavares Mendes <sup>1</sup> ; Isabel Soares <sup>1</sup>	<sup>1</sup> School of Economics, University of Porto
Electricity cost optimization in a renewable energy system	Sérgio Pereira, Paula Ferreira, A.I. Vaz	Center for Industrial and Technology Management, Universidade do Minho

Room 642 - Energy Efficiency 1

Efficiency of the introduction of electric buses in public transport fleet	Marko Slavulj <sup>1</sup> ; Davor Brčić <sup>1</sup> ; Ljupko Šimunović <sup>1</sup>	<sup>1</sup> Faculty of Transport and Traffic Sciences University of Zagreb
An Economic Model For Waste to Heat District Greenhouse Heating	Mehmet Basak <sup>1</sup> ; Suleyman Hakan Sevilgen <sup>1</sup>	<sup>1</sup> Yildiz Technical University
Knowing electricity end-uses to successfully promote energy efficiency in buildings: a case study in low-income houses in Southern Brazil	Arthur Santos Silva <sup>1</sup> ; Fernando Luiz <sup>1</sup> ; Ana Carolina Mansur <sup>1</sup> ; Abel Silva Vieira <sup>1</sup> ; Aline Schaefer <sup>1</sup> ; Enedir Ghisi <sup>1</sup>	<sup>1</sup> Federal University of Santa Catarina
Characterisation and Modelling of Energy Behaviours	Marta Lopes <sup>1</sup> ; Carlos Henggeler Antunes <sup>2</sup> ; Nelson Martins <sup>3</sup> ; Maria São João Breda <sup>4</sup> ; Paulo Peixoto <sup>5</sup>	<sup>1</sup> INESC Coimbra and ESAC; <sup>2</sup> INESC Coimbra and University of Coimbra; <sup>3</sup> University of Aveiro; <sup>4</sup> Institute of Cognitive Psychology, University of Coimbra; <sup>5</sup> Centre for Social Studies, University of Coimbra

**Room 613 - Market Power and Regulation**

Regulating International Gas Transport: Welfare Effects of Postage Stamp and Entry-Exit Systems	António Brandão <sup>1</sup> ; Isabel Soares <sup>1</sup> ; Joana Resende <sup>1</sup> ; Joana Pinho <sup>2</sup> ; Paula Sarmiento <sup>1</sup>	<sup>1</sup> CEF.UP and Faculty of Economics of University of Porto; <sup>2</sup> CEF.UP. RGEA and Faculdade de Económicas. Universidad de Vigo
The impact of regulation, privatization and competition in gas infrastructure investments	Tiago Andrade <sup>1</sup>	<sup>1</sup> REN - Redes Energéticas Nacionais
Trading a Pumped Storage Hydro in a Liberalized Electricity Market with Increasing Degrees of Market Power	Fábio Teixeira <sup>1</sup> ; Jorge Sousa <sup>2</sup> ; Sérgio Faias <sup>2</sup>	<sup>1</sup> ISEL; <sup>2</sup> ISEL and Cie3/IST
The “Smart Paradox”: Stimulate the deployment of Smart grids with effective regulatory instruments	Vítor Marques <sup>1</sup> ; Nuno Bento <sup>2</sup> ; Paulo Morais Costa <sup>3</sup>	<sup>1</sup> ERSE, Portugal; <sup>2</sup> DINÂMIA CET-IUL, ISCTE, Portugal; <sup>3</sup> Instituto Politécnico de Viseu, Escola Superior de Tecnologia e Gestão; INESC TEC – INESC Technology and Science

**Room 639 - Wealth Accounting and Valuation of Eco Systems**

Non-market valuation of environmental resources in Portugal	Paula Simões <sup>1</sup> ; Luís Cruz <sup>2</sup> ; Eduardo Barata <sup>2</sup>	<sup>1</sup> Polytechnic Institute of Leiria; <sup>2</sup> GEMF, Faculty of Economics, University of Coimbra
Transport infrastructure project evaluation using cost-benefit analysis: how are environmental impacts assessed?	Heather Jones <sup>1</sup> ; Filipe Moura <sup>1</sup> ; Tiago Domingo <sup>1</sup>	<sup>1</sup> Instituto Superior Técnico
The carbon responsibility of capital and labour	Alexandra Marques <sup>1</sup> ; João Rodrigues <sup>1</sup> ; Tiago Domingos <sup>1</sup>	<sup>1</sup> Instituto Superior Técnico, Universidade Técnica de Lisboa, Lisbon, Portugal
Public opinion on renewable energy technologies. The portuguese case.	Fernando Ribeiro; Paula Ferreira; Madalena Araújo; Ana Cristina Braga	Universidade do Minho

**DAY 10 - 9:30****Room 642 - Energy Technology 1**

The usage of BiogasWebPlanner® system for analysis of biogas market tendencies in Poland	Pablo Cesar Rodriguez Carmona, Krzysztof Pilarski, Tomasz Kluza, Jacek Dach, Piotr Boniecki, Wojciech Czekafa, Andrzej Lewicki, Damian Janczak, Kamil Witaszek	Institute of Biosystems Engineering, Poznan University of Life Sciences, POLAND
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Prospects on employing microalgae into the production of biofuels: outcomes from a Delphi study	Lauro André Ribeiro <sup>1</sup> ; Patrícia Pereira da Silva <sup>2</sup> ; Teresa Margarida Mata <sup>3</sup> ; António Areosa Martins <sup>4</sup>	<sup>1</sup> Energy for Sustainability Initiative - Univ. Coimbra and INESCCoimbra; <sup>2</sup> Faculty of Economics - Univ. Coimbra, INESCCoimbra and Energy for Sustainability Initiative; <sup>3</sup> Faculty of Engineering - University of Porto; <sup>4</sup> Faculty of Natural Sciences, Engineering and Technology - Oporto Lusophone University
Low intensity pretreatment before anaerobic waste activated sludge anaerobic digestion	Klaudiusz Grubel <sup>1</sup> ; Jan Suschka <sup>1</sup> ; Bożena Mrowiec <sup>1</sup>	<sup>1</sup> University of Bielsko-Biala
Influence of sewage sludge content in the mixture with sawdust and maize straw on composting process dynamics	Wojciech Czekala <sup>1*</sup> , Jacek Dach <sup>1</sup> , Jacek Przybył <sup>1</sup> , Krzysztof Pilarski <sup>1</sup> , Damian Janczak <sup>1</sup> , Andrzej Lewicki <sup>1</sup> , Kamil Witaszek <sup>1</sup> , Pablo César Rodríguez Carmona <sup>1</sup> , Robert Mazur <sup>2</sup> , Krystyna Malińska <sup>3</sup> , Magdalena Myszura <sup>2</sup>	Institute of Biosystems Engineering, Poznan University of Life Sciences, POLAND
Analytical and Computational Studies of Utilising LSCs Luminescent Solar Concentrators Incorporated With Multi-Junction Photovoltaic Cells in the UAE	Hisham Mashmoushy	Beirut Arab University, Beirut, Lebanon

### Room 613 - Environmental and Social Impact Assessment 1

An integrated modeling approach for greening commuters' transportation and parking	Luis Cruz <sup>1</sup> ; Fausto Freire <sup>2</sup> ; João-Pedro Ferreira <sup>1</sup> ; Eduardo Barata <sup>1</sup>	<sup>1</sup> GEMF, Faculty of Economics, University of Coimbra; <sup>2</sup> ADAI-LAETA, DEM, University of Coimbra
Reducing energy use by dialogue marketing. A combined approach for mobility and households' energy use	Reinhard Hössinger <sup>1</sup> ; Christoph Link <sup>1</sup> ; Ulrike Raich <sup>1</sup> ; Wiebke Unbehaun <sup>1</sup>	<sup>1</sup> Institute for Transport Studies, Department of Landscape, Spatial and Infrastructure Sciences, University of Natural Resources and Life Sciences Vienna, Austria
Wind Energy and local community perceptions	Fátima Lima <sup>1</sup> ; Paula Ferreira <sup>1</sup> ; Filipa Vieira <sup>1</sup>	<sup>1</sup> University of Minho
Economic, social, energy and environmental assessment of inter municipality commuting	João-Pedro Ferreira <sup>1</sup> ; Pedro Ramos <sup>1</sup> ; Luis Cruz <sup>1</sup> ; Eduardo Barata <sup>1</sup>	<sup>1</sup> GEMF, Faculty of Economics, University of Coimbra

Evaluation of Post-2012 carbon policies	Dr. Olga Diukanova <sup>1</sup>	<sup>1</sup> Foundation for the Development of Environmental and Energy Markets
<b>Room 626 - Energy System Analysis 2</b>		
Energy planning with electricity storage and sustainable mobility: the study of São Miguel island	Miguel Moreira da Silva <sup>1</sup> ; Manuel António Matos <sup>2</sup> ; João Abel Peças Lopes <sup>2</sup>	<sup>1</sup> Faculdade de Engenharia, Universidade do Porto; <sup>2</sup> Faculdade de Engenharia, Universidade do Porto / INESC Porto
Useful work transitions for Portugal from 1856 to 2009. Intensities and European patterns.	André Cabrera Serrenho <sup>1</sup> ; Benjamin Warr <sup>2</sup> ; Tânia Sousa <sup>1</sup> ; Robert U. Ayres <sup>2</sup> ; Tiago Domingos <sup>1</sup>	<sup>1</sup> Instituto Superior Técnico, Technical University of Lisbon; <sup>2</sup> INSEAD
The systems of data acquisition in bioreactor for modeling of biowaste composting	Damian Janczak; Jacek Dach; Krzysztof Pilarski; Piotr Boniecki; Jacek Przyby; Andrzej Lewicki; Wojciech Czekala; Kamil Witaszek; Pablo César Rodríguez Carmona; Marta Cieřlik	Institute of Biosystems Engineering, Poznan University of Life Sciences, POLAND
Selection of portfolios of electricity generation projects: an exploratory study	Eduardo Matos, Paula Ferreira, Jorge Cunha	Center for Industrial and Technology Management, Universidade do Minho
Potential Role of Stationary Urban Distributed Storage on the Management of Power Systems	José Gonçaves <sup>1,3</sup> , António Martins <sup>1,3</sup> , Luís Neves <sup>1,2,3</sup>	<sup>1</sup> University of Coimbra, <sup>2</sup> Polytechnic Institute of Leiria, <sup>3</sup> INESC Coimbra
<b>Room 639 - Energy Markets 1</b>		
Drivers for household electricity prices in the EU: a system-GMM panel data approach	Patrícia Pereira da Silva <sup>1</sup> ; Pedro Cerqueira <sup>2</sup>	<sup>1</sup> Faculty of Economics - Univ. Coimbra, INESC Coimbra and Energy for Sustainability Initiative; <sup>2</sup> Faculty of Economics - Univ. Coimbra and GEMF
Causes of the volatility of electricity spot price in Brazil	Nivalde José de Castro <sup>1</sup> ; André Luis da Silva Leite <sup>2</sup> ; Guilherme de Azevedo Dantas <sup>1</sup> ; Roberto Brandão <sup>1</sup>	<sup>1</sup> Federal University of Rio de Janeiro UFRJ Brazil; <sup>2</sup> Federal University of Santa Catarina UFSC Brazil

The welfare cost of energy insecurity	Baltasar Manzano <sup>1</sup> ; Luis Rey <sup>2</sup>	<sup>1</sup> Universidade de Vigo and Economics for Energy; <sup>2</sup> Economics for Energy
Explanatory variables on South-west spot electricity markets integration	Nuno Figueiredo <sup>1</sup> ; P. Pereira da Silva <sup>2</sup>	<sup>1</sup> MIT-Portugal - Universidade de Coimbra; <sup>2</sup> Faculty of Economics, University of Coimbra

#### DAY 10 - 11:30

##### Room 626 - Technological Change and the Environment 2

Preparation and Characterization of LaCoO <sub>3</sub> Using in Purify Pollutant for Example in Gas Refinery	H.Haghpars <sup>1</sup>	<sup>1</sup> 4TH refinery south pars gas complex
Environmental and Socio-Economic impact assessment of the production of kenaf (HIBISCUS CANNABINUS L.) when irrigated with treated waste waters	Bruno Barbosa <sup>1</sup> ; Ana Fernando <sup>1</sup> ; Benilde Mendes <sup>1</sup>	<sup>1</sup> New University of Lisbon
Electro-coagulation of raw water in batch using aluminium and iron electrodes	BELHOUT Dalila <sup>1</sup>	<sup>1</sup> National Polytechnic School, Algiers, Algeria
Pollution Offshoring: Myth or Reality? Evidence from the United States and the European Union	Claire Brunel <sup>1</sup>	<sup>1</sup> Georgetown University

##### Room 613 - Energy Markets 2

Crude Oil nonlinear linkages with stocks: regional, country and sector effects	Carlos Pinho <sup>1</sup> ; Mara Madaleno <sup>1</sup>	<sup>1</sup> Universidade de Aveiro
Impact of fossil fuel costs on electric power prices. Empirical evidence of the Spanish case	María Teresa García-Álvarez; Blanca Moreno	<sup>1</sup> Unviersity of Oviedo; <sup>2</sup> University of Coruna
The Impact of EU ETS on the Spanish Electricity Prices	Carlos Pereira Freitas <sup>1</sup> ; Patrícia Pereira da Silva <sup>2</sup>	<sup>1</sup> Institute of Engineering, Polytechnic of Porto and Faculty of Economics, University of Coimbra; <sup>2</sup> Faculty of Economics, Univ. Coimbra, INESC Coimbra and Energy for Sustainability Initiative
Copulas and CoVaR, with applications for the energy market	Romain Decet <sup>1</sup> ; and Thorsten Lehnerty <sup>2</sup>	<sup>1</sup> Risk & Credit Management, Enovos Luxembourg S.A., and Luxembourg School of Finance, University of Luxembourg; <sup>2</sup> Luxembourg School of Finance, University of Luxembourg

##### Room 639 - Markets and Drivers of Renewable Energy

The looming impact of higher shares of Renewables on electricity market prices	Reinhard Haas <sup>1</sup>	<sup>1</sup> EEG TU Wien
Renewable energy sources: economic, environmental and technical aspects	Susana Silva <sup>1</sup> ; Isabel Soares <sup>2</sup> ; Óscar Afonso <sup>2</sup>	<sup>1</sup> Universidade Lusíada and CEFUP; <sup>2</sup> FEP and CEFUP
CO2 reduction potentials and costs of biomass-based alternative energy carriers in Austria	Amela Ajanovic <sup>1</sup> ; Reinhard Haas <sup>1</sup>	<sup>1</sup> Vienna University of Technology
Entry strategies in the face of incumbents dominant position: the case of advanced renewable energy technologies	Margarida Fontes <sup>1</sup> ; Cristina Sousa <sup>2</sup> ; Silvana Pimenta <sup>3</sup>	<sup>1</sup> LNEG - Laboratório Nacional de Energia e Geologia; <sup>2</sup> DINAMIA CET and ISCTE-IUL; <sup>3</sup> ISCTE-IUL

### Room 642 - Economic Growth and Sustainability 2

Economic Growth and Useful Work	João Santos <sup>1</sup> ; Rui Mota <sup>1</sup> ; Tânia Sousa <sup>1</sup> ; Tiago Domingos <sup>1</sup>	<sup>1</sup> IN+, Center for Innovation, Technology and Policy Research, Environment and Energy Scientific Area, Department of Mechanical Engineering, Instituto Superior Técnico, UTL
Fossil&Renewable Energy Consumption, GHGs and Economic Growth: Evidence from a Panel of European Union (EU) Countries	Gulden Boluk <sup>1</sup> ; Mehmet Mert <sup>1</sup>	<sup>1</sup> Akdeniz University
Towards sustainable product development: an environmental and economic study	Carla L. Simões <sup>1</sup> ; Lígia M. Costa Pinto <sup>2</sup> ; C. A. Bernardo <sup>1</sup>	<sup>1</sup> Institute for Polymers and Composites – IPC/I3N, University of Minho; <sup>2</sup> Department of Economics/NIMA, University of Minho
A Macroeconomic Model For An Oil Scarcity Scenario	O. Carvalho, J. Magalhães, T. Sousa,	Instituto Superior Técnico Department of Mechanical Engineering

### DAY 10 - 14:30

### Room 626 - Environmental and Social Impact Assessment 2

Sustainability indicators for the portuguese cork industry	Ana Paula Perlin <sup>1</sup> ; Gisele Bortolaz Guedes <sup>1</sup> ; Manuel Lopes Nunes <sup>1</sup> ; Paula Ferreira <sup>1</sup>	<sup>1</sup> University of Minho
Comparative performance of alternative ready-to-use LCIA methods: The case-study of the pulp and paper industry	Margarida S. Gonçalves <sup>1</sup> ; Tânia Pinto-Varela <sup>2</sup> ; Ana Paula Barbosa-Póvoa <sup>3</sup> ; Augusto Q. Novais <sup>1</sup>	<sup>1</sup> LNEG; <sup>2</sup> LNEG, IST; <sup>3</sup> IST
Sustainability Indicators for Electric Utilities: a proposal using PCA	Marta Guerra da Mota <sup>1</sup> ; Isabel Soares <sup>2</sup>	<sup>1</sup> FEUP; <sup>2</sup> FEP e CEFUP



Bringing in competing stakeholders: A sustainable management of the Alqueva Reservoir	Amando A. Radomes, Jr. <sup>1</sup> ; Camilo Andrés Benítez Ávila <sup>1</sup>	<sup>1</sup> Universidade Nova de Lisboa
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Conceptualizing a Credits Trading Approach towards Corporate Social Responsibility Credits	Shantesh Hedeia, Paula Varandas Ferreira, Manuel Lopes Nunes, Luis Alexandre Rocha	University of Minho
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### Room 642 - Energy Modelling 2

Oil abundance and economic growth – a panel data analysis	Nuno Torres <sup>1</sup> ; Óscar Afonso <sup>2</sup> ; Isabel Soares <sup>2</sup>	<sup>1</sup> CEFUP and Universidade Lusíada Porto; <sup>2</sup> FEP and CEFUP
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Potential of CO2 taxes as a policy measure towards low-carbon Portuguese electricity sector by 2050	Hana Gerbelová <sup>1</sup> ; Filipa Amorim <sup>1</sup> ; André Pina <sup>1</sup> ; Christos Ioakimidis <sup>2</sup> ; Paulo Ferrão <sup>1</sup>	<sup>1</sup> MIT Portugal Program - Sustainable Energy Systems, Instituto Superior Técnico; <sup>2</sup> Deusto Institute of Technology, DeustoTech
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Methodology to develop integrated scenarios for electricity demand, mix electricity supply, price and GDP	Mário Brito <sup>1</sup> ; Tânia Sousa <sup>1</sup>	<sup>1</sup> Department of Mechanical Engineering and IN+, Instituto Superior Técnico
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Modelling the Hungarian energy system – the first step towards sustainable energy planning	Fanni Sáfián <sup>1</sup>	<sup>1</sup> Eötvös Loránd University, Hungary
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### Room 613 -Energy Technology 2

Photovoltaic power predict using neural network	Samir H. OUDJANA <sup>1</sup>	<sup>1</sup> URAER
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Support of Electric Energy Requirement at Educational Institutions with Photovoltaic Systems Generating Electricity from Solar Radiation	Ali Vardar <sup>1</sup> ; Atalay Çetin <sup>2</sup>	<sup>1</sup> Uludağ University; <sup>2</sup> Aksaray University
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Addition of fish waste to maize silage fermentation as a sample of synergy effect in biogas production	Andrzej Lewicki <sup>1</sup> ; Krzysztof Pilarski <sup>1</sup> ; Jacek Dach <sup>1</sup> ; Damian Janczak <sup>1</sup> ; Wojciech Czeaka <sup>1</sup> ; Kamil Witaszek <sup>1</sup> ; Pablo César Rodríguez Carmona <sup>1</sup> ; Krystyna Malińska <sup>2</sup> ; Roman Marecik <sup>3</sup> ; Paweł Cyplik <sup>3</sup>	<sup>1</sup> Poznan University of Life Sciences; Institute of Biosystems Engineering; <sup>2</sup> Czestochowa University of Technology; <sup>3</sup> Poznan University of Life Sciences; Department of Biotechnology and Food Microbiology
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The application of low temperature anaerobic digestion for BTX removal	Bożena Mrowiec <sup>1</sup> ; Mariusz Kuglarz <sup>1</sup> ; Lucyna Przywara <sup>1</sup>	<sup>1</sup> University of Bielsko-Biala
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### Room 639 -Energy Efficiency 2

Improve Energy Efficiency and Sustainability in a Retractable Plastic Factory	João Galvão <sup>1</sup> ; Licínio Moreira <sup>2</sup> ; João Ramos <sup>1</sup> ; Sérgio Leitão <sup>3</sup>	<sup>1</sup> Leiria Polytechnic Institute & INESC Coimbra, Portugal; <sup>2</sup> Leiria Polytechnic Institute, Portugal; <sup>3</sup> UTAD - University of Trás-os-Montes and Alto Douro, Vila Real, Portugal
Refurbishment of barracks housing - Energetic, economic and ecological	Kathleen Schwabe <sup>1</sup> ; Falk Schaudienst <sup>1</sup> ; Manuela Walsdorf-Maul <sup>1</sup>	<sup>1</sup> TU Berlin
A preliminary assessment of energy performance in refurbished schools	Manuel Carlos Gameiro <sup>1</sup> ; Carlos Henggeler Antunes <sup>2</sup> ; Hermano Bernardo <sup>2</sup> ; Humberto Jorge <sup>2</sup> ; Luís Cruz <sup>3</sup> ; Eduardo Barata <sup>3</sup> ; Luísa Dias Pereira <sup>1</sup> ; Mariana Coimbra <sup>4</sup> ; Gonçalo Luis <sup>4</sup> ; Luis Borges <sup>4</sup> ; Luís Neves <sup>5</sup> ; José Costa <sup>1</sup>	<sup>1</sup> University of Coimbra and ADAI – LAETA; <sup>2</sup> University of Coimbra and INESC Coimbra; <sup>3</sup> GEMF, University of Coimbra; <sup>4</sup> TDGI – Tecnologia e Gestão de Imóveis, S.A.; <sup>5</sup> Polytechnic Institute of Leiria and INESC Coimbra
Measuring energy efficiency in exports	Joao Liborio <sup>1</sup>	<sup>1</sup> European Commission

#### DAY 10 - 16:30

##### Room 626 - Environmental and Social Impact Assessment 3

Biogas Energy in Turkey: Current Situation, Sustainability and Policy Implications	Gulden Boluk <sup>1</sup> ; Serhat Kucukali <sup>2</sup>	<sup>1</sup> Akdeniz University; <sup>2</sup> Canakaya University
Environmental and traffic implications of cheap energy: Case study in the State of Kuwait	Dr. Abdirashid Elmi <sup>1</sup>	<sup>1</sup> Kuwait University
A Cost-Benefit Analysis for Social Impact Assessment: the case of preventive measures in a hospital	Delfina Ramos, Pedro Arezes, Paulo Afonso	University of Minho
A prospective analysis of the employment impacts of energy efficiency retrofit investment in Portugal by 2020	Carla Oliveira Henriques <sup>1</sup> ; Dulce Coelho <sup>2</sup> ; Patrícia Pereira Silva <sup>3</sup>	<sup>1</sup> ISCAC, Polytechnique Institute of Coimbra and INESC Coimbra; <sup>2</sup> ISEC, Polytechnique Institute of Coimbra and INESC COimbra; <sup>3</sup> Faculty of Economics, University of Coimbra
Sustainable Development in Portuguese Business Organizations: Performance Dimensionality and Utilization Patterns	Pedro Mamede <sup>1</sup> ; Carlos F. Gomes <sup>2</sup>	<sup>1</sup> PROCESS ADVICE Lda and University of Coimbra – School of Economics; <sup>2</sup> University of Coimbra – School of Economics and ISR- Institute of Systems and Robotics

### Room 642 - Energy Efficiency 3

Techno-economic evaluation of cogeneration units considering carbon emission savings	Ana Cristina Magalhães Ferreira <sup>1</sup> ; Manuel Lopes Nunes <sup>1</sup> ; Senhorinha Teixeira <sup>1</sup> ; Luís Martins <sup>1</sup>	<sup>1</sup> University of Minho
Energy efficiency of a city hotel – Bringing together energy savings and life cycle costs	Manuela Walsdorf-Maul <sup>1</sup> ; Kathleen Schwabe <sup>1</sup> ; Falk Schaudienst <sup>1</sup>	<sup>1</sup> Technische Universität Berlin
Energetic efficiency analysis of the agricultural biogas plant in 250 kWe experimental installation	Jacek Dach, Krzysztof Pilarski, Piotr Boniecki, Jacek Przybył, Damian Janczak, Andrzej Lewicki, Wojciech Czekala, Kamil Witaszek, Pablo César Rodríguez Carmona, Marta Ciešlik	Institute of Biosystems Engineering, Poznan University of Life Sciences, POLAND
A comparative study of the evolution on energy efficiency between 1960 - 2009 across 4 European countries	João Catarino <sup>1</sup> ; André Cabrera Serrenho <sup>1</sup> ; Tânia Sousa <sup>1</sup>	<sup>1</sup> Instituto Superior Técnico, Technical University of Lisbon

### Room 613 - Energy Projects Analysis

Evaluation of wind energy potential in Davutpasa campus	Mustafa Tahir Akkoyunlu <sup>1</sup> ; Saban Pusat <sup>1</sup>	<sup>1</sup> Yildiz Technical University
Why shareholders of wind energy plant have a high profitability in Galicia?	Dra. Irene Clara Pisón Fernández <sup>1</sup> ; Dr.Francisco Rodríguez de Prado <sup>1</sup> ; Dr.Félix Puime Guillén <sup>1</sup>	<sup>1</sup> Universidad de Vigo
A risk analysis of small-hydro power (SHP) plants investment	Jorge Cunha, Paula Ferreira	Center for Industrial and Technology Management, Universidade do Minho

Domestic photovoltaic systems: a finance-based MCDA approach

Dulce Coelho<sup>1</sup>; Carla  
Oliveira Henriques<sup>2</sup>;  
Patrícia Pereira Silva<sup>3</sup>

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Deploying a Renewable Energy Project: An Equilibrium Analysis

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