IMPORTANT INFORMATION

CONFERENCE VENUE

The EfS 2017 Conference will take place at the Hotel VIDAMAR RESORTS MADEIRA.

REGISTRATION DESK

The registration desk is located at the Conference Venue and will be open as follows:

Wednesday, 8th February 2017	08:00 – 18:00
Thursday, 9th February 2017	09:00 – 18:00
Friday, 10th February 2017	09:00 – 13:00

LUNCH & COFFEE-BREAKS

The cost of lunch is included in the registration fee. Lunch will be served at the 2nd floor of the Hotel Vidamar Resorts. Coffee-breaks will be served at the venue's entrance.

CONFERENCE DINNER

Conference Dinner will be served on Thursday, 9th February, 20:30, at Chalet Vicente - Estrada Monumental nº 238.

FAREWELL COCKTAIL

Farewell Cocktail will be served at the venue's entrance on Friday, 10th February at 13:00.

POST-CONFERENCE TOUR

The meeting point for the Post-Congress Tour is the Vidamar Hotel Entrance at 8:45 on Saturday, 11th February.

8th February 2017 |09:30 – 09:45 | Sunset room

OPENING SESSION

8th February 2017 |09:45 – 10:30 | Sunset room

PLENARY SESSION: BUILDING A SUSTAINABLE SOLAR PV INFRASTRUCTURE: MEETING THE TERA WATT CHALLENGE

Lecturer: Douglas Halliday

Chair: António Gomes Martins

COFFEE-BREAK

8th February 2017 |11:00 – 12:20 | Lagoon II

THEMATIC SESSION: DYNAMIC AND ADAPTIVE BUILDING ENVELOPES

Chair: António Tadeu

ID	
68	HYGROTHERMAL BEHAVIOR OF A COATING MADE BY EXPANDED CORK FOR DIFFERENT CLIMATIC CONDITIONS ***Rosário Fino**, Nuno Simões, António Tadeu*
128	THERMAL ANALYSIS OF PRECAST CONCRETE SANDWICH WALL PANELS ***Beatriz Ferrer**, Nuno Simões, Julieta António, Joana Prata*
50	EXPERIMENTAL CHARACTERIZATION OF ADAPTIVE TRANSPARENT FAÇADES: LESSONS LEARNED FROM THREE CASE STUDIES *Lorenza Bianco, Ilaria Vigna, **Valentina Serra***
127	SHADING SYSTEM INTEGRATING GREEN ROOFS, SOLAR PV-TRACKERS AND RAINWATER HARVESTING ***Catarina Serra**, Nuno Simões, Sérgio Matos, Nuno Miranda, Carla Pimentel-Rodrigues, Armando Silva-Afonso*

8th February 2017 |11:00 – 12:20 | Sunset I

SESSION: POLICY AND ASSESSMENT I

Chair: Luís C. Dias

ID	
81	AN OPTIMIZATION APPROACH TO INCREASE BIODIESEL COST EFFECTIVENESS, ADDRESSING COMPOSITIONAL AND PRICE UNCERTAINTY ***Carla Caldeira**, Omar Swei, Fausto Freire, Luís C. Dias, Elsa A. Olivetti, Randolph Kirchain*
114	AN OVERVIEW OF DEPLOYING AN INTEGRATED MANAGEMENT OF ENERGY RESOURCES IN PORTO SANTO ISLAND ***Roham Torabi**, Sandy Rodrigues, Morgado Dias, Álvaro Gomes*
27	INSMART - INTEGRATIVE ENERGY PLANNING FOR CITIES LOW CARBON FUTURES: ANALYTICAL FRAMEWORK ***João P. Gouveia**, Luís P. Dias, Júlia Seixas, Sofia Simões*
26	INSMART - INTEGRATIVE ENERGY PLANNING FOR CITIES LOW CARBON FUTURES: MODELLING AND SCENARIOS RESULTS ***Luís P. Dias**, Sofia Simões, João P. Gouveia, Júlia Seixas*

LUNCH

8th February 2017 |14:00 – 15:40 | Lagoon II

THEMATIC SESSION: LIFE-CYCLE ASSESSMENT (LCA) AND MANAGEMENT (LCM)
Chair: Fausto Freire

ID	
103	LIFE-CYCLE ENERGY AND GREENHOUSE GAS ANALYSIS OF A MODULAR HOUSE ***Vanessa Tavares**, Fausto Freire*
94	ENVIRONMENTAL AND COST LIFE-CYCLE ASSESSMENT OF BUILDING RETROFITS: A STREAMLINED APPROACH ***Carla Rodrigues**, Randolph Kirchain, Fausto Freire, Jeremy Gregory*
87	SUSTAINABLE OPTIMIZATION OF TOMATOE SUPPLY CHAIN IN A REGION OF PARANÁ STATE – BRAZIL ***Rodrigo Camilo**, Regiani A. Almeida, Ricardo V. P. Rezende, Mauro A. S. S. Ravagnani*
62	COMPARATIVE LIFE-CYCLE ASSESSMENT OF TRANSPORTATION MODES FOR COMMUTING IN LISBON *Joana Bastos, Pedro Marques, Suart Batterman, **Fausto Freire***
119	UPSTREAM GREENHOUSE GAS EMISSIONS OF NATURAL GAS CONSUMED IN PORTUGAL ***Amir Safaei**, Fausto Freire, Carlos Henggeler Antunes*

8th February 2017 |14:00 – 15:40 | Sunset I

SESSION: CLEAN ENERGY SUPPLY
Chair: José Costa

ID	
54	TESTING FOR CAPITAL, LABOR, AND USEFUL EXERGY AGGREGATE PRODUCTION FUNCTIONS THROUGH A COINTEGRATION-BASED METHOD ***João Santos**, Tiago Domingos, Tânia Sousa, Miguel St. Auby*
104	EVOLUTION OF SOLAR PHOTOVOLTAIC SUPPORT POLICIES IN BRAZIL AND PORTUGAL: A REVIEW *Lorrane Câmara, **Guillermo I. Pereira**, Guilherme Dantas, Nivalde de Castro, Patrícia P. Silva*
6	SENSITIVITY ANALYSIS OF ENVIRONMENTAL AND INTERNAL PARAMETERS OF A PHOTOVOLTAIC CELL ***Masud Rana Rashel**, Andre Albino, Teresa C. F. Goncalves, Mouhaydine Tlemcani*
82	THE GIS BASED EVALUATION OF BUILDING ROOFTOPS' PHOTOVOLTAIC POTENTIALS USING UAV (UNMANNED AERIAL VEHICHLE) DATA ***Balca Ağaçsapan**, Ayşe Akkurt, Ecem Ulutak, Resul Çömert, Hakan Uyguçgil, Saye N. Çabuk, Uğur Avdan, Alper Çabuk*
126	STUDY ABOUT THE USAGE OF GPL AND CNG AS ALTERNATE FUELS IN FLEETS OF HEAVY DUTY TRUCKS ***Luís Serrano**, João Lúcio, Paulo Matos de Carvalho*

COFFEE-BREAK

8th February 2017 |16:00 – 18:00 | Lagoon II

SESSION: BUILDINGS I
Chair: Adélio Gaspar

ID	
111	DEVELOPMENT OF A NEW CO2-BASED DEMAND-CONTROLLED VENTILATION STRATEGY USING ENERGYPLUS ***Behrang Chenari**, Francisco Bispo Lamas, Adélio Rodrigues Gaspar, Manuel Gameiro da Silva*
112	ENERGY, ECONOMIC AND GHG EMISSIONS ANALYSIS IN HVAC SYSTEMS OPERATION *Rui Correia, **Francisco B. Lamas***
5	ESTIMATION OF CLASSROOMS OCCUPANCY USING A MULTI-LAYER PERCEPTRON *Eugénio Rodrigues, **Luísa D. Pereira**, Adélio R. Gaspar, Álvaro Gomes, Manuel G. Silva*
22	THE SASSI OF MATERA AS THE OLDEST BIOCLIMATIC ARCHITECTURE MODEL ***Antonella Guida**, Antonello Pagliuca, Antonio G. Loforese*
64	NEUROCOOL: FIELD TESTS OF A MODEL-PREDICTIVE CONTROLLER FOR VAC SYSTEMS ***Yves Stauffer**, E. Olivero, E. Onillon, D. Lindelöf, C. Mahmed*
29	PEER COMPARISON AS MOTIVATIONAL TRIGGER TO SAVE ENERGY IN OFFICE ENVIRONMENT *Valentina Fabi, **Verena M. Barthelmes**, Stefano P. Corgnati*

8th February 2017 |16:00 – 18:00 | Sunset I

SESSION: POLICY AND ASSESSMENT II

Chair: Reinhard Haas

ID	
125	ON THE ECONOMICS AND ENVIRONMENTAL BENIGNITY OF ELECTRIC VEHICLES ***Amela Ajanovic**, Reinhard Haas*
4	PRODUCT WATER FOOTPRINT: HOW TO ACCOUNT THE FRESHWATER CONSUMPTION AND ASSESS THE IMPACTS? ***Paula Quinteiro**, L. Arroja, A. C. Dias*
25	LIFE CYCLE ENERGY CONSUMPTION AND ENVIRONMENTAL IMPACT: ASSESSMENT OF A DETACHED HOUSE IN ALMANSA (SPAIN) ***Andrea Costantino**, Elisa Sirombo, Marco Filippi, Víctor M. L. Toledo*
88	INNOVATIVE MOEEBIUS HYBRID BUSINESS MODELS FOR DEMAND RESPONSE AND ENERGY EFFICIENCY *Claudia Mafra, Ricardo Rato, Chara Zografou, Konstantinos Tsatsakis, Melina Lazaropoulou, Tasos Tsitsanis, Javier Biosca, Javier Royo, Jon Martinez, Akshat Kulkarni, Mircea Bucur, Yoav Zingher, Bojan Bogdanovic, Radimilo Savic, Dário Jacinto, Joaquim Sardinha, Jiri Rojicek, Marek Sikora, Petr Stluka, **Dawid Krysiński***
53	SORTING AND RANKING POLICIES TO FOSTER TECHNOLOGICAL INNOVATIONS IN THE ELECTRICITY SECTOR IN BRAZIL: A DELPHI-BASED MULTI-CRITERIA APPROACH ***Luís C. Dias**, Carlos H. Antunes, Guilherme Dantas, Nivalde de Castro, Lucca Zamboni*
101	SUSTAINABILITY ASSESSMENT OF CONCEPTS FOR ENERGETIC USE OF BIOMASS – DECISION SUPPORT WITHIN LOCAL BIOENERGY PROJECTS ***Meike Schmehl,** Nils Lerche, Jutta Geldermann*

9th February 2017 | 09:45 – 10:30 | Sunset room

PLENARY SESSION: ECONOMIC FEASIBILITY ANALYSIS OF SMALL SCALE PV SYSTEMS IN DIFFERENT COUNTRIES

Lecturer: Morgado Dias

Chair: António Tadeu

COFFEE-BREAK

9th February 2017 | 11:00 – 12:20 | Lagoon II

SESSION: BUILDINGS II

Chair: Luísa D. Pereira

ID	
102	EFFECTIVENESS OF THE INTRODUCTION OF LOAD SHIFTING AND REAL-TIME PRICING (RTP) ON THE REDUCTION OF BANK AGENCIES' HVAC ANNUAL ENERGY BILLS ACROSS PORTUGAL ***Lurian P. Klein***
58	UNVEILING GREEN ENERGY SOURCES IN POWER DISTRIBUTION NETWORKS ***Christiano Lyra**, Celso Cavellucci, Jose Vizcaino, Fábio L. Usberti*
38	TOWARD A SUSTAINABLE HOUSING HOW THE COMPONENTS OF A BUILDING CAN IMPACT ON ITS ABILITY TO KEEP INTERNAL TEMPERATURE CONSTANT ***Federico Fiume***
13	OBJECTIVATION OF INDOOR ENVIRONMENT QUALITY: INTRODUCING THE EMU MONITORING SYSTEM *Leo van Cappellen, João D. Carrilho, **Manuel G. Silva**, John van Putte, Bart Smid*

9th February 2017 | 11:00 – 12:20 | Sunset I

THEMATIC SESSION: REVISITING THE ECONOMICS OF ENERGY TRANSITION

Chair: Patrícia P. Silva

ID	
107	ADAPTATION DYNAMICS TOWARD A SMARTER GRID: THE CASE OF ELECTRICITY DISTRIBUTION SYSTEM OPERATORS ***Guillermo I. Pereira**, Patrícia P. Silva, Reinhard Madlener*
18	WEATHER AND MARKET SPECIFICITIES IN THE REGIONAL TRANSMISSION OF RENEWABLE ENERGY PRICE EFFECTS ***Nuno C. Figueiredo**, Patrícia P. Silva, Derek Bunn*
73	THE IBERIAN ENERGY TRANSITION: TOWARDS A LOW CARBON POWER SECTOR? ***Mara Madaleno**, Marta F. Dias, Margarita Robaina, Mónica Meireles*
100	HOW DISTRIBUTION SYSTEM OPERATORS MEET THE ENERGY TRANSITION CHALLENGES: A COMPARATIVE ANALYSIS FOR PORTUGAL AND GERMANY ***Jan M. Specht**, Natalie Ebersbach, Reinhard Madlener*

LUNCH

9th February 2017 | 14:00 – 15:40 | Lagoon II

SESSION: BUILDINGS III
Chair: Manuel Gameiro da Silva

ID	
41	A TARGET GROUP-SPECIFIC COMMUNICATION APPROACH TO PUSH REFURBISHMENT ***Mart Verhoog**, Thomas Bruckner, Manfred Kirchgeorg*
67	THE USE OF INTEGRATED ENERGY DESIGN PROCESS IN PUBLIC BUILDING RETROFITING TO NEARLY ZERO ENERGY STANDARD ***Jerzy Kwiatkowski**, A. Komerska, E. D. Rynska*
61	ENERGY RETROFITTING OF HISTORICAL BUILDINGS IN MEDITERRANEAN AREAS ***Santi M. Cascone**, Stefano Cascone*
86	THE INFLUENCE OF THE BUILDING RETROFITING TO A NEARLY ZERO ENERGY STANDARD ON THE EMBODIED AND OPERATIONAL ENERGY AND CO2 EMISSION ***Anna Komerska**, J. Kwiatkowski, J. Rucińska*
121	HOME OF AGED' THERMAL COMFORT– BUILDINGS OF SANTA CASA DA MISERICÓRDIA OF CASTELO BRANCO *Ana Campos, **Ana F. Ramos**, J. Mendes da Silva*

9th February 2017 | 14:00 – 15:40 | Sunset I

THEMATIC SESSION: PEOPLE CENTRE APPROACH FOR TRANSITION TOWARDS A FOSSIL FREE SOCIETY
Chair: Mark Dyer

ID	
66	SPATIAL PLANNING OF PUBLIC CHARGING POINTS FOR ELECTRIC VEHICLES – THE CASE OF PORTO MUNICIPALITY ***Tiago Costa**, Fabian Heymann, Álvaro Costa*
106	COMMUNITY BASED TRANSITION TO LOW ENERGY SOCIETY IN SOUTH EAST IRELAND – REFLECTIONS AND LESSONS LEARNED *Paddy Phelan, **Derek Sinnott***
2	TRANSITION OF TWO SCANDINAVIAN CITIES VÄXJÖ AND SØNDERBORG TOWARDS BECOMING FOSSIL FUEL FREE COMMUNITIES. ***Mark Dyer**, Helga Ögmundardóttir*
115	SMART HOME CONTROL: ASSESSING THE POTENTIAL FOR REDUCING DOMESTIC ENERGY DEMAND AND ENGAGING VULNERABLE HOUSEHOLDS ***Sergio Tirado Herrero**, Yolande Strengers , Larissa Nicholls*
1	EXTENT OF CITIZEN PARTICIPATION IN RESEARCH FOR TRANSITION TO A FOSSIL FREE FUTURE ***Mark Dyer**, Filippo Corsini, Chiara Certoma*

COFFEE BREAK

9th February 2017 | 16:00 – 18:00 | Lagoon II

SESSION: SMART CITIES AND COMMUNITIES

Chair: Christiano Lyra

ID	
95	UNDERSTANDING CITIZENS' ENGAGEMENT AND PRACTICES ON SUSTAINABLE MOBILITY AND ENERGY EFFICIENCY IN THE DEPLOYMENT OF SMART CITIES INFRASTRUCTURES ***Catarina Rolim**, Joana Ribeiro, Renata Lajas, André Pina, Carlos Silva*
90	QUANTIFYING THE SOCIAL IMPACT OF A PILOT SUSTAINABLE AND ENVIRONMENTAL FRIENDLY OPTIMIZER FOR URBAN LANDSCAPING *Osama A. Hosney, Elkhayam M. Dorra, **Khaled A. Tarabieh**, Khaled A. Nassar, Sherif Zahran, Mariam Amer*
23	"WE LIVE TOMORROW" – EXPERIENCES OF CROWDSOURCING TO BUILD A SMART HOME *Rodrigo F. Calili, Fernando Luiz C. Oliveira, **Reinaldo C. Souza**, Ágatha L. T. Oliveira, Guilherme A. Martins, Flávio O. C. Martins*
71	AN ENERGY-BASED PEDESTRIAN ACCESSIBILITY INDICATOR ***Nuno Sousa**, F. A. Moreira, J. Coutinho-Rodrigues*
70	PEDELEC ON A HILLY CITY: A CASE STUDY IN COIMBRA ***Nuno Sousa**, A. E. Gonçalves, J. Coutinho-Rodrigues*
8	SMART CHARGING IN PRIVATE ENVIRONMENTS ***Maricica Nistor**, André Dias*

9th February 2017 | 16:00 – 17:40 | Sunset I

SESSION: POLICY AND ASSESSMENT III

Chair: António Gomes Martins

ID	
89	PAST AND PRESENT APPROACHES TOWARDS A LOW CARBON ECONOMY. COULD NON-STATE ACTORS INFLUENCE ENERGY GOVERNANCE AND SOCIAL SUSTAINABILITY? ***Cátia Ramos**, Mauro Couceiro*
46	SUSTAINABILITY ASSESSMENT OF ELECTRICITY GENERATION: FUTURES SCENARIOS IN IRAN ***D. Manzoor** , V. Aryanpur*
97	SUSTAINABLE TOURISM FOR THE FUTURE: SETTING THE RESEARCH AGENDA ***Shu X. Toh**, João-Pedro Ferreira, Luís Cruz, Eduardo Barata*
98	ENERGY IMPERATIVE IN SUSTAINABLE URBAN METABOLISM: A METHODOLOGICAL APPROACH *Lakshman R. T. Pedamallu, **Arnfried Cardoso Ziebell**, Vivek K. Singh*
17	CLIMATE CHANGE MITIGATION AND ADAPTATION IN URBAN AREAS – AN EXAMPLE FROM THE CITY OF VIENNA ***Hannes Schwaiger**, D. N. Bird, H. Gallaun, M. Zuvela-Aloise, K. Andre*

CONFERENCE DINNER

10th February 2017 | 09:00 – 10:40 | Lagoon II

SESSION: BUILDINGS IV
Chair: Nuno Simões

ID	
129	THERMAL PERFORMANCE OF SUSTAINABLE BUILDING WALL SOLUTIONS USING RICE BY-PRODUCTS ***Beatriz Marques**, António Tadeu, João Almeida, João Rama*
116	TECHNOLOGICAL SOLUTIONS FOR A BIO-CLIMATIC ARCHITECTURAL APPROACH. COMPARATIVE ANALYSES. *Santi M. Cascone, Elisabetta Marino, **Simona M. C. Porto**, Claudia Saglibene, Nicoletta Tomasello*
123	BUILDING SIMULATION ANALYSIS OF THE EFFECT OF A ROOFTOP GREENHOUSE LOCATED ON A LISBON URBAN MARKET ***Ricardo Gomes**, Luís Matias, Samuel Niza, Carlos Pina dos Santos, Carlos Santos Silva*
93	ENERGY AND RESOURCE USAGE-AWARE BUILDINGS VIA COGNITIVE INTERNET OF THINGS AGENTS ***Rahul Sharma**, Alexandre M. Pinto, Vivek K. Singh*
99	ENHANCING ENERGY EFFICIENCY IN A HIGHLY-GLAZED BUILDING ***Francisco B. Lamas**, Bruno J. Cardoso, Nelson S. Brito, Adélio R. Gaspar*

10th February 2017 | 09:00 – 10:40 | Sunset I

SESSION: POLICY AND ASSESSMENT IV
Chair: Reinaldo Castro

ID	
42	EXPLORING ENERGY EFFICIENCY POLICY FROM AN ESCO PERSPECTIVE ***Carlos Capelo**, João F. Dias, Renato Pereira*
51	LOOKING FROM A DISTANCE: ARE CURRENT ELECTRICITY MARKETS LEADING US TO SUSTAINABLE PROSPERITY? ***António G. Martins***
20	AERIAL THERMOGRAPHY AS A DIAGNOSTIC TOOL FOR RESIDENTIAL BUILDING STOCK ENERGY ASSESSMENT, WITHIN A LOCAL ENERGY POLICY PERSPECTIVE ***Nathalie Molines**, Carine Henriot*
24	LOW EMISSION DEVELOPMENT STRATEGIES (LEDS) IN GEORGIA: THE ENHANCING CAPACITY FOR LOW EMISSIONS DEVELOPMENT (EC-LEDS) CLEAN ENERGY PROGRAM ***Netanya D. Huska***
45	MEASURING ENERGY EFFICIENCY IN PORTUGAL *Thomas Weyman-Jones, **Júlia M. Boucinha**, Catarina F. Inácio, Pedro M. Martins*

COFFEE-BREAK

10th February 2017 | 11:00 – 12:40 | Lagoon II

SESSION: BUILDINGS V
Chair: Mart Verhoog

ID	
15	SUMMER CROSS VENTILATION IN RESIDENTIAL BUILDINGS ***Manuel Pinto**, João Viegas, Vasco Freitas*
56	THERMAL MANAGEMENT OF PHOTOVOLTAICS WITH THERMAL ENERGY STORAGE UNITS FILLED WITH MICROENCAPSULATED PCMS ***Nelson Soares**, P. Antunes, Adélio R. Gaspar, J. J. Costa*
55	EFFECTIVE HEAT CAPACITY METHOD TO SIMULATE HEAT DIFUSION PROBLEMS WITH PHASE CHANGE *Nelson Soares, P. Antunes, **J. J. Costa***
12	SUSTAINABLE ARCHITECTURE WITH TECHNOLOGY-SCIENCE- ***Aslı Aldemir**, Pelin D. Çebi*
10	MODEL FOR AND INTEGRATED EVALUATION OF REHABILITATION ACTIONS: AN APPROACH TO A GROUP OF BUILDINGS OF THE BEGINNING OF THE 20TH CENTURY *Catarina P. Mouraz, J. Mendes da Silva, **Ana F. Ramos**, António A. Bettencourt*

10th February 2017 | 11:00 – 12:40 | Sunset I

SESSION: SMART CITIES AND COMMUNITIES II

Chair: Nuno Sousa

ID	
9	OPERATING STRATEGIES FOR BATTERY STORAGE SYSTEMS IN LOW-VOLTAGE GRIDS TO LIMIT THE FEED-IN POWER OF SOLAR POWER SYSTEMS USING FUZZY CONTROL ***Tobias Lühn**, Jutta Geldermann*
72	PRELIMINARY ASSESSMENT OF UNDERGROUND RESERVOIRS FOR COMPRESSED AIR ENERGY STORAGE IN PORTUGAL ***Catarina R. Matos**, Júlio F. Carneiro, Patrícia P. Silva*
117	AN IOT INFRASTRUCTURE FOR SMART CITIES: THE SUSCITY PROJECT USE-CASE ***David P. Abreu**, Karima Velasquez, Marilia Curado, Edmundo Monteiro*
52	AN ENERGY EFFICIENCY PERSPECTIVE INTO SMALL AND MEDIUM DATA CENTERS: PROGRESS AND REALITY BASED ON SURVEYS ***Thiago L. Vasques**, Pedro S. Moura*
124	HOW TO INTEGRATE LARGE SHARES OF VARIABLE RENEWABLES INTO THE ELECTRICITY SYSTEM ***Reinhard Haas***

10th February 2017 |12:40 – 13:00| Sunset room

CLOSING SESSION

NOTES