

08:00 09:00 Registration & Welcome

Plenary - Open Ceremony - Welcome Presentations

09:00	10:00	<p>Prof. Dr. William BAHNFLETH, P.E. ASHRAE presidential member</p> <p>Dr. Costas A. BALARAS Director & Regional Chair, ASHRAE Region XIV</p> <p>Angelos DALAVOURAS President, ASHRAE Hellenic Chapter</p>	<p>Vice Admiral Nikolaos Tsounis HN Chief, Hellenic Navy General Staff</p> <p>Georgios Stasinou President, Technical Chamber of Greece</p>
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10:00	10:30	<p>Thermal Energy Storage in the Era of Sustainability</p> <p>Prof. Dr. William BAHNFLETH, P.E. <i>FASHRAE, FASME, FISIAQ, ASHRAE President 2013-2014, Department of Architectural Engineering Pennsylvania State University</i></p>	<p>How Sustainable are Hotel Rooms? Estimating Sustainability Factors</p> <p>Ioannis STAMATIOU <i>Electrical and Computer Engineer, Environmental Design of Cities and Buildings MSc HOU</i></p>	<p>Analyses of Thermal Comfort and Air Flow Patterns in Naval Ships and Passenger trains</p> <p>Prof. Dr. Essam KHALIL <i>ASHRAE Fellow, ASME Fellow, AIAA Fellow, Professor of Energy. Cairo University, ASHRAE Director at Large</i></p>	<p>TESSE²B</p> <p>The Tesse2b overall vision and rationale</p> <p>Prof. Dr. Michalis Gr. VRACHOPOULOS <i>TEISTE</i></p> <p>Dr. Constantine KARYTSAS <i>Director of RES Division, CRES</i></p> <hr/> <p>The TESSE2b project: Thermal Energy Storage Systems for Energy Efficient Buildings</p>	<p>POSTER SESSION</p> <p>Experimenting in lighting design using light fixtures in a real space</p> <p>Olympia ARDAVANI Architect Engineer, Environmental Engineer, Lighting Designer</p> <hr/> <p>Simulation of Daylight Penetration through Roof Openings with Varying Geometrical Data Relations, in a Small Industrial Building in Greece and Evaluation of Photometric Results</p> <p>Olympia ARDAVANI Architect Engineer, Environmental Engineer, Lighting Designer</p> <hr/> <p>External Factors and Efficiency of Thermal Energy Storage System</p> <p>Prof. Dr. Tomasz BAKON <i>Electrical Engineer, Assist. Professor at Faculty of Production Engineering, Warsaw University of Life Sciences, Poland</i></p>	<p>WORKSHOPS</p> <p>WORKSHOP – 1</p> <p>New Chiller Generation: Technologies & Refrigerant Solutions for High Energy Efficiency and low Environmental Impact in Buildings</p> <p>Emiliano PELLIS <i>Mechanical Engineer Export Area Manager CLINT / G.I. INDUSTRIAL HOLDING SpA</i></p> <hr/> <p>WORKSHOP – 2</p> <p>Refrigeration Applications with Transcritical CO₂</p> <p>Timos DASKALOPOULOS <i>Mining & Metallurgical Engineer, MBA, CEO Delphis Group, Athens, Greece</i></p>
10:30	11:00	<p>Building and Urban Scale Transnational Multicriteria Sustainability Assessment Systems</p> <p>Dr. Costas A. BALARAS <i>Mechanical Engineer, FASHRAE, Research Director, Group Energy Conservation, Institute for Environmental Research & Sustainable Development, National Observatory of Athens, Greece</i></p>	<p>Standardization for Supporting Decision Making in Tertiary Sector Buildings Energy Efficiency Renovations</p> <p>Prof. Dr. Theocharis TSOUTSOS Head, Renewable & Sustainable Energy Lab, School of Environmental Engineering, Technical University of Crete</p>	<p>Risk and Threat Assessment Integration in Systems Engineering Process</p> <p>Dimitrios KROUPATSIARIS Captain at Hellenic Navy, BS in Marine Engineering, HNA, M.Sc. in Electrical & Computer Engineering, NPS, Degree of Electrical Engineer, NPS</p>	<p>Prof. Luis COELHO <i>IPS</i></p> <hr/> <p>TEISTE</p> <p>Development of heat exchangers and PCM tanks for heating, cooling and Domestic Hot Water (DHW)</p> <p>Prof. Dr. Maria K. KOUKOU</p> <hr/> <p>GEOTEAM</p> <p>Borehole heat exchangers(BHE) using PCM technology</p> <p>Mag. Heiko GAICH</p>		

		COFFEE BREAK					
11:00	11:30						
11:30	11:50	<p>Commissioning Management for High-Performance Buildings</p> <p>Andrés SEPÚLVEDA <i>Chemical Engineer IFL MBA, Madrid Polytechnic University, Commtech Commissioning Services CEO, Madrid, Spain</i></p>	<p>A Demand Flexibility Driven Risk Assessment Framework for Smartgrids</p> <p>Stylios KARATZAS <i>Electrical Engineer, MSc in Operations Management, Ph.D. (c), Civil Engineering Department, University of Patras, Greece</i></p>	<p>Vehicles, Energy, and Air Quality - Current Impact and Issues</p> <p>Prof. Dr. William BAHNFLETH, P.E. <i>FASHRAE, FASME, FISIAQ, ASHRAE President 2013-2014, Department of Architectural Engineering Pennsylvania State University</i></p>	<p>CRES</p> <p>Solar Thermal Systems' innovative concepts for residential buildings</p> <p>Theoni I. Oikonomou <i>Solar Thermal Systems Dept.</i></p>	<p>About Stage Lighting in the Theatre: The Use of Led Lanterns on Lighting Performance Spaces – Stage Spaces (Go Green)</p> <p>Angeliki BOUMPOPOULOU <i>Electrical and Computer Engineering, Lighting Design MA, Supervisor in Execution of Projects, Technical Department, Municipality of Kalamata City, Greece</i></p>	<p>WORKSHOP – 3</p> <p>ASHRAE Standard 189.1 – “Standards for the Design of High Performance Buildings; except Low-Rise Residential”</p> <p>Prof. Douglas ZENTZ <i>Associate Professor, Program Coordinator for the HVACR Programs within the College of Engineering Technology at Ferris State University</i></p>
11:50	12:10	<p>Optimising Efficiency at System Level</p> <p>Raul SIMONETTI <i>HVAC/R Corporate Business Manager at the HVAC/R Knowledge Centre of CAREL Industries SpA, Brugine, Italy</i></p>	<p>Cost Effectiveness Assessment and Beyond: a Study on Energy Efficiency Interventions in new Greek Residential Building Stock</p> <p>Platon V. PALLIS <i>Mechanical Engineer, M.Sc. Ph.D (c), Senior Researcher at Laboratory of Steam Boilers & Thermal Plants, National Technical University of Athens</i></p>	<p>Advanced System Architectures and Operational Methodologies Leading to Energy Efficient Operations in the new Metro Line 4 in Athens</p> <p>Dr. George LEOUTSAKOS <i>Mechanical Engineer, Engineering Department, Attiko Metro S.A, Athens, Greece</i></p>	<p>RUB</p> <p>Control and monitoring system for high energy and cost efficiency</p> <p>Prof. Constantinos SOURKOUNIS & Pavlos TOUROU</p>	<p>Daylight and Transparency: Architectural Spaces' Qualitative Features Related to Daylight Through Materials' Form and Structure</p> <p>Anastasios BOUTZIKAS <i>Architect Engineer UTH, M.A. Lighting Design & Multimedia</i></p>	<p>WORKSHOP – 4</p> <p>HVAC systems for Hyper - Efficient Buildings</p> <p>Alkis Triantafyllopoulos <i>Menerga Hellas Mech. Engineer</i></p>
12:10	12:30	<p>Comparative Techno-Economic Assessment between Conventional insulation and VIP for the Renovation of a Building Envelope</p> <p>Dr. Ioannis Atsonios <i>Mechanical Engineer, Post-Doctoral Researcher at Lab. of Heterogeneous Mixtures and Combustion Systems, School of Mechanical Engineering, National Technical University of Athens, Greece</i></p>	<p>Energy Efficiency in Heritage Buildings</p> <p>Vasiliki KYRIAKOU <i>Architect Engineer, MSc. Energy systems, Doctoral candidate, Department of Civil Engineering Demokritos University of Thrace, Greece</i></p> <p>Prof. Dr. Vassilis P. PANOSKALTSIS <i>Department of Civil Engineering, Demokritos University of Thrace, Greece</i></p>	<p>Theoretical Study of the Effect of Injection Timing Malfunction on DI Diesel Engine Performance and Combustion Characteristics</p> <p>Marios I. Kourampas <i>Naval Engineer Officer</i></p>	<p>Tesse2b demonstration sites ECOSERVEIS</p> <p>Aniol Esquerra ALSIUS</p> <p>GEOTEAM</p> <p>Mag. Heiko GAICH</p> <p>Z&X</p> <p>Zenon CHRYSANTHOU</p>	<p>Light and Water in Wellness Spaces</p> <p>Ioanna DAMOPOULOU <i>Lighting Design & Multimedia Applied Art Hellenic Open University</i></p>	<p>How the Economic Viability of Redesigning the Lighting System is Affected in A Typical Classroom in Greece by Lighting Design and Daylight Zones</p> <p>Dr. Lambros DOULOS <i>Post-Doctoral Researcher, Dpt. Of Architecture, University of Thessaly, Adjunct Professor, Hellenic</i></p>

12:30	12:50	<p>Deep Renovation of a Residential Building - a Life Cycle Perspective</p> <p>Dr. Alexandra Bonou Civil Engineer, Post Doctoral Researcher, School of Mechanical Engineering, Lab. of Heterogeneous Mixtures and Combustion Systems, Zografou, Athens, Greece</p>	<p>Towards Occupancy Inference in a Smart Home Using Energy and Environmental Data Sources and Binary Classification Techniques</p> <p>Dr. Stelios KRINIDIS Postdoctoral Research Associate at Information Technologies Institute/ Center for Research and Technology Hellas (ITI/CERTH)</p>	<p>Advanced Exergy Analysis of Gas Turbines</p> <p>Kyriaki MOSCHOPOULOU Student, Dpt. Mechanical Engineering, University of West Attica, Athens, Greece</p>	<p>Financial & Market analysis of TESSe2b solution</p> <p>CRES</p> <p>Dr. Olympia POLYZOU & Dr. Spyridon KARYTSAS Geothermal Energy Dept.</p>	<p>Open University, School of Applied Arts Greece, Researcher, Photometry Lab, National Technical University of Athens</p>	
12:50	14:00	LUNCH BREAK					
14:00	14:20	<p>Net Positive Energy Design</p> <p>Dr. Rupesh IYENGAR Dr. Sc. (Sustainable Architecture), M. Sc. (Sustainable Design), B. Eng. (Mechanical) Director, Services Consultants, India. Co-Founder, Index Workshop LLP, Singapore</p>	<p>Energy Signature Model for Data Center Infrastructure</p> <p>Prof. Dr. Spiros LIVIERATOS Electrical Engineer, Associate Professor, School of Pedagogical and Technological Education Dept. of Electrical and Electronic Engineering, Athens, Greece</p>	<p>The Discovery of some Engine Parts of the early 19th Century Steam Ship "Karteria" at the Salamina Main Naval Station of the Hellenic Navy</p> <p>Dr. Michaelis LEFANTZIS Architect Engineer, Greek Ministry of Culture & Sports, Directorate for the Restoration of Ancient Monuments Athens, Hellas</p>	<p>European Innovation Activities in Thermal Energy Storage</p> <p>CREATE</p> <p>Advanced thermal storage system based on Thermo Chemical Materials</p> <p>Fenixtnnt, Barbora BLAŠKOVIČOVÁ</p>	<p>The Use of Lighting as a Tool to add Familiarity to a Space – The Example of a Hotel</p> <p>Eleftheria FLOROU Architect AUTH, MSc Lighting Design MA HOU</p>	<p>WORKSHOP – 4 cont. HVAC systems for Hyper - Efficient Buildings</p> <p>Alkis Triantafyllopoulos Menerga Hellas Mech. Engineer BEng Mech Eng, MSc in Energy Engineering ASHRAE Hellenic Chapter President 2017-2018</p>
14:20	14:40	<p>Energy Efficiency in Smart Cities</p> <p>Prof. Dr. Essam KHALIL ASHRAE Fellow, ASME Fellow, AIAA Fellow, Professor of Energy. Cairo University, ASHRAE Director at Large</p>	<p>Experimental Performance Evaluation of a Small-Scale ORC Power Unit Working with Low Temperature Energy Sources for Power Co-generation</p> <p>Prof Dr. Maria K. KOUKOU Assistant Professor, Mechanical Engineering Department, Technological Education Institute of Sterea Ellada, Psachna, Evia</p>	<p>Energy Efficient Strategies for Urban Transportation Planning</p> <p>Prof. Dr. Doaa M. EL-SHERIF Professor of Environmental Planning & Urban Management, Executive Director; Urban Training & Studies Institute (UTI); Housing & Building National Research Center (HBRC)-Ministry of Housing, Utilities & Urban Communities, Egypt</p>	<p>SCORES</p> <p>Self consumption of renewable energy by hybrid storage systems</p> <p>Fenixtnnt, Barbora BLAŠKOVIČOVÁ</p>	<p>Daylight as Basic Parameter on Lighting Design in Tunnels with Vertical Openings</p> <p>Christina GKAZGKA Electrical Engineer, Lighting Designer</p>	<p>WORKSHOP – 5 Chillers and Ecodesign</p> <p>Athanasios PALIOGIANNIS Mechanical Engineer MSc., Sales Manager BSS & Projects, AHI CARRIER SEE SA</p>
						<p>Intelligent Bulk Materials for a Smart Transport Sector</p> <p>Dr. Andreas Gondikas Chemical Engineer, Environmental Engineer, Project manager, AXIA Innovation</p>	<p>Urban Micro Space Lighting: The Case of Folegandros Fortress</p> <p>Myrsini KOPANARI</p>

14:40	15:00	<p>Can Machines be Conscious</p> <p>Prof. Dr. Maria VENIERI <i>Department of Philosophy & Social Studies, University of Crete</i></p>	<p>Assessment of the Influence of the Thermal Properties of the Grout Backfill Material on the Heat Exchange Process of Geothermal Boreholes</p> <p>Dr. Amândio REBOLA <i>Mechanical Engineering, Researcher of H2020 TESSe2b project at Instituto Politécnico de Setúbal, Setúbal, Portugal</i></p>	<p>Experimental Investigation of the Wave Run Up on a TLP Floating Wind Turbine</p> <p>Marinos CHARALAMPOUS <i>Naval Architect and Marine Engineer, School of Engineering - Naval Architecture Department, University of West Attica, Athens, Greece</i></p>	<p>E2VENT Energy efficient ventilated facades for optimal adaptability and heat exchange</p> <p>Fenixtnnt, Barbora BLAŠKOVIČOVÁ</p>	<p><i>Engineer of Restoration and Renovation of Buildings, Lighting Design MA</i></p> <hr/> <p>Statistical Distribution of Luminous Efficacy of Office Luminaires</p> <p>Evangelos MANOLIS <i>Lighting Design & Multimedia MA, Sales Director, Capture Visualisation AB, Gothenburg, Sweden, Sales Director, AtlaBase Ltd, Athens, Greece</i></p>
15:00	15:20	<p>Energy Analysis on Cascade Refrigeration CO2 Systems with Thermal Compression in Super Markets</p> <p>Prof Dr. Michalis Gr. VRACHOPOULOS <i>Professor Mechanical Engineering Department, Technological Education Institute of Sterea Ellada Psachna, Evia</i></p>	<p>Multicriteria Analysis on the Energy Upgrade to nZEB of Traditional Buildings in Mountainous Areas</p> <p>Ioannis RAMMOS <i>Architect UTH, Environmental Design of Cities and Buildings MSc HOU</i></p>	<p>The Impact of Economic Crisis on Teleworking and Travel Behaviour in the Cities of Thessaloniki and Karditsa, Greece</p> <p>Dr. Eleni MISOKEFALOU <i>Civil Engineering, MSc. Planning, Organization and Management of Transport Systems, Lecturer at University of Thessally</i></p>	<p>HYBUILD Integration of energy storage systems in a heat pump</p> <p>NTUA, Prof. Sotirios KARELLAS</p>	<p>Contemporary Lighting Requirements in Museums</p> <p>Ioanna PAPADOPOULOU <i>Hellenic Open University, School of Applied Art, Lighting Design MA</i></p> <hr/> <p>Studying, Managing and Planning Areas Protected from Light Pollution. The Case of Planning Greece's First National Dark Sky Park</p> <p>Andreas PAPALAMBROU <i>Electrical Engineer, Light Designer</i></p>
15:20	15:40	<p>Motives and Tools to Enable Citizens to Become "Smart Consumers": A "Socially-Oriented" Approach Towards Smart Energy Consumption in Buildings</p> <p>Dr. Christos VLACHOKOSTAS <i>Mechanical Engineer, Board Member Technical Chamber of Greece/Region of Central Macedonia</i></p>	<p>Study of Heat Transfer in a Latent Heat Storage System using Salt Hydrates for Domestic Heating Applications</p> <p>George DOGKAS <i>Physicist, PhD Candidate, Technological Education Institute of Sterea Ellada, Chalkida, Greece</i></p>		<p>DISCUSSION</p> <p>Thermal Energy Storage – Prospects and future steps in European research</p>	<p>Retail lighting design: consumer approach techniques</p> <p>Evangelia RENTZIOU</p>
15:40	16:00	<p>Historical Buildings Energy Efficiency – improvement and Empowerment</p> <p>Dr. Milena BLAGOJEVIC <i>Architect, Teaching Assistant, Department of Architecture, University of Florence, Italy</i></p>	<p>Energy Efficiency in Heritage Buildings</p> <p>Vasiliki Kyriakou <i>Architect Engineer, MSc. Energy systems, Doctoral candidate, Department of Civil Engineering Demokritos University of Thrace, Greece</i></p>			<p>Photography and Audiovisual Arts, MA Lighting Design</p> <hr/> <p>Assessment of Daylighting Design Strategies in Preschool Buildings</p> <p>Athina I. SAMIOU <i>Architect Engineer A.U.Th., M.Sc. Environmental Design</i></p>

16:00	16:20	<p>Analysis of Wind Catcher, Decorative Pool and Outlet Opening Combinations on Evaporative Cooling of Residential Interiors</p> <p>Prof. Dr. Murat ÇAKAN Asst. Professor, Faculty of Mechanical Engineering, Istanbul Technical University, Turkey</p>	<p>Utilization of transgenic plants, through genetic modification as bioluminescent, for outdoor lighting</p> <p>Olympia ARDAVANI School of Applied Arts, Hellenic Open University, Patra, Greece</p>			<p><i>of Buildings, M.A. Lighting Design-Multimedia</i></p>	
COFFEE BREAK							
16:30	16:50	<p>Combining Business Processes with Energy Management: A Process Driven Building Energy Management Framework for Tertiary Buildings</p> <p>Stylios KARATZAS Electrical Engineer, MSc in Operations Management, Ph.D. (c), Civil Engineering Department, University of Patras, Greece</p>	<p>Innovative uses of Phase Change Materials (PCMs) for Renewable Heating & Cooling</p> <p>Adam DICKEN Chemical Engineer, AMIChemE, Phase Change Material Products Ltd</p>			<p>Lighting and Well-Being of Employees in Healthcare Buildings</p> <p>Hara SIGALA Architect NTUA, MSc Light and Lighting UCL, Adjunct Professor Hellenic Open University</p>	
16:50	17:10	<p>Yearly Performance of a Cogeneration System with Nanofluid-based Thermal Photovoltaic Coupled to a Heat Pump</p> <p>Dr. Evangelos BELLOS Post-doctoral Researcher at Thermal Department of School of Mechanical Engineering in National Technical University of Athens, Greece</p>				<p>The contribution of Richard Kelly in 21stCentury Architecture through Lighting Design</p> <p>Hara SIGALA Architect NTUA, MSc Light and Lighting UCL, Adjunct Professor Hellenic Open University</p>	
ROUND TABLE – OPEN DISCUSSION Building our New Energy Future							
16:30	17:30	<ul style="list-style-type: none"> • Prof. Dr. William Bahnfleth • Dr. Costas Balaras • Dr. Essam Khalil • Prof. Dr. Bratislav Blagojevic 		<ul style="list-style-type: none"> • Rear Admiral Georgios Bamblenis • Captain Dimitrios Koupatsiaris HN • Andrés Sepulveda • Dr. Rupesh Iyengar 			