PROGRAMME

First Day
19 May 2005

Opening Session 09.00-11.00

Chair: D. Asimakopoulos, M. Santamouris, N. Fintikakis and P. Wouters

09.00-09.15: Welcome Addresses

Conference opening
D. Asimakopoulos, Vice – Rector of National and Kapodistrian University of Athens

Architecture and renewable energy sources
N. Fintikakis, Architect, Vice President of the Society for the promotion of studies on Prehistoric Thera, Director of UIA-ARES International work program

Welcome for AIVC – INIVE
P. Wouters, Belgian Building Research Institute

09.45-10.10: Energy performance regulations in the context of the EPBD: Keep it simple?
P. Wouters, D. Van Orshoven, X. Loncour, Belgian Building Research Institute

10.10-10.35: Potentials of urban heat island mitigation
Hashem Akbari, Heat Island Group, Lawrence Berkeley National Laboratory

10.35-11.00: Passive cooling in the works of A. N. Tombazis and Associates
A. Tombazis, Meletitiki – Alexandros N. Tombazis and Associates Architects Ltd

11.00- 11.15: Coffee Break

11.15 – 13.15: Parallel Session 1, Natural Ventilation for Cooling

Chair: E. Maldonado and G. Guarracino

11.15-11.30: Keynote Speeches

Natural ventilation of urban buildings – Summary of urbvent project
C. Ghiaus, F. Allard, University of La Rochelle, M. Santamouris, C. Georgakis, University of Athens, C.-A. Roulet, M. Germano, Federal Polytechnic School of Lausanne, F. Tillenkamp, Axima Lab, N. Heijmans, Belgian Building Research Institute
F. Nicol, London Metropolitan University, E. Maldonado, Institute of Engineering Mechanic
M. Almeida, University of Minho, G. Guarracino, ENTPE/CNRS Vaulx-en-Velin,
L. Roche, Building Research Establishment
11.30-12.50: Oral Presentations

Human factor in thermal performance of natural ventilated buildings
G. Gomez Azpeitia, A. Alcántara, P. Barragán, University of Colima, B. Givoni, University of California

Sensitivity analysis of a maritime located night ventilated library building
D. Connolly, D. Finn, P. Kenny, University College Dublin

CFD reliability issues in analysis of naturally ventilated buildings
J.M. Horan, D.P. Finn, University College Dublin

Effects of vents openings and insect screen on greenhouse ventilation
T. Bartzanas, N. Katsoulas, C. Kittas, University of Thessaly, T. Boulard, INRA-URIH 400, M. Mermier, INRA d'Avignon

Natural and mixed ventilation design via CFD and architectural modelling
M. Todorovic, O. Ecim, University of Belgrade, A. Marjanovic, VTI, I. Randjelovic, CIP

Wind tower a natural cooling system in Iranian traditional architecture
P. S. Ghaemmaghami, Iran University of Science and Technology, M. Mahmoudi, Qazwin Islamic Azad University

12.50-13.00: Short Oral Presentations

Study on the numerical predictive accuracy of wind pressure distributions and airflow characteristics. Part 1 Optimization of turbulence models for practical use
T. Endo, T. Kurabuchi, M. Ishii, K. Komamura, Tokyo University of Science, E. Maruta, Nihon University, T. Sawachi, National Institute of Land and Infrastructure Management

Study on the numerical predictive accuracy of wind pressure distributions and airflow characteristics. Part 2 Prediction accuracy of wind pressure distribution of various shaped buildings
M. Ishii, T. Kurabuchi, T. Endo, Tokyo University of Science, E. Maruta, Nihon University
T. Sawachi, National Institute of Land and Infrastructure Management

11.15-13.15: Parallel Session 2, Fighting Heat Island – Canyon Effect

Chair: R. Lamberts and S. Burton

11.15-11.30: Keynote Speech

Cool colored roofs to save energy and improve air quality
H. Akbari, R. Levinson, W. Miller, P. Berdahl, Lawrence Berkeley National Laboratory

11.30-12.50: Oral Presentations

A comparative study of the thermal performance of reflective coatings for the urban environment
A. Synnefa, M. Santamouris, I. Livada, University of Athens

Assessing the thermal environment of major cities in Greece
M. Stathopoulou, C. Cartalis, A. Andritsos, University of Athens

Estimating the ecological footprint of the heat island effect over Athens, Greece
M. Santamouris, K. Paraponiaris, University of Athens, G. Mihalakakou, University of Ioannina
Canyon effects calculation of wind speed in an urban street canyon with the aid of a semi-empirical model based on experimental data

C. Georgakis, M. Santamouris, University of Athens
A study of temperature and wind distribution inside two urban street canyons in Athens

K. Niachou, I. Livada, M. Santamouris, University of Athens
The impact of wind on air temperature distribution in Athens and in Santorini

I. Livada, K. Niachou, M. Santamouris, University of Athens
Heating demand differences between central and surrounding areas in the coastal town of Patras

Y. Caouris, A. Giannopoulos, University of Patras, M. Santamouris, University of Athens

12.50-13.00: Short Oral Presentations

Thermo Graphic analyses for monitoring urban areas in Rome to study heat island
C. Atturo, L. Fiumi, CNR-IITA-LARA
Guidelines for energy optimisation through landscape architecture in hot humid regions
S. Arias, University of Guadalajara

15.15-17.15: Parallel Session 3, Designing for Cooling

Chair: A. Tombazis and C. Kabele

15.15-15.30: Keynote Speech

Glass Architecture: Is it sustainable?
F. Butera, Polytechnic School of Milan

15.30-17.05: Oral Presentations

Refurbishment of old buildings for sustainable Use
S. Burton, S. Kesidou, FaberMaunsell
Environmental sustainable iranian traditional architecture in hot humid regions
M. Shohouhian, F. Soflaee, ISlamshahr Azad University
The potential for zero emissions / energy development in China
A. C. Pitts, B. Chen, University of Sheffield
Energetic rehabilitation of an office building in Barcelona by use of passive ventilation strategy and active solar technologies as shading device and corporate identity element
T. Masseck, Universitat Politècnica de Catalunya (UPC)
An innovative passive system for preventing conservation of the ancient stained glass windows in the Assissi St Francis Basilica superior church
A. Mingozzi, S. Bottiglioni, Mingozzi and Associates
Passive and low energy cooling techniques for the Czech Republic
M. Lain, Technical University in Prague, J. Hensen, Technical University of Eindhoven

17.05-17.15: Short Oral Presentations

Thermal performance of an underground museum in Turkey
M. Mas Gomez, Architectural Association Graduate School
Passive cooling techniques as part of energy rehabilitation measures in office buildings in Greece.
C. J. Koinakis, Technological Educational Institute of Thessaloniki

15.15-17.15: Parallel Session 4, Thermal Comfort

Chair: A. Papadopoulos and M. Wilson

15.15-15.30: Keynote Speech

Maximum temperatures in buildings to avoid heat discomfort
F. Nicol, London Metropolitan University, M. Humphreys, Oxford Brookes University

15.30-17.05: Oral Presentations

Adaptive thermal comfort evaluation in a field study
B. Moujalled, R. Cantin, G. Guarracino, ENTPE-DGCB-LASH
Climate optimised building parameters for low energy summer comfort under a discomfort index
L. Pagliano, P. Zangheri, Politechnic of Milan
Summer thermal comfort in traditional Buildings of the 19th century in Florina north western Greece
A. Oikonomou, National Technical University of Athens
Optimisation of indoor thermal comfort outside the heating season
S. Croce, L. P. Gattoni, R. Arlunno, Polytechnic of Milan
Thermal comfort in Boats
K. Kritsonis, ECOCAT, F. Nicol, Low Energy Architecture Research Unit (LEARN)
Comparison of the HQE method and the Ev assessment
P. Kosmopoulos, I. P. Fragidou, Democritus University of Thrace
Thermal comfort study of occupants in university of Patras
A. K. Aggelakoudis, M. G. Athanasiou, University of Patras

17.05-17.15: Short Oral Presentations

Eliminating the need for mechanical cooling
A. Rivera, Architectural Association
Improvement of summer comfort in wood frame buildings
G. Fraisse, V. Trillat-Berdal, B. Souyri, University of Savoy

17.15- 17.30: Coffee Break

17.30-19.00: Parallel Session 5, Education, Legislation and Socioeconomic

Chair: C. Axarli and A. Pitts

17.30-17.45: Keynote Speech

On the Impact of energy pricing on low energy design of buildings
A. M. Papadopoulos, A. Stylianou, Aristotle University Thessaloniki, S. Oxizidis, TNO-MEP
17.45-18.50: Oral Presentations

EULEB – European high quality low energy buildings  
J. Schlenger, H. F. O. Muller, University of Dortmund  
The contribution of contemporary technology to the environmental protection and sustainable development  
P. Patargias, University of Peloponnese  
Ecology in architecture design: Testing an advanced educational path  
P. Caputo, M. Molina, A. Roscetti, J. Vicari, Accademy of Architecture of Mendrisio, C. Milani, I. Rega, P. Schettino, Università della Svizzera Italiana  
CLEAR A multimedia package for comfortable low energy architecture  
A. Jacobs, F. Nicol, M. Wilson, J. Solomon, London Metropolitan University  
Thermal comfort educational software for hot climates  
I. Marincic, J. M. Ochoa, University of Sonora, A. Isalgue, Universitat Politecnica de Catalunya  
Social attitudes about environmental design and RES – Field study in Cyprus  
P. Kosmopoulos, Th. Ioannou, Democritus University of Thrace

18.50-19.00: Short Oral Presentations

Discrepancies between indications deriving from energy and economic issues in the design of building thermal Insulation  
G. L. Brunetti: Polytechnic of Milan  
The challenges of teaching bioclimatic architectural design  

17.30-19.00: Parallel Session 6, Design Tools

Chair: S. Meir and M. Almeida

17.30-17.45: Keynote Speech

A matrix for assessing the performance of intelligent buildings  
G. Sutherland, G. Stavarakakis, Technical University of Crete, D. Kolokotsa, Technological Educational Institute of Crete, S. Karatassou, M. Santamouris, University of Athens

17.45-18.55: Oral Presentations

A free user-friendly design tool that shows how to reduce cooling energy in buildings  
M. Milne, C. Gomez, D. Leeper, P. LaRoche, J. Morton, UCLA  
Energy buildings management methodology  
P. R. S. Jota, V. R. B. Silva, CEFET-MG  
Dormitory optimised energy performance using spatial archetypes  
E. Primikiri, University of Patras, M. Kokkolaras, P. Papalambros, University of Michigan

Application of the Ev Matrix in Xanthi, Greece  
P. Kosmopoulos, Democritus University of Thrace  
Numerical analysis of the microclimate conditions around a new telescope in La Palma, Spain
D. Pérez, J. Cipriano, CIMNE, G. Houzeaux, Politechnic University of Catalunya and CIMNE
Comparative analysis of thermal simulation models and their suitability to passive cooling techniques in hot arid climates
A. Marsh, Cardiff University

18.55-19.00: Short Oral Presentation

Solar irradiation graphs
T. Stasinopoulos, National Technical University of Athens

19.00- 20.30: Welcome Reception
09.00-11.00: Plenary Session, Ventilation for Cooling

Chair: M. Santamouris and H. Yoshino

09.00-09.40: Keynote Speeches

The air infiltration and ventilation center: The history and technical program of IEA Annex V
M. Sherman, Lawrence Berkeley National Laboratory
The role and ambitions of AIVC as international meeting point for information on ventilation and energy
P. Wouters, D. Van Orshoven, X. Loncour, Belgian Building Research Institute

09.40 – 11.00: Oral Presentations

Hybrid ventilation performance assessment using fitness functions
P. Michel, M. Elmankibi, ENTEPE DGCB LASH,
Local dynamic similarity concept as applied to evaluation of discharge coefficients of ventilated buildings. Part 1. Basic idea and underlying wind tunnels
T. Kurabuchi, T. Endo, Tokyo University of Science, M. Ohba, T. Goto, Tokyo Polytechnic University, Y. Akamine, University of Tokyo
Local dynamic similarity concept as applied to evaluation of discharge coefficients of ventilated buildings. Part 2. Applicability of local dynamic similarity concept
T. Goto, M. Ohba, Tokyo Polytechnic University, T. Kurabuchi, T. Endo, T. Otsuki, Tokyo University of Science Y. Akamine, The University of Tokyo
Local dynamic similarity concept as applied to evaluation of discharge coefficient of ventilated buildings. Part 3. Simplified method for estimating dynamic pressure tangential to openings of cross ventilated buildings
Y. Akamine, M. Kamata, The University of Tokyo, T. Kurabuchi, T. Endo, Tokyo University of Science, M. Ohba, T. Goto, Tokyo Polytechnic University
Wind driven flow through building openings
P. Karava, T. Stathopoulos, A.K. Athienitis, Concordia University
Performance of natural hybrid and mechanical ventilation systems in urban canyons
K. Niachou, M. Santamouris, University of Athens, S. Hassid, Technion-Israel Institute of Technology
Design of a hybrid ventilation system: The Cli’nat project

11.00- 11.15: Coffee Break

11.15 – 13.15: Parallel Session 7, Advanced Envelope Technology

Chair: F. Nicol and Y. Caouris
11.15-11.30: Keynote Speech
Building’s imitation of a human body’s thermal behaviour
**B. Todorovic**, University of Belgrade

11.30-13.00: Oral Presentations

Evaluation of the thermal performance of the envelope of an innovative construction system for low cost buildings *(will be presented by Dr. Baruch Givoni)*

**J. R. García Chávez**, Universidad Autónoma Metropolitana-Azcapotzalco
Building envelope design as a passive cooling technique

**E. Okba**, Cairo University
Monitoring for the evaluation of the energetic behaviour of PCM containing walls

**P. Principi**, **C. Di Perna**, **G. Borrelli**, **A. Carbonari**, Polytechnic University of Marche
Experimental energetic evaluation of changeable thermal inertia PCM containing walls

**P. Principi**, **C. Di Perna**, **G. Borrelli**, **A. Carbonari**, Polytechnic University of Marche
Efficient energy thermal insulation façade systems for optimal savings and flexibility in architectural design

**G.K Rouni**, Drapa chemie
A preliminary study of hygrothermal performance of autoclaved aerated concrete blocks under hot humid climate of Thailand

**Y. Ungkoon**, **J. Hirunlabh**, King Mongkut's University of Technology Thonburi, **J. Khedari**, South-East Asia University, **U-C. Shin**, Daejeon University, **P. Yodovard**, SUPERBLOCK PUBLIC CO
Innovative low energy renovation of a single family dwelling for summer comfort

**L. Vandaele**, **A. Deneyer**, **N. Heijmans**, **F. Dobbels**, Belgian Building Research Institute
Potential of innovative daylighting and passive cooling systems for achieving luminous and thermal comfort in commercial buildings. *(will be presented by Dr. Baruch Givoni)*

**J. R. García Chávez**, Universidad Autónoma Metropolitana-Azcapotzalco, **K. Tsikaloudakis**, Aristotle University of Thessaloniki

11.15 – 13.15: Parallel Session 8, Heat Dissipation Techniques

Chair: **E. Primikiri** and **G. Stavrakakis**

11.15-11.30: Keynote Speech

Cooled soil as a cooling source for buildings

**B. Givoni**, UCLA

11.30-12.55: Oral Presentations

A novel multi stage down draft evaporative cool tower for space cooling. Part 1. Aerodynamic design

A novel multi stage down draft evaporative cool tower for space cooling. Part 2. Preliminary experiments with a water spraying system

A Nonequilibrium Molecular Dynamics Simulation of Evaporation
Z. J. Wang, M. Chen, Z. Y. Guo, Tsinghua University

Thermal efficiency characteristics of an indirect evaporative cooling systems
B. Costelloe, Dublin Institute of Technology, D. P. Finn, University College Dublin

Passive downdraught evaporative cooling applied to an auditorium
J. J. Correia da Silva, Universidade de Évora

Limits and potentials of office building climatisation with ambient air
U. Eicker, M. Huber, P. Seeberger, J. Schumacher, C. Vorschulze, University of Applied Sciences Stuttgart

12.55-13.00: Short Oral Presentation

The potential for evaporative cooling in Turkey
M. Ateş, D. Baker, Middle East Technical University

15.15-17.15: Parallel Session 9, Sustainable Architecture

Chair: N. Fintikakis, and A. Mingozzi

15.15-15.30: Keynote Speech

Passive cooling effect of building features in traditional Japanese buildings
H. Yoshino, Tohoku University, K. Hasegawa, S. Matsumoto, Akita Prefectural University

15.30-17.05: Oral Presentations

Logical use of traditional technologies for housing passive cooling in hot humid Italian climatic areas
A. Mingozzi, S. Bottiglioni, Mingozzi and Associates
Environmental design studio design for Arriyadh, Saudi Arabia
G. Loehlein, American University of Sharjah
Low energy cooling in historical library office hall
K. Kabele, Department of Environmental and Building Services Engineering
Bioclimatic architecture concepts applied to CEFET’s building
M. S. S. Bracarense, R. P. Papa, P. R. S. Jota, CEFET-MG, BH
Design and retrofitting of a hybrid building in Athens
A. Gavalas, Gavalas Architects
Energy rehabilitation of modern office building in the region of Xanthi
P. Kosmopoulos, P. Kiriakidis, Democritus University of Thrace
Efficient retrofit actions and advanced control strategies for a student hostel
S. Ferrari, Polytechnic of Milan

17.05-17.15: Short Oral Presentations

Climatic responsive architecture in hot and dry regions of Iran
A. Azami, S.H. Yasrebi, A. Salehipoor, Islamic Azad University of Tabriz
Passive cooling and energy conservation design strategies of school buildings in hot arid regions, Riyadh, Saudi Arabia
W. Abanomi, Ph. Jones, Cardiff University
Adaptive strategies for office spaces in the UK climate
I. Gallou, Environment & Energy Studies Programme, Architectural Association Graduate School

15.15-17.15: Parallel Session 10, Advanced Active Cooling Techniques

Chair: U. Eicker and E. Erell

15.15-15.30: Keynote Speech
Cooling potential of heating – Cooling wall panels
A. Krainer, University of Ljubljana, R. Perdan, Biotech, Gal Krainer, TTGI d.o.o.

15.30-17.15: Oral Presentations
Hybrid photovoltaic – Thermal technology and solar cooling: The CRF solar façade case study
F. Butera, R. S. Adhikari, N. Aste, Polytechnic of Milan, R. Bracco, Research Center Fiat
Feasibility study of the passive solar room dehumidifying system using the sorption property as a wooden attic space through field measurements
N. Areemit, Y. Sakamoto, The University of Tokyo
Evaluation of a solar driven thermal systems for urban buildings
S. Oxizidis, A. Wemmers, TNO-MEP, A.M. Papadopoulos, A. Avgelis, A. Stylianou, Aristotle University of Thessaloniki
Optimisation and study of an autonomous solar desiccant cooling system
C. Maalouf, E. Wurtz, L. Mora, F. Allard, LEPTAB, University of La Rochelle
Solar cooling potential in tourist complexes in the North Aegean
N. Mamounis, A. Dimoudi, Greek Open University
Evaluation of PV technology implementation in the building sector
J.J. Bloem, A. Colli, EC DG Joint Research Centre, P. Strachan, University of Strathclyde
Potential use of geothermal energy from mine water in Europe for cooling and heating
E. Demollin-Schneiders, Gemeente Heerlen, Z. Malolepszy, University of Silizie, D. Bowers, PB Bowers London

17.15- 17.30: Coffee Break

17.30-19.00: Parallel Session 11, Designing for Cooling

Chair: A. Wagner and G. Mihalakakou

17.30-17.45: Keynote Speech
Energy efficient office buildings with passive cooling – Results and experiences from a research and demonstration programme in Germany
K. Voss, University Wuppertal, S. Herkel, J. Pfafferott, Fraunhofer ISE, A. Wagner, University Karlsruhe

17.45-18.50: Oral Presentations
Planning and design strategies for sustainable low energy development in Seoul, Korea
A. C. Pitts, K. Kim, University of Sheffield  
Traditional indian architecture – The future solar buildings

D. Vyas, IPS Academy  
Passive solar design in Antonio Gaudi’s domestic architecture

E. Usón Guardiola, E. Cunill de la Puente, Escuela Técnica Superior de Arquitectura de Barcelona  
Environmental strategies in retrofitting of educational buildings – The integrated approach

E. Triantis, University of Patras  
Natural cooling systems in sustainable traditional architecture of Iran

F. Soflaee, M. Shokouhian, Islamshahr Azad University  
Statistical simulation of user behaviour in low energy office buildings

J. Pfafferott, S. Herkel, Fraunhofer Institute for Solar Energy System  
Exploitation of solar energy in buildings, particularly in the natural and low energy heating and cooling. The case study of an energy-efficient residence in Nikaia, Larissa

A. Dimou, C. Koroneos, National Technical University of Athens

18.50-19.00: Short Oral Presentations

The passively cooled KfW building in Germany – Monitoring results  
A. Wagner, M. Kleber, University of Karlsruhe, K. Rohlfss, IP5  
Bioclimatic design of a residential complex for the elderly

V. Simantira, K. Stefopoulou, D. Triantafillid, K. Xanthopoulos, University of Patras

17.30-19.00: Parallel Session 12, Design and Comfort in Outdoor Spaces

Chair: E. Ng and A. Dimoudi

17.30-17.45: Keynote Speech

The London heat island and building cooling design  
M. Kolokotroni, Y. Zhang, Richard Watkins, Brunel University

17.45-18.55: Oral Presentations

The effect of water sprinkling on the surface temperatures of the materials used on the skin of Greek cities  
F. Bougatioti, National Technical University of Athens  
Thermal comfort in open spaces: A study in the Nearheast of Brazil

A. Dias, L. Chebel Labaki, UNICAMP, V. M. Dantas de Araújo, UFRN  
Thermal comfort conditions in outdoor spaces

N. Gaitani, M. Santamouris, University of Athens, G. Mihalakakou, University of Ioannina  
The problems of a shade-shadow and light in a design of open air market stall

R. Ernest, UCLAS  
The effect of shading on the surface temperatures of the materials used on the skin of Greek cities

F. Bougatioti, National Technical University of Athens  
Green areas in open urban spaces

G. Peretti, D. Marino, E. Montacchini, Polytechnic University of Turin  
Thermal comfort in urban spaces: the case of very warm and dry climate

J. M. Ochoa I., I. Marincic, University of Sonora
18.55-19.00: Short Oral Presentation

Schematic design proposals of the implementation of PDEC in the urban open spaces of Athens

E. Evangelinos, F. Bougiatioti, A. Oikonomou, National Technical University of Athens
09.00-11.00: Parallel Session 13, Advanced Envelope Technology

Chair: M. Kolokotroni and S. Meir

09.00-09.40: Keynote Speech

The Impacts of EPBD upon the summer performance of buildings
E. Maldonado, Institute of Engineering Mechanic

09.40 – 10.50: Oral Presentations

Composite insulating materials as a tool for the reduction of cooling loads
A.M. Papadopoulos, A. Avgelis, A. Karamanos, Aristotle University of Thessaloniki,
S. Hadjarakou, FIBRAN S.A., Ch. Nikolopoulos, H. Pesmatzoglou, TETRAS O.E.
Potentialities of lightweight construction solutions for sustainability
M. Almeida, L. Bragança, P. Mendonça, University of Minho
The potentiality of reflected sunlight through Rawshan screens
E. Aljofi, King Faisal University
The impact of envelope insulation and ventilation on summer performance
K. M. S. Chvatal, E. A. B. Maldonado, M. H. P. Corvacho, University of Porto
Sustainability embodied in the regional context
K. Iwamura, Musashi Institute of Technology

10.50-11.00: Short Oral Presentations

Solar Contribution evaluation for building attached sunspace in the Mediterranean climate
G. Oliveti, M. De Simone, S. Ruffolo, University of Calabria
Studying natural lighting in a hot climate
D. C. Avila, University of Guadalajara

09.00-11.00: Parallel Session 14, Use of PV's for Cooling and Advanced Glazing

Chair: C. Ghiaus and C. Cartalis

09.00-09.40: Keynote Speech

A study of double facades with phase – Change storage and photovoltaics
A. K. Athienitis, J. Zhang, D. Feldman, Concordia University

09.40 – 10.45: Oral Presentations

Ventilation benefit accrued from PV module installed in Building
J. K. Tonui, Y. Tripanagnostopoulos, University of Patras
Study of a new concept of Photo voltaic – thermal hybrid collector
Y. B. Assoa, C. Menez, R. Yezou, Thermal Center of Lyon (CETHIL), G. Fraisse, University of Savoy, T. Lefebvre, SUNLAND21 Company
Responsive glazing for solar control shading
G. Savineau, Technical Applications Manager
Thermal performance of different glazing surfaces in a hot climate
A. P. A. S. Castro, L. C. Labaki, G. C. R. Gutierrez, School of Civil Engineering, R. M. Caram de Assis, University of São Paulo USP

10.45-11.00: Short Oral Presentations
Optimum geometry and orientation of a building opening with an electro chromic glazing
M. N. Assimakopoulos, A. Tsangrassoulis, M. Santamouris, University of Athens
G. Guarracino, Laboratoire des Sciences de l’Habitat
Dynamic thermal simulation of a solar chimney with PV modules
J. M. Herrero, M. R. Heras-Celemin, CIEMAT
A solar multifunctional roof: Photovoltaic and thermal coupling
L. Tagliabue, N. Aste, G. Chiesa, Polytechnic of Milan

11.15-13.15: Parallel Session 15, Sustainable Architecture
Chair: S. Herkel and A. Krainer

11.15-11.30: Keynote Speech
Aristotle’s theory as a tool for inspiration in architecture. The shelter of the archaeological site at Akrotiri.
N. Fintikakis, Architect, Vice President of the Society for the promotion of studies on Prehistoric Thera, Director of UIA-ARES International work program

11.30-12.50: Oral Presentations
Study on the thermal and visual performance of eleven residential buildings
K. Pavlou, A. Sfakianaki, M. Santamouris, E. Mouriki, University of Athens, M. Kechrinioti, I. Stolidou, D. Psychogios, LABA Laboratory of Architecture
Design and commissioning of the low-energy office building in Prague.
M. Lain, M. Bartak, F. Drkal, Czech Technical University in Prague, J. Hensen, Technical University of Windhaven.
Passive and green building design: A residential complex for the elderly in Andria (Italy)
G.R. Dell’Osso, F. Iannone, Polytechnic of Bari
Towards better building and urban design in HK
E. Ng, Chinese University of Hong Kong
Day lighting analysis and energy saving measures in the Sino – Italy environment and energy building
F. Butera, R. S. Adhikari, N. Aste, Polytechnic of Milan
The Sino – Italy environment and energy building: A model for a new generation of sustainable building
F. Butera, R. S. Adhikari, P. Caputo, S. Ferrari, P. Oliaro, N. Aste, Polytechnic of Milan
10.50-11.00: Short Oral Presentations

Analysis of the typology and orientation of the 19th century traditional architecture in Florina, NW Greece
A. Oikonomou, University of Athens
Environmental Impacts and compatible Urban Design. (Case Study of Bam Citadel)
N. Mohajeri, Azad University

11.15-13.15: Parallel Session 16, Advanced Control Systems

Chair: S. Roaf and P. Karava

11.15-11.30: Keynote Speech

The effect of shading design and control on building cooling demand
A. Tzempelikos, A.K. Athienitis, Concordia University

11.30-13:00 :Oral Presentations

On the potential of Internet based energy services in Greece during cooling season
S. Karatasou, V. Geros, M. Santamouris, University of Athens
Integrating the cellular method for shading design with a thermal simulation
E. Kaftan, Research & EcoDesign, A. Marsh, Cardiff University
Recent market assessment and legal framework for BEMS in Greece
T. Nikolaou, E. Maria, Technical University of Crete, P. Zalimidis, University of Aegean,
D. Kolokotsa, Technological Educational Institute of Crete
The fresnel lens concept for solar control of buildings
Y. Tripanagnostopoulos, Ch. Siabekou, J.K. Tonui, University of Patras
Generative Skins
S. Yannas, Architectural Association
Comparative analysis of control strategies for passive cooling
P. Michel, M. Elmankibi, ENTPE DGCB LASH

10.55-11.00: Short Oral Presentations

Solar control devices: Balance between thermal performance and daylight
M. Mehrota, Architectural Association

11.00- 11.15: Coffee Break

15.15-17.15: Parallel Session 17, Ventilation for Cooling

Chair: J. R. Millet and A. Tzempelikos

15.15-15.30: Keynote Speech

Evaluation of hybrid ventilation control strategies in residential buildings
D. Jreijiry, A. Husaunndee, J.G. Villenave, CSTB, C. Inard, LEPTAB

15.30-17.15: Oral Presentations

Effect of vents configuration and insect screen on greenhouse microclimate
T. Bartzanas, N. Katsoulas, C. Kittas, University of Thessaly, T. Boulard, INRA-URIH, M. Mermier, INRA d'Avignon
Natural ventilation due to wind action: Practice knowledge against experimental airflow visualisation
A. M. Toledo, F. O .R. Pereira, Federal University of Santa Catarina
Potential of inertial ventilation for passive cooling in Brazilian climates
P. Hollmuller, University of Geneva, R. Lamberts, F. Westphal, M. Ordenes, J. Carlo, Federal University of Santa Catarina
Badgir in traditional Iranian architecture
A. Azami, Islamic Azad University of Tabriz
Comparison of computed and measured wind fields within street canyons
V.D. Assimakopoulos, National Observatory of Athens, C. Georgakis, M. Santamouris, University of Athens
Multicriteria assessment of natural ventilation potential of a site
M. Germano, C. A. Roulet , École polytechnique fédérale de Lausanne (EPFL)
Effect of air movement in building
S. Heidari, Ilam University
Air-conditioning avoidance: Lessons from the Windcatchers of Iran
S. Roaf, Oxford Brookes University, U.K.

15.15-17.15: Parallel Session 18, Designing for Cooling

Chair: S. Yannas and E. Evaggelinos

15.15-15.30: Keynote Speech

Architects, clients and bioclimatic design: A solar neighbourhood POE
S. Vainer, Environmental Education College, I. Meir, Ben-Gurion University of the Negev

15.30-17.05: Oral Presentations

The influence of building design features on microclimate modification in the warm periods of the year. Discussion based on temperature measurements
K. N. Axarli, Aristotle University of Thessaloniki
The window in the building tradition of the sub humid tropic
A. Gomez, A. Alcantara, University of Colima, E. Alvarado
Evaluation of influences of the external temperature in the building energy consumption
R. P. Papa, P.R.S. Jota, CEFET-MG
Cooling season post occupancy evaluation of a low energy complex school in the UK
I. Pegg, Buro Happold and Brunel University, A. Cripps, Buro Happold, M. Kolokotroni, Brunel University
Responsive and sustainable architectural strategies for temperate regions
S. M. Mofidi, University of Science and Technology
17.05-17.15: Short Oral Presentations

Site layout as a function of shading in Karst region
Z. Kristl, A. Krainer, University of Ljubljana

Climatic architecture tradition of India
P. Viswanathan, Glasgow School of Art

17.15-17.30: Coffee Break

**Closing Session**

Indoor environment for energy performance of buildings – A new European draft standard
O. Seppänen, Helsinki University of Technology, B Olesen, Danish Technical University, A Boerstra, BBA

Passive and low energy cooling – The state of the art and future priorities
M. Santamouris, University of Athens