

# WREC X - PROGRAMME AMENDMENT

## PLENARY PAPERS

### **Thursday: Plenary B2**

**09:00 – 10:30**

#### **InvBM 121- Future Automotive Fuels in Regional and Global Context**

Nasir El Bassam

Director of the International Research Centre for Renewable Energy (IFEED) , Kirchweg 4A, D-31275 Sievershausen, Germany

### **Friday: Plenary A6**

**09:00 – 10:30**

#### **LEA98- Localised Energy Storage:- what options are there for communities?**

Bryce Gilroy-Scott<sup>1</sup>

<sup>1</sup>MSc Architecture: Advanced Environmental and Energy Systems (Distinction), Graduate School of the Environment, Centre for Alternative Technology Machynlleth, Wales

**(Instead of Inv LEA50 - Inv LEA50 is on Tuesday)**

## POLICY ISSUES

### **Tuesday**

**11:00 – 13:00 Policy II**

#### **P19- Supply, Sustainability, Security of the world energy**

A/Prof A Zahedi

School of Engineering, James Cook University, Queensland, Australia

**14:30 – 16:00 Policy III**

#### **InvP28- Renewable Energy Development Opportunities in Indonesia**

Erwin Susanto Sadirsan<sup>1</sup>, Prof. Dr. M. Ali Sayigh<sup>2</sup>

<sup>1</sup> Board of Directors , The Indonesian Renewable Energy Society (IRES / METI), Jakarta, INDONESIA

<sup>2</sup>Chairman of WREC, Director General of WREN, Brighton, UK

**Wednesday**

**11:00 – 13:00 Session V**

**InvP50 – Renewable Energy Investment in Germany – Invest in Germany**

Nikolai Dobrott: Friedrichstrasse 60, 10117 Berlin, Germany

**14:30–16:00 Session – VI**

**EIB financing of low-carbon energy technologies An overview of the Bank's renewable energy policy as part of its Corporate Operational Plan**

Roland Schulze<sup>1</sup>

<sup>1</sup> Senior Energy Engineer, EIB Projects Directorate, Transport and Energy Department, 100, Boulevard Konrad Adenauer, L-2950 Luxembourg

## **FUEL CELLS**

**Tuesday**

**11:00 -13:00 Session FC I**

**InvFC100- Photoelectrochemical hydrogen production & Metal bipolar plates for fuel cells**

John Turner: Hydrogen Technologies & Systems Center

National Renewable Energy Laboratory

1617 Cole Blvd, Golden, CO 80401, Colorado, USA

**14:30 -16:00 Session FC II**

**FC23- Hydrogen Adsorption Storage Tank for PEFC Stacks**

Pasquale Corbo\*, Fortunato Migliardini, Ottorino Veneri

Istituto Motori – Italian National Research Council (CNR), Via

Marconi, 8 – 80125 Naples, Italy

**16:30 – 18:00 Session III**

**FC8- A Study on Detecion of Hydrogen Leak in Soils**

Shuji Namatame<sup>1</sup> & Yasuhiro Gomi<sup>2</sup>

<sup>1</sup> Deputy General Manager, Hydrogen Leak Detection Technology SEC,  
The Japan Gas Association, JAPAN

<sup>2</sup> Gas Quality Management Team, Fundamental Technology DEPT. ,  
TOKYO GAS, JAPAN  
( **Replacement of FC 16**)

**Wednesday**

**11:00 – 13:00 Session FC IV**

**FC9- Optimum Sizing of a Hydrogen Production Installation  
Based on Renewable Energy Surplus**

Kosmas A. Kavadias, Dimitris P. Zafirakis, Konstantinos Rozakeas & John  
K. Kaldellis

Soft Energy Applications & Environmental Protection Lab, TEI of Piraeus,  
P.O. Box 41046, Athens, 12201, Greece

**14:30- 16:00 Session FC V**

**InvFC101- The Vision of the Hydrogen Economy.**

John Turner: Hydrogen Technologies & Systems Center

National Renewable Energy Laboratory

1617 Cole Blvd, Golden, CO 80401, Colorado, USA Colorado, USA

**BIOMASS & BIOFUELS SESSIONS**

**Tuesday**

**14:30 -16:00 Session 3- Biofuels – II**

**BM116- PETROBRAS – An Energy Company and the Brazilian  
Biofuel Program**

Fernando Martins Torres, Luiz Alberto Fernandes Valle, Rubin P. Diehl  
Filho - PETROBRAS, Human Resources, Petrobras University, Gas &  
Energy School, Rio de Janeiro, Brazil

**Wednesday**

**11:00 -13:00 Session 5 – Process for Biomass Conversion II**

**BM120- Power Generation from Landfill Gas – Art or Science?**

Ian Cooper<sup>1</sup>

<sup>1</sup> Business Development Manager of ENER-G Natural Power Limited,  
Manchester, UK

## **14:30 -16:00 Session 6- Biomass Policy and Processes**

### **BM49- Biodiesel Production from Rapeseed (*Brassica napus*) Oil By Using Supercritical Methanol**

Nezihe Azcan & Anil Yaprakci

Department of Chemical Engineering, Anadolu University, Eskisehir,  
TURKEY

## **MARINE AND OCEAN ENERGY TECHNOLOGY**

**Wednesday**

### **16:30 – 18:00 Session S1: Bringing marine renewables to the market 2**

#### **M21- A Virtual Hydroelectric Laboratory.**

Les Duckers<sup>1</sup> & Richard Blanchard<sup>2</sup>

<sup>1</sup> Faculty of Business, Environment and Society, Coventry University,  
Coventry, UK,

<sup>2</sup> CREST, Department of Electronic& Electrical Engineering,  
Loughborough

## **SOLAR THERMAL APPLICATIONS**

**Tuesday**

### **11:00 -13:00 Session II – Collector Technology**

#### **ST130- A TRNSYS Model of a Hybrid PV/T Solar Collector System**

Soteris Kalogirou<sup>1</sup>, George Florides<sup>1</sup>, Demetris Tsipas<sup>2</sup>, Monir Ekhrawat<sup>2</sup>,  
Yiannis Tripanagnostopoulos<sup>3</sup>, Manolis Souliotis<sup>3</sup>

1. Department of Mechanical Engineering and Materials Science and  
Engineering, Cyprus University of Technology, P. O. Box 50329, Limassol  
3603, Cyprus

2. Department of Mechanical Engineering, Aristotle University of  
Thessaloniki, Thessaloniki 54224, Greece

3. Physics Department, University of Patras, Patra 26504, Greece.

## **16:30 -18:00 Session IV- Collectors and Systems**

### **ST53- Solar energy integration in textile industry: a case study**

Ennio A. Carnevale, Lorenzo Ferrari, Simone Paganelli

Department of Energy Engineering “Sergio Stecco”, University of Florence, Florence, Italy

## **Wednesday**

### **11:00 -13:00 Session V- Cooling**

### **InvST52- Design and application of concentrating PV/T solar collectors**

Yiannis Tripanagnostopoulos

Physics Department, University of Patras, Patra 26500, Greece.

## **16:30 -18:00 Special Session I – Thermo & Engines (SP)**

### **ST 58- Experimental Analysis of Heat Transfer Phenomenon in Vapor Chamber**

Yusli Yaakob<sup>1</sup>, Muhammad Abd.Razak<sup>1</sup>, Azli Abd.Razak<sup>2</sup>, Zulkifli Abdullah<sup>3</sup>

<sup>1</sup> Faculty of Mechanical Eng, Universiti Teknologi MARA, Pmtg Pauh, Penang, MALAYSIA,

<sup>2</sup> Faculty of Mechanical Eng, Universiti Teknologi MARA, Shah Alam, Selangor, MALAYSIA,

## **WIND ENERGY APPLICATIONS**

## **Tuesday**

### **11:00 -13:00 Session 2**

### **WE2- Wind Energy in Morocco**

Dr Driss Hajir<sup>1</sup> & Mustapha Enzili<sup>2</sup>

<sup>1</sup> Secretary General of CDER, Marrakech, Morocco

<sup>2</sup> Dept. of Resources & Engineering, CDER, Marrakech, Morocco

### **14:30 -16:00 Session 3**

#### **Technology Risks Associated with a Community Based Wind Energy Project: Wind Resource Assessment**

Mathieu A. Landry<sup>1</sup>, Yves Gagnon<sup>1</sup>, Denny Richard<sup>2</sup>, Aldéo Saulnier<sup>2</sup>

<sup>1</sup> K.C. Irving Chair in Sustainable Development, Université de Moncton, Moncton NB, CANADA,

<sup>2</sup> Town of Bouctouche, Bouctouche NB, CANADA

### **16:30 -18:00 Session 4**

#### **WE30- Weibull Parameter Prediction and Extrapolation of Wind Speed Variation to Higher Elevations**

Vilas Warudkar\*, Ashutosh Tripathi\*\*, Subramanyam Ganesan\*\*\*, Seemi Ahmed\*\*\*\*, Siraj Ahmed\*\*\*\*\*

\*Lecturer, Department of Mechanical Engineering, MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, Bhopal INDIA

### **PHOTOVOLTAIC TECHNOLOGY**

#### **Tuesday**

#### **11:00 -13:00 Session II – Thin Film and Crystalline Cells and Modules**

#### **InvPV57- Performance Analysis of a Solar Photovoltaic Test Facility at Sohar University, Sultanate of Oman**

Mounir Bouzguenda, Abdelkader Tami, Jehad M. Al-Khalaf Bani Younis and Azzeddine Ferrah

Electrical and Computer Engineering, Faculty of Engineering, Sohar University

PO Box 44, PC 311, Sohar-Sultanate of Oman

#### **Wednesday**

#### **11:00 – 13:00 Session V**

#### **Inv34- Third generation photovoltaics for solar energy conversion.**

Matteo Biancardo

Risø National Laboratory for Sustainable Energy, Technical University of Denmark – DTU, DK-4000 Roskilde, Denmark

## **16:30 -18:00 Session SI – Special Technical Session**

### **PV6- InAs<sub>1-x</sub>Sb<sub>x</sub>/Ga<sub>1-y</sub>Al<sub>y</sub>Sb HETEROSTRUCTURES FOR THERMOPHOTOVOLTAIC CELLS**

Dr.Ph.Niyazi Mursakulov<sup>1</sup> & Prof.Azad Bayramov<sup>2</sup> & Dr.Ph.Nigar Abdulzadeh<sup>1</sup>

<sup>1</sup>Institute of Physics National Academy of Sciences of Azerbaijan, Baku, Azerbaijan,

<sup>2</sup>Institute of Physics National Academy of Sciences of Azerbaijan, Baku, Azerbaijan

### **PV77- Electrification of marginalized rural communities with a simplified system based on triple junction amorphous silicon photocells**

Alejandro Alatorre-Ordaz<sup>1\*</sup>, Ernestina Torres-Reyes<sup>1</sup> & Silvia Gutiérrez-Granados<sup>1</sup>

<sup>1</sup> Instituto de Investigaciones Científicas, Universidad de Guanajuato, Cerro de la Venada s/n Guanajuato, Gto. 36040, MEXICO

## **RELATED TOPICS**

**Tuesday**

**09:00 -10:30 Session I**

InvRT50 is replace by:

### **RT100- Heat and Energy Mapping and Decentralised Energy Feasibility Study**

Karan Monga<sup>1</sup>, Simon West<sup>2</sup>, John Simmons<sup>3</sup> & Kathryn Sanders<sup>4</sup>

<sup>1</sup> Senior Development Economist, Halcrow Group Ltd, Birmingham, UK

<sup>2</sup> Rural Development Manager, Advantage West Midlands, Birmingham, UK

<sup>3</sup> Senior Engineer, Halcrow Group Ltd, Glasgow, UK

<sup>4</sup> Mechanical Engineer, Halcrow Group Ltd, Glasgow, UK

### **RT49- Theoretical study on the effect of operating conditions on performance parameters of a solar absorption refrigeration system**

Jasim Abdulateef<sup>1</sup>, Kamaruzzaman Sopian and Mohammed Alghoul

<sup>1</sup>Solar Energy Research Institute (SERI), University Kebangsaan Malaysia, 43600 Bangi, Selangor, MALAYSIA

## **LOW ENERGY ARCHITECTURE**

**Tuesday**

**14:30 -16:00 Session III-External Environment III**

### **InvLEA11- Energy, Urbanism and Architecture, the case of Portugal**

M. Correia Guedes(1)\*, M. Pinheiro(2) and L. Manuel Alves(3)

1 Head of the Architectural Research Centre, Department of Civil Engineering and Architecture, Higher Technical Institute (IST), Lisbon

2 Ph.D. Student, Department of Civil Engineering and Architecture, IST

3 Senior Researcher, Department of Mechanical Engineering, IST

**16:30 -18:00 Session IV – Whole Building I**

### **InvLEA12- Thermal Comfort in Services' Buildings: A study in Portugal**

Manuel Correia Guedes<sup>1</sup> & Luís Matias<sup>2</sup>

<sup>1</sup> Coordinator of the Architectural Research Centre, Higher Technical Institute (IST), Department of Civil Engineering and Architecture, PORTUGAL

<sup>2</sup> Building Department, National Laboratory for Civil Engineering (LNEC), PORTUGAL

**Wednesday**

**11:00 – 13:00 Session V-Whole Building II**

### **LEA70- Study of the Energy Performance of Korean Apartment Buildings with Alternative Balcony Configurations**

Cameron Johnstone<sup>1</sup>, Jaemin Kim<sup>1</sup>, Georgios Kokogiannakis<sup>1</sup>, Paul Strachan<sup>1</sup>, Jongyeop Kim<sup>1</sup>, Kyung-hun Woo<sup>2</sup>, Boo-sik Kang<sup>2</sup>

<sup>1</sup> ESRU (Energy Systems Research Unit), Dept. of Mechanical Engineering, University of Strathclyde, Glasgow, UK

<sup>2</sup> Samsung C&T Corporation, Republic of Korea

**16:30 – 18:00 Session SI – Case Study I**

### **LEA6- Application of wind catcher for nocturnal ventilation in the UK**

Abbas Ali Elmualim

ICRC, The School of Construction Management and Engineering, University of Reading, UK

**Thursday**

**11:00 – 13:00 Session VII – Whole Building/refurbishment**

**LEA5- Sustainable Construction in Developing Countries: a Study of North Cyprus**

Abbas Ali Elmualim and Doğa Alp

ICRC, The School of Construction Management and Engineering,  
University of Reading, UK

**16:30 -18:00 Session SII-Case Study II**

**LEA92- A Novel Design for Industrial Air conditioning by Evaporative Cooling**

Prof Anwar El-Hadi

President of Sudan Eng. Council, Prof of Air Conditioning and Refrigeration, ex-Chairman of Mech. Eng. Div, ex-Dean of College of Eng., Juba Univ., SUDAN

**LEA40- Methodological evaluation of the environmental impact for an aeolian park. The visual perception index**

Angelo Milone<sup>1</sup>, Daniele Milone<sup>2</sup>, Salvatore Pitruzzella<sup>3</sup>

<sup>1,2</sup> Dipartimento di Ricerche Energetiche ed Ambientali. Università di Palermo. Viale delle Scienze. Palermo. Italy.

<sup>3</sup> Dipartimento di Ingegneria Civile. Università di Messina. Salita Sperone. Contrada di Dio. Messina. Italy.