

Energia para a Sustentabilidade

Energy for Sustainability (EfS)

Encontro EfS ♦ Empresas
Vertente I&D
DEC-FCTUC
23 de novembro de 2011

Actividade de I&D

- Cerca de uma dezena de projectos de I&D em curso
- Integração dos alunos de doutoramento nos projectos
- Participação em eventos científicos internacionais com apresentação de comunicações
- Artigos publicados em revistas internacionais
- Organização de encontros técnico-científicos, com envolvimento dos alunos
- Colaboração de docentes na leccionação em universidades estrangeiras
- Participação em grupos de trabalho de revisão de regulamentação técnica nacional (SCE)



Projectos de I&D

- BioTrans - Capturing Uncertainty in Biofuels for Transportation. Resolving Environmental Performance and Enabling Improved Use, FCT MIT-Portugal Program, ADAI / INESC Coimbra / MIT, 2010-2013, PI: F. Freire
- Energy Box – development and implementation of a demand-driven energy management system, FCT MIT-Portugal Program, INESC Coimbra / IPCDVS / MIT, 2010-2013, PI: C. H. Antunes
- EESEVS - Economic and Environmental Sustainability of Electric Vehicle Systems, FCT MIT-Portugal Program, INESC Coimbra / ADAI / ISR-UC / MIT, 2010-2013, PI: L. Dias
- iTEAM – Integrated Transportation and Energy Activity-Based Model, FCT MIT-Portugal Program, FCTUC / IST / FEUP / MIT, 2009-2012, PI: F. C. Pereira
- GROUND-MED - Advanced ground source heat pump systems for heating and cooling in Mediterranean climate, EU-FP7 program, ISR-UC, 2009-2014, PI: A. T. de Almeida



Projectos de I&D

- MODERN - MObility, Development and Energy use Reduction, Civitas Plus Programme, ISR-UC, 2009-2013, PI: A. T. de Almeida
- SB -Sustainable Buildings, Development of a WeB-based Monitoring Tool for Energy Consumption and Indoor Environmental Quality, QREN, WSBP /ADAI, 2010-2012, PI: M. C. Gameiro
- Improving Dwellings by Enhancing Actions on Labelling of the EPBD (IDEAL EPBD), EC, ISR-UC, 2008-2011, PI: A. T. de Almeida
- Enersip - ENERgy Saving Information Platform for Generation and Consumption Networks, FP7 EC, ISR-UC, 2010-2012, PI: A. T. de Almeida
- NeuroCity - Luminárias Inteligentes de Elevado Desempenho Energético para Iluminação Pública, ADI-QREN, ISR-UC, 2011-2013, PI: A. T. de Almeida
- E4 -Energy Efficient Elevators and Escalators, IEE, ISR-UC, 2008-2010, PI: A. T. de Almeida



Projectos de I&D

- PPEC - Consultoria para o Plano de Promoção da Eficiência no Consumo, EDP, INESC Coimbra / ISR-UC, 2009-2014, PI: C. H. Antunes, A. T. de Almeida
- Site EDP ECO- Consultoria para o site EDP ECO, EDP, ISR-UC / INESC Coimbra, 2010-2012, PI: A. T. de Almeida, H. Jorge
- SAVE AGE - Strengthening Energy Efficiency in Residential Homes for Elderly People, IEE, IRS-UC, 2010-2012, PI: A. T. de Almeida
- Change Best - Promoting the development of an energy efficiency service (EES) market, IEE, IRS-UC, 2009-2011, PI: A. T. de Almeida
- Energy2B - Stimulate students to make an energy difference through local & European idea competitions and entrepreneurial services, IEE, IRS-UC, PI: A. T. de Almeida



Publicações

- Edição nacional de livro baseado na disciplina de Metodologias de Investigação
- Co-coordenação de Guidebook de Associação Internacional (REHVA)

- Guidebook nº 14 sobre Indoor Climate Quality Assessment

Cerca de 10 capítulos de livros:

- Hybrid IO Analysis of CO2 Emissions: An Application to the Portuguese Economy
- Direct Load Control in the Perspective of an Electricity Retailer – A Multi-Objective Evolutionary Approach
- Ethanol from sugar beet
- Uncertainty Analysis of the Life-cycle Greenhouse Gas Emissions and Energy Renewability of Biofuels
- Large Scale Integration of Wind Power Generation
- Assessing the Efficiency and Distribution of Agricultural Activities Using DSS
- Vegetable oil fuel
- Ethanol from wheat
- Case Studies about IEQ Monitoring in Buildings
- Impact of Advances on Computing and Communication Systems in Automotive Testing
- ...



Publicações

□ Cerca de 60 artigos em revistas científicas internacionais:

- Characterization of the Household Electricity Consumption in the EU, Potential Energy Savings and Specific Policy Recommendations, *Energy & Buildings*
- A multi-objective multi-sectoral economy-energy-environment model: application to Portugal, *Energy*
- Parking at the UC campus: Problems and solutions, *Cities*
- Development and Application of Competencies for Graduate Programs in Energy and Sustainability, *Journal of Professional Issues in Engineering Education and Practice*
- Using SSM for Structuring Decision Support in Urban Energy Planning, *Technological and Economic Development of Economy*
- A GIS-based multicriteria spatial decision support system for planning urban infrastructures, *Decision Support Systems*
- Uncertainty Analysis in Biofuel Systems: An Application to the Life Cycle of Rapeseed Oil, *Journal of Industrial Ecology*
- Indoor air quality audit implementation in a hotel building in Portugal, *Building and Environment*
- Small-hydropower integration in a multi-purpose dam-bridge for sustainable urban mobility, *Renewable and Sustainable Energy Reviews*
- ...



Participação em eventos científicos

- Cerca de 70 comunicações em eventos científicos:
 - ICT Infrastructure for Energy-Positive Buildings and Neighbourhoods
 - 24th International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems
 - 6th International Conference of the International Society for Industrial Ecology
 - 2011 IEEE ISSST - International Symposium on Sustainable Systems and Technology
 - 10th International Conference on Environment and Electrical Engineering
 - World Renewable Energy Congress
 - 4th International Congress on Energy and Environment Engineering and Management
 - 2011 IEEE International Symposium on Sustainable Systems and Technology
 - 11th IAEE European Conference: Energy Economy, Policies and Supply Security
 - International Joint Conference on Ambient Intelligence
 - 2nd International Conference in Microgeneration and Related Technologies in Buildings: Microgen
 - Roomvent 2011, 12th International conference on Air Distribution in Rooms
 - ...



Organização de eventos técnico-científicos

- Ciclo de Palestras “Um novo sistema energético, renováveis e novas tecnologias”, com a participação de Eng^o. L. Mira Amaral (7/4/2011) e Prof. A. Sá da Costa (5/5/2011). Universidade de Coimbra. Coordenação: P. Pereira da Silva
- Seminário Luso-Brasileiro “Políticas e Experiências de Eficiência Energética”, Universidade de Coimbra, 8-9 Setembro 2011. Organização: A. G. Martins, C. Henggeler Antunes, P. Pereira da Silva, Nivalde de Castro (UFRJ)
- 3rd Young International Conference on Energetics – YICE 2011, Instituto Politécnico de Leiria, 7-9 Julho 2011. www.iyce2011.org
- Workshop COST Action IC0804 “Energy efficiency in large scale distributed systems”, Universidade de Coimbra, 8-10 Novembro 2010.
- Ciclo de conferências “Risco, Regulação e Investimento – Energia e Telecomunicações”, Universidade de Coimbra, Abril-Maio 2010. Organização: P. Pereira da Silva.

