

Wednesday, 23 October 2019

Prof. Ronald Rovers

Climate change requires reinventing building(s)

Hall I

Opening Ceremony **10:00**

Keynote Speech **10:45**

Coffee Break **11:15**

Sessions **11:45**

Energy efficient and sustainable constructions: contributing to reduced impacts and emissions.

Hall I

Chair: Prof. Dimitrios Bikas

Hebatulla Elsharawy

Life Cycle Assessment (LCA) based concept design method for potential zero emission residential building design

Nikolaos Sifakis

Towards nearly zero energy ports: Reality or myth?

Alex Gonzalez-Caceres

Evaluation of measurement techniques for modelling buildings in energy simulation and labelling tools

Elzbieta Hamadyk

Use of timber for the sustainable city growth and its role to the climate change

Konstantinos Petros Kampouris

Energy storage systems review and case study in the residential sector

Water & air:

Elements' treatment in the urban environment

Hall II

Chair: Dr. Wim Bakens

Constantina Varsami

Aeolian Towers: Designing aerodynamics

Stefania Anna Palermo

On the LID systems effectiveness for urban stormwater management: Case study in Southern Italy

Aikaterini Basdeki

Urban rain water management- Results of questionnaire in Thessaloniki, Greece

Stefania Anna Palermo

Green wall systems: where do we stand?

Energy performance evaluation and enhancement

Hall III

Chair: Prof. Paris Fokaides

Angeliki Kresteniti

A simplified calculation process of buildings' energy saving potential

Georgios Gourlis

Energy efficient operation of industrial facilities: the role of the building in simulation-based optimisation

Ramon Pascual Pascuas

Review & comparison of methodologies and tools to perform energy efficiency projects in public buildings in MED areas

Despoina Teli

Facilitating responsive interaction between occupants and building systems through dynamic post-occupancy evaluation

Dr. Constantinos Balaras

THE BUILT ENVIRONMENT – A source of and solution to the challenges for a SUSTAINABLE FUTURE

Hall I

Light Lunch **13:00**

Keynote Speech **14:00**

Sessions **14:30**

Policy approaches and strategies towards buildings of higher performance: current status

Hall II

Chair: Prof. Sandro Nizetić

Dimitrios Kraniotis

Use of cross laminated timber (CLT) in industrial buildings in Nordic climate : A case study

Alex Gonzalez-Caceres

Is the tailor recommendation useful? Policy suggestions to upgrade the EPC recommendations report

Elli Kyriaki

Energy policy and regulatory tools for sustainable commercial buildings

Vincent Blouin

Barriers to adoption of green building materials and technologies in developing countries: The case of Burkina Faso

Egle Klumbyte

A SIPOC based model for the sustainable management of facilities in social housing

Building Physics

Hall II

Chair: Dr. Elena Dascalaki

Paris Fokaides

Numerical Investigation of the impact of longitudinal thermal bridging on energy efficient buildings under humid continental climate conditions: The case of Lithuania

Beñat Arregi

Assessment of thermal performance and surface moisture risk for a rear-ventilated cladding system for facade renovation

Leonie Scheuring

Natural ventilation provided by a self-sufficient façade system

Donato Rubinetti

Fully integrated numerical design tool to assess the thermal performance of PCM in the building environment

Existing buildings performance: consideration of resilience- and thermal behavior-related factors

Hall II

Chair: Prof. Katerina Tsikaloudaki

Chris Murphy

New Zealand's unreinforced masonry buildings: Facing up to the Earthquake

Evi Riga

Urban seismic risk model for resilient cities. The case of Thessaloniki

Karolos Kontoleon

Analysing the thermal behaviour of an insulated flat roof with regards to its exterior surface emissivity coefficient

Adolfo Preciado

Rammed earth sustainability and durability in seismic areas as a building material

Beñat Arregi

Comparison of theoretical heat transfer model with results from experimental monitoring installed in a refurbishment with ventilated facade

Improving the performance at building and urban scale: consideration of different contributing factors

Hall III

Chair: Prof. Isaac Meir

Fatma Seyma Keskin

Sustainable structural intervention methodology for vulnerable buildings from a lifecycle perspective

Eleftheria Alexandri

Which is the optimum option for parking in the city centre?

Carmen María Calama-González

Building characterisation and assessment methodology of the social housing stock in the Mediterranean warmer climate: The case of southern Spain

Lingjun Hao

Assessing the impact of climate change on energy retrofit of alpine historic buildings: consequences for the hygrothermal performance

Athanasios Balasas

Environmental response of mudbrick settlements. The case of Korestia villages in Western Macedonia

Coffee Break **15:45**

Sessions **16:15**

Thursday, 24 October 2019

09:00 Registration

09:30 Sessions

Environmentally friendly buildings: Sustainable practices, LCA considerations, assessment tools **Hall I**

Chair: Prof. Christina Giarma

Junya Yamasaki
Annual nationwide environmental impact assessment of Japanese municipalities by type of business within the endpoint-type LCA method "LIME2"

Constantinos Balaras
A transnational multicriteria assessment method and tool for sustainability rating of the built environment

Rasa Apanavičienė
Sustainability assessment of the building construction stage using Building Sustainability Assessment Schemes

Amr Abdelfattah
Sustainable development practices & its effect on Green Buildings

Eleni Bitsiou
Parameters related to building components' life-cycle analysis in methods for buildings' environmental performance assessment

Renewable Energy Sources I: Systems and modeling **Hall II**

Chair: Prof. Georgios Panaras

Miguel Hermans
New generation of theoretical models for the thermal response of geothermal heat exchangers

Georgios Mouzeviris
Seasonal heat performances of air-to-water heat pumps in the Greek climate

Domenico Mazzeo
Impact of climatic conditions of different world zones on the energy performance of the photovoltaic-wind-battery hybrid system

Nikos Papamanolis
The utilization of solar energy in the building sector in Mediterranean countries

Under the sun: Solar energy, daylight & bioclimatic considerations **Hall III**

Chairs: Prof. Aris Tsangrassoulis

Flora Bougiatioti
Bioclimatic analysis of streets and buildings of the Byzantine period

Szu-Cheng Chien
Light beyond vision: Implications for human-centric lighting design in tropical nursing homes

Antonios Kontadakis
Performance assessment of an active sunlight redirection system in areas with different climate: A comparison

Aikaterini Mantzourani
The effect of the daylight zone on light energy savings

Slavica Stamatovic Vuckovic
Principles of passive solar architecture as means of improving health and thermal comfort aspects of indoor environment

10:45 Coffee Break

11:15 Sessions

Thermal comfort **Hall I**

Chair: Prof. Despoina Teli

Nikolina Pivac
Application of wearable sensory devices in predicting occupant's thermal comfort in office buildings during the cooling season

Zohreh Soleimani
Design of heat sinks for wearable thermoelectric generators to power personal heating garments: A numerical study

Eleni Malaktou
Summer thermal comfort conditions in shopping arcades and their adjoining streets in hot and dry climates. The case of the Nicosia's historic centre.

Lavinia Chiara Tagliabue
Indoor comfort conditions assessment in educational buildings with respect to adaptive comfort standards in European climate zones

Giannis Papadopoulos
Thermal comfort and Indoor Air Quality assessment in university classrooms

Environmentally friendly approaches under the prism of social justice and perceptions **Hall II**

Chairs: Prof. Eleni Alexandrou

Michael Crosbie
Green houses of worship: Connections between religious beliefs and sustainable architecture

Branislav Antičić
Environmentally-friendly planning for urban shrinkage

Sofia-Natalia Boemi
Research of energy behaviour and energy poverty of households in Northern Greece

Panos Kosmopoulos
A Panhellenic social survey (2018-9) regarding the quality of life, energy needs and people's attitudes towards R.E.S.

Ioanna Kyprianou
Challenges in regional approaches: Lessons from energy poverty research in a small scale European member state

Spyridon Karytsas
Measurement methods of socioeconomic impacts of renewable energy projects

Energy use at different urban environment scales: trends, analyses and optimisation **Hall III**

Chair: Prof. Theodoros Theodosiou

Constantinos Balaras
Time evolution of energy use intensities and energy gap of existing Hellenic non-residential buildings

Driton Hyseni
Energy efficiency in complex buildings

Igor K. Shesho
Heat transfer between heated, partially heated and non-heated residential units in buildings

Dimitra Tsigirigi
Energy efficiency in the city scale: An urban block typology approach

Eleni Liapopoulou
Energy performance analysis & low-carbon retrofit solutions for residential buildings

12:45 Light Lunch

13:45 Keynote Speech

Prof. Sandro Nizetic

Importance of energy efficiency and how to remove barriers to energy efficiency in public and residential buildings

Hall I

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Climate change mitigation

Hall II

Chair: Prof. Kleo Axarli

Robert Sangori

Energy efficiency of building technologies and climate change using geographical information system (GIS):

A case study of use of soil, water and forest/grass in Migori county, Kenya

Khaoula Raboudi

The shading envelope: A morphology for climate change mitigation

Milica Igic

Impact of Climate Change on rural development and rural built environment: Case study settlements within the Region of the Southern and Eastern Serbia

Ifigenia Theodoridou

Towards climate change mitigation and adaptation in cities – the role of Greek Municipalities and Prefectures. Findings and outcomes from the EMPOWERING Project

Isaac Meir

Towards Zero Energy Settlements –

A brief note on commissioning and POE within the EU ZeroPlus Settlements

Near zero energy buildings: strategies and consideration of various issues

Hall III

Chair: Prof. Agis Papadopoulos

Andreas Androutsopoulos

Achieving nearly zero energy buildings in Greece

Effrosyni Giama

Towards integrated energy and environmental management of commercial buildings: The Onassis Cultural Centre (OCC) case

Samah Mehira

Designing a net zero energy social housing by integrating Photovoltaic Systems: Case study in Algeria

Maria Symeonidou

High performance building facades for Zero Energy Buildings in Greece: State of the art and perspectives

Emeli Guarda

Use of thermal insulation in the envelope to mitigate energy consumption in the face of climate change for Brazilian savannah

Coffee Break 15:30

Sessions 16:00

Sustainability of the built environment: inclusion in education and informative elements

Hall I

Chair: Prof. Ana Radivojevic

Rajat Gupta

Meta-study of residential energy studies in India

Viktoria Prilenska

Serious game for building neighbourhood energy supply scenarios

Eleni Alexandrou

Assessment of the sustainable redesign of existing buildings in Greece in an undergraduate course: Application of passive solar systems in existing, typical residences

Dustin Albright

Imagining a healthy future: Cross-disciplinary design for sustainable community development in Cange, Haiti

Iva Muraj

Sustainability, Environmental Performance and Energy Efficiency in Higher Education: Faculty of Architecture, University of Zagreb

Danae Zoe Mitkas

Mitigation of traffic pollution emissions in the built environment: a real-time flow actuated tool for on ramp management

Retrofitting, renovation and interventions considering environmental impacts and performance

Hall II

Chair: Dr. Dimitrios Kraniotis

Maria Paula Dunel

Evaluation of the thermal performance of a Social Interest Housing (SIH) with ecological brick masonry produced with urban solid waste stabilized in a tropical climate to replace the use of traditional building materials

Aristotelis Vartholomaios

Optimisation of outdoor shading devices with thermal comfort criteria: The case of the Venetian Port of Chania

Laurina C. Felius

The impact of building automation control systems as retrofitting measures on the energy efficiency of a typical Norwegian single-family house

Elpida Polychroni

Innovative financial schemes for buildings energy renovation

Adalberto Guerra Cabrera

Comparative study of measurement and verification (M&V) baseline models for quantifying energy savings in building renovations

Andreas Androutsopoulos

Mapping the deep renovation possibilities of European buildings

Consideration of embodied impacts for structures of a wide spectrum of types and integration of BIM

Hall III

Chair: Dr. Constantinos Balaras

Eirik Resch

Embodied emission profiles of building types: Guidance for emission reduction in the early phases of construction projects

Nesreen Fathy

HBIM- A sustainable approach for heritage buildings restoration in Egypt

Elena Dascalaki

On the share of embodied energy in the lifetime energy use of typical Hellenic residential buildings

Christiana Panteli

Overview of BIM integration into the construction sector in European member states and European Union Acquis

Duu-Hwa Lee

Establishing an evaluation model for recycled green building materials for global circular economies and construction industry

Charalampos Baniotopoulos

Life Cycle Analysis of lattice and tubular wind turbine towers. A comparative study

Gala Dinner ZITHOS in Dore, Tsirogianni 7, White Tower



20:30

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Friday, 25 October 2019

09:30 **Keynote Speech**

Prof. Matthaïos Santamouris

Hall I

10:00 **Sessions**

On the Impact of Urban Overheating and advances on Mitigation Science

Urban context: microclimatic and emissions-related conditions: evaluation and optimization

Hall I

Chair: Prof. Dustin Albright

Natasha Frilingou

Effects of improved energy performance of buildings on air quality over the greater Athens area

Andreas Gavros

Microclimate profile and contribution of air conditioning to local heat island effects at the Aristotle University of Thessaloniki main campus

Maria Balouktsi

On the definition and prioritization of strategies and actions to minimize greenhouse gas emissions in cities: An actor-oriented approach

Stella Tsoka

Assessing the effect of urban morphology on the parameters of urban microclimate under different meteorological conditions. Application in residential areas of Thessaloniki, GR.

Maeva Dang

The potential for rooftop agriculture in the city of Rio de Janeiro: Growing capacity, food security & green infrastructure

Improving the energy performance of various types of buildings

Hall II

Chair: Dr. Domenico Mazzeo

Sören Eikemeier

Life-cycle oriented simulation-supported heating demand optimisation of buildings: An Austrian case study

Ioannis Tsigkas

District cooling on an existing district heating infrastructure: Technologies and potential

Anastasia Martzopoulou

Application of urban passive cooling systems and design techniques in livestock buildings

Angeliki Kavga

Recent advancements in the energy performance of intelligent green houses: A Case study

Djedjiga Baziz

The opaque ventilated facade for passive cooling in the climate of Algiers with exploitation of thermal breezes

Renewable Energy Sources II: Consideration of different aspects

Hall III

Chair: Dr. Georgios Martinopoulos

Georgios Malliotakis

Small wind turbines: Sustainability criteria related to the local built environment

Eftihia Tzen

Small wind turbines for on grid and off grid applications

Rosa Christodoulaki

Optical analysis of an evacuated tube collector with built-in compound parabolic concentrator for process heat applications

Konstantinos Lymperopoulos

Preliminary evaluation of operational results of RES systems integrated in students' residences in Xanthi, Greece

Christian Popp

Development of a photovoltaic thermal facade system

11:15 **Coffee Break**

11:45 **Sessions**

Policy, regulation and standards

Hall I

Chair: Prof. Patrizia Piro

Ana Radivojevic

Lack of regulation on the energy efficiency in Serbia in terms of the assessment of the impact of thermal bridges

Nouara Issaadi

Towards an energy performance threshold for existing residential building in Algeria for thermal rehabilitation; Current situation, proceedings and perspectives

Behrouz Pirouz

A new multi-objective dynamic model to close the gaps in sustainable development of industrial sector

Robert Sangori

The role of policy, regulation and standards: Towards sustainability in Kenya's building environment

Agis Papadopoulos

Developing a strategy for energy efficiency in the Egyptian building sector

Sustainability-related aspects of buildings & building components performance

Hall II

Chair: Prof. Karolos Kontoleon

Themistoklis Nikolaidis

Stability investigations in composite steel-concrete walls for restoration purposes to enhance structural and sustainability design

Iasonas Bakas

Treasures gutted by fire. Fire safety design awareness as a consequence of historic building accidents and disasters

Vasiliki Pachtá

Influence of perlite and aerogel in the performance of cement-based mortars at elevated temperatures

Ugwu Juliet

Sustainability performance of plantain leaf ash and the compressive strength of concrete

Maria Stefanidou

Influence of aerogel as aggregate in the properties of cement mortars

Retrofitting, renovation and interventions considering environmental impacts and performance II

Hall III

Chair: Dr. Andreas Androutsopoulos

Margarita Angelidou

Co-creating sustainable urban planning and mobility interventions in the city of Trikala

Georgios Martinopoulos

High energy efficiency renovation options for a typical apartment. The case study of the SPITI project

Alexandros Politis

Energy upgrading of existing collective housing with environmental and economic criteria: financial accessibility gap in cost-optimal energy retrofit of a ten-storey residential building in Athens, Greece

Ioannis Tsolakidis

Urban land cover mapping, using open satellite data. Case study of the municipality of Thessaloniki

Panagiotis Rovertos Kontonis

Investigation of sun protection issues via the active and passive building integration of active solar energy systems: A Case study of the renovation of an existing building in Cyprus

13:00 **Round Table**

14:00 **Light Lunch**

