



12th -14th October 2005
Athens Imperial Hotel, Greece

Wednesday, 12th October 2005

Day 1

13:00 - 14:00

Registration at the Conference Secretariat

14:00 - 15:30

Opening - Introduction and overview

Chair: E. LAZARI, Head of Buildings Department & PASLINK EEIG Operating Manager, Centre for Renewable Energy Sources, PASLINK EEIG Member, Greece

Presentations by the members of the welcoming committee

To be confirmed



“PASLINK outdoor testing: past, present and future”

L. Vandaele, P. Wouters, Belgian Building Research Institute, Sint-Stevens-Woluwe, Belgium

J.J. Bloem, EC-JRC, Institute for Environment and Sustainability, Renewable Energies Unit, Ispra, Italy



“PASLINK and dynamic outdoor testing of thermal and solar properties of building components”

P.H. Baker, Centre for Research in Indoor Climate & Health, Glasgow Caledonian University, Glasgow, Scotland, UK

H.A.L. Van Dijk, TNO Building and Construction Research, Delft, The Netherlands

15:30 – 16:30

Lunch

16:30 – 18:00

Session 1: Experimental testing and monitoring

Chair: O. GUTSCHKER, Brandenburg Technical University of Cottbus, PASLINK EEIG Associate Member, Germany



“Testing and modelling of the angular - dependent solar heat gain of glazing with venetian blind shading”

H. Simmler, B. Binder, Swiss Federal Laboratories for Materials Testing and Research (EMPA), Laboratory for Applied Physics in Building, Duebendorf, Switzerland



“Study of a hybrid PV integrated building application in a well controlled test environment”

J.J. Bloem, EC-JRC, Institute for Environment and Sustainability, Renewable Energies Unit, Ispra, Italy

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- 18:00 – 18:30 → **“Improving the whole building modelling and integration of an innovative window using the PASSYS test cell”**
V. Leal, Department of Mechanical Engineering, Faculty of Engineering of the University of Porto, Porto, Portugal, Polytechnic Institute of Viana do Castelo, Viano do Castelo, Portugal
E. Maldonado, Department of Mechanical Engineering, Faculty of Engineering of the University of Porto, Porto, Portugal
- 18:30 – 20:00 *Coffee break*
- Session 2: Experimental testing and monitoring (continued)**
Chair: I. HEIMONEN, VTT Building and Transport, PASLINK EEIG Member, Finland
- **“Round robin testing of building components using the PASLINK test facilities: quality assurance in testing and analysis”**
P.H. Baker, Centre for Research in Indoor Climate & Health, Glasgow Caledonian University, Glasgow, Scotland, UK
- **“Outdoor testing of building components: case studies”**
P. A. Strachan, Energy Systems Research Unit (ESRU), University of Strathclyde, Glasgow, Scotland, UK
L. Vandaele, Belgian Building Research Institute, Sint-Stevens-Woluwe, Belgium
- **“Simulation of the double façade in the Brno Metropolitan Library”**
J. Sedlak, P. Mracek, Institute of Building Design and Engineering, Faculty of Civil Engineering, Brno University of Technology, Brno, Czech Republic

Thursday, 13th October 2005

Day 2

09:30 - 11:00

Session 3: Dynamic analysis methods and techniques

Chair: L. VANDAELE, PASLINK EEIG Secretary, Belgian Building Research Institute, PASLINK EEIG Member, Belgium

- **“Models and methods for describing the thermal characteristics of buildings and building components using experimental data”**
M.J. Jimenez, CIEMAT, Department of Energy, Energy Efficiency in Buildings Unit, Madrid, Spain
H. Madsen, Informatics and Mathematical Modelling, Technical University of Denmark, Lyngby, Denmark
- **“Parameter identification under difficult conditions - How much information is contained in the objective function?”**
O. Gutschker, BTU Cottbus, Department of Applied Physics/ Thermophysics, Cottbus, Germany

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→ **“Dynamic system analysis for educational purposes: identification and control of a thermal loop”**

F.P. Neirac, P. Gatt, Ecole des Mines de Paris, Centre for Energy and Processes, Paris, France

11:00 – 11:30

Coffee break

11:30 – 13:00

Session 4: Applications of dynamic analysis

Chair: P.H. BAKER, Centre for Research in Indoor Climate and Health, Glasgow Caledonian University, Scotland, UK

→ **“Estimation of the reliability of the thermal receptivity coefficient of the surfaces of timber frame wall materials”**

L. Kairys, Kaunas University of Technology, Department of Civil Engineering and Architecture, Kaunas, Lithuania

V. Stankevicius, J. Karbauskaite, Institute of Architecture and Construction, Laboratory of Thermal Building Physics, Kaunas, Lithuania

→ **“Estimation of the main thermal characteristics of building components using parametric models in MATLAB”**

M.J. Jimenez, CIEMAT, Department of Energy, Energy Efficiency in Buildings Unit, Madrid, Spain

H. Madsen, K.K. Andersen, Informatics and Mathematical Modelling, Technical University of Denmark, Lyngby, Denmark

→ **“Determination of U and g coefficient for external partitions with transparent insulation using “Lord” software”**

J. Belok, Silesian University of Technology, Faculty of Civil Engineering, Gliwice, Poland

→ **“Identification techniques applied to solar water ponds”**

A.A. Argiriou, University of Patras, Department of Physics, Section of Applied Physics, Patras, Greece

13:00 – 14:00

Lunch

14:00 – 15:30

Session 5: Mathematical modelling and dynamic simulation

Chair: PROF. H. MADSEN, Dept. of Math. Statistics, Informatics & Mathematical Modelling, Technical University of Denmark, PASLINK EEIG Associate Member, Denmark

→ **“Role of simulation in the performance assessment of building components”**

P.A. Strachan, Energy Systems Research Unit (ESRU), University of Strathclyde, Glasgow, Scotland, UK

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➔ **“Integrated simulation of heat demand and air exchange in a multifamily building”**

A. Baranowski, J. Ferdyn-Grygierek, Department of Heating, Ventilation and Dust Removal Technology, Silesian University of Technology, Gliwice, Poland

➔ **“A critical review of simulation techniques for daylight responsive systems”**

L. Doulos, F. Topalis, Lab. of Photometry, National Technical University of Athens, Athens, Greece

A. Tsangrassoulis, Dept. of Architecture, University of Thessaly, Volos, Greece

15:30 – 16:00

Coffee break

16:00 – 17:30

Session 6 : Dynamic simulation and innovative applications

Chair: A. ARGIRIOU, Assistant Professor, University of Patras, Department of Physics – Section of Applied Physics, Greece

➔ **“Experimental validation of a model to adapt measured data at a standard weather station to represent site-specific air temperature in an urban street canyon ”**

E. Erell, J. Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Ben-Gurion, Israel

T. Williamson, School of Architecture, Landscape Architecture and Urban Planning, The University of Adelaide, Adelaide, Australia

➔ **“Development of simulation algorithms for control scheme optimization in greenhouses”**

K. Dalamagkidis, G. Saridakis, D. Kolokotsa, Technological Educational Institute of Crete, Department of Natural Resources and Environment, Chania, Crete, Greece

➔ **“Modelling study of the energy performance of Greek educational buildings”**

I. Koronaki, E. Tzanakaki, Centre for Renewable Energy Sources, Pikermi, Greece

G. Polymenopoulos, P. Strachan, Energy Systems Research Unit (ESRU), University of Strathclyde, Glasgow, Scotland, UK

➔ **“Measurement and prediction of indoor microenvironments for the control of biocontaminants”**

P.H. Baker, G.H. Galbraith, C. Hunter, C.H. Sanders, Centre for Research on Indoor Climate & Health, School of Engineering, Science & Design, Glasgow, Caledonian University, Glasgow, Scotland, UK

R.C. Mclean, Mechanical Engineering Department, University of Strathclyde, Glasgow, Scotland, UK

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Day 3

09:30 - 11:30

Session 7: Applications to energy performance assessment

Chair: HANS BLOEM, Institute for Environment & Sustainability, Renewable Energies Unit, European Commission-Joint Research Centre, PASLINK EEIG Associate Member, Italy

- ➔ **“Air conditioning energy use in houses in southern England”**
J. He, A.N. Young, A. Pathan, T. Oreszczyn, Bartlett School of Graduate Studies, University College London, London, UK
- ➔ **“Energy audits in dwelling buildings in Latvia. Data analysis”**
D. Blumberga, A. Blumberga, V. Vitolins, Riga Technical University, Riga, Latvia
- ➔ **“Energy performance assessment of existing dwellings and non-residential buildings”**
C.A. Balaras, Group Energy Conservation, Institute for Environmental Research & Sustainable Development, National Observatory of Greece, P. Penteli, Greece
B. Poel, G. Van Cruchten, EBM-consult bv, Arnhem, The Netherlands
- ➔ **“The transparency and repeatability of building energy performance certification”**
K. Burke, P. Kenny, Architecture, University College Dublin, Dublin, Ireland
D. Finn, Mechanical Engineering, University College Dublin, Dublin, Ireland

11:30 – 12:00

Coffee break

12:00 – 14:00

Round table: From research to application

Chair: G. SUTHERLAND, PASLINK EEIG Operating Secretary, Centre for Renewable Energy Sources, PASLINK Member, Greece

Topic:

"The role of networking activities for linking research to practical applications"

- ➔ **“Evaluation of the impact of networking activities on the quality of results obtained when applying system identification techniques to in-situ measurements for assessing energy performance of building components ”**
A. Androutopoulos, G. Sutherland, Centre for Renewable Energy Sources, Buildings Dept, Pikermi, Greece
J.J. Bloem, Joint Research Centre (JRC), Institute for Environment and Sustainability, Renewable Energies Unit, Ispra, Italy
H.A.L. Van Dijk, TNO, Department of Building Physics, Indoor Climate and Systems, Delft, The Netherlands
P.H. Baker, Centre for Research in Indoor Climate & Health, Glasgow Caledonian University, Glasgow, Scotland, UK



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→ **“Creation of a sustainable networking environment for research actions on the eco performance of buildings”**

E. Lazari, G. Sutherland, Centre for Renewable Energy Sources, Pikermi, Greece

L. Vandaele, Belgian Building Research Institute, Sint-Stevens-Woluwe, Belgium

P.H. Baker, Centre for Research in Indoor Climate & Health, Glasgow Caledonian University, Glasgow, Scotland, UK

J.J. Bloem, Joint Research Centre (JRC), Institute for Environment and Sustainability Renewable Energies Unit, Ispra, Italy

D. Blumberga, Riga Technical University, Riga, Latvia

13:00 – 14:00

Discussion – Conclusions and closure of the conference

14:00 – 15:00

Lunch

15:00 – 16:30

1st Meeting of the DYNASTEES Network

An open invitation is extended to all DYNASTEES 2005 participants who wish to attend

