3rd International Exergy, Life Cycle Assessment, and Sustainability Workshop & Symposium (ELCAS-3)

07 – 09 July, 2013, NISYROS – GREECE

SYMPOSIUM PROGRAMME
SATURDAY
06 JULY 2013
AFTERNOON

REGISTRATION
(19:00 - 21:00)

SUNDAY
07 JULY 2013
MORNING

OPENING
SESSION 1 - PLENARY
ROOM A
(10:00 - 14:00)

LUNCH BREAK
(14:00 - 16:00)

SESSION 2
ROOM A
(15:00 - 17:30)

SESSION 3
ROOM B
(16:00 - 17:30)

SUNDAY
07 JULY 2013
AFTERNOON

COFFEE BREAK AND POSTERS PRESENTATION
(17:30 - 18:00)

SESSION 2
ROOM A
(18:00 - 20:30)

SESSION 3
ROOM B
(18:00 - 20:30)
MONDAY 08 JULY 2013
MORNING

SESSION 4 - PLENARY
ROOM A (08:30 - 10:30)

COFFEE BREAK
(10:30 - 11:00)

SESSION 5
ROOM A (11:00 - 14:00)

SESSION 6
ROOM B (11:00 - 14:00)

LUNCH BREAK
(14:00 - 16:00)

SESSION 7
ROOM A (16:00 - 17:30)

SESSION 8
ROOM B (16:00 - 17:30)

COFFEE BREAK AND POSTERS PRESENTATION
(17:30 - 18:00)

SESSION 7
ROOM A (18:00 - 20:30)

SESSION 8
ROOM B (18:00 - 20:30)

MONDAY NIGHT: SYMPOSIUM DINNER (21:30)
CLOSURE SESSION 9 - PLENARY
ROOM A
(08:30 - 13:00)
COFFEE BREAK (10:30 – 11:00)

TUESDAY AFTERNOON: NISYROS VOLCANO VISIT,
COFFEE AT VILLAGE OF NIKIA – VISIT AT THE VOLCANO MUSEUM
AND DINNER AT VILLAGE OF EMPORIO
Saturday 06 July 2013
Registration
Symposium Desktop – Room A
19:00 – 21:00  REGISTRATION

Sunday 07 July 2013
Registration
Symposium Desktop – Room A
09:00 – 10:00  REGISTRATION

OPENING
Session 1
Plenary
10:00 – 14:00, Morning – Room A

Sunday 07 July 2013
10:00 – 10:30  Welcome Ceremony – COST C24 Presentation
C.J. KORONEOS: Introduction to ELCAS
PHIL JONES: COST Action TU1104 - SMART ENERGY REGIONS
Local Authorities of Nisyros

INVITED KEYNOTE SPEAKERS:

10:30 – 11:00  ENERGY GENERATING BUILDING ENVELOPES
Phil Jones

11:00 – 11:30  LIFE CYCLE MANAGEMENT OF LOW-CARBON BUILDING MATERIALS FOR SMART CITIES
Allan Astrup Jensen

11:30 – 12:00  BREAKING SYMMETRIES AND EMERGING URBAN STRUCTURES
Serge Salat

12:00 – 12:30  ON THE PRINCIPLES/IMPORTANCE OF THERMODYNAMICS
Özer Arnas
12:30 – 12:45  QUESTIONS AND DISCUSSION

12:45 – 13:00 LCA AND LCSA OF HYDROGEN PRODUCTION FROM BIOMASS

P. Masoni, A. Zamagni, C. Tripepi, M. Stefanova, D. Barisano

13:00 – 13:15 THE NEED FOR A 3D EXERGY ANALYSIS OF BUILT ENVIRONMENT

Ronald Rovers

13:15 – 13:30 ANALYSIS OF LIFE CYCLE OF PLANTS FROM POINT OF ENERGY BALANCE

Imre Benko

13:30 – 13:45 AN INTERDISCIPLINARY APPROACH TO THE IMPLEMENTATION OF WIND ENERGY: ACCEPTANCE, ENGINEERING, ECONOMICS AND SITE OPTIMIZATION

Harry Spiess, Andrea Marcolla, Rudolf Fuchs, Vicente Carabias

13:45 – 14:00 QUESTIONS AND DISCUSSION

14:00 – 16:00 LUNCH BREAK

Session 2
Exergy and Industrial Systems

16:00 – 16:15 EXERGY ANALYSIS OF ALUMINUM RECOVERY FROM MUNICIPAL SOLID WASTE INCINERATION

D. Vyzinkarova, E. Allegrini, D. Laner, Astrup T.F.

16:15 – 16:30 RENEWABLE AND DISTRIBUTED SOURCES WITHIN SMART ENERGY REGIONS

Jovan Todorović

16:30 – 16:45 MODELING OF A CONCRETE ENERGY ACCUMULATOR COOPERATION WITH THE COMPRESSION HEAT PUMP

B. Salacinski, V. Pisarev, J. Gorski

16:45 – 17:00 EXERGY ANALYSIS OF BIOMASS COGENERATION SYSTEMS BASED ON GASIFICATION AND COMBUSTION

J. Taillon, R. E. Blanchard
17:00 – 17:15 MODELICA-BASED MODELING AND EXERGY ANALYSIS OF A CENTRAL HEATING SYSTEM
R. Sangi, R. Streblow, D. Müller

17:15 – 17:30 EXERGETIC ANALYSIS OF THE ENEXAL BAUXITE RESIDUE TREATMENT ON THE OVERALL RESOURCE EFFICIENCY OF THE PRIMARY ALUMINA REFINING PROCESS
E. Balomenos, D. Panias, I. Paspaliaris, D. Kastritis, D. Boufounos

17:30 – 18:00 COFFEE BREAK

18:00 – 18:15 CROSS-INDUSTRY INNOVATIONS IN THE RENEWABLE ENERGY INDUSTRY
M. Kloiber, R. Priewasser

18:15 – 18:30 THE USE OF A LOW ENERGY HYBRID MEMBRANE PROCESS FOR WATER TREATMENT
V. K. Patroklos, E. Tsirekas, S. Stylianou, A. I. Zouboulis and P. Samaras

18:30 – 18:45 EXERGY ANALYSIS OF THE POWER MODE OPERATION OF A BIMODAL NUCLEAR THERMAL ROCKET FOR THE NERVA CONCEPT
E. Skordilis, L. Benos, M.M. Ioanniti, K. Pavlou and Stamatis A.

18:45 – 19:00 LUMINOUS RECYCLING
Rodrigo Antonio Vasquez Paredes, Fidel Franco, Jaume Roset

19:00 – 19:15 FUTURE OF SOLAR COLLECTORS: TILT ANGLE OPTIMIZATION FOR MAXIMUM PERFORMANCE
Abdulkadir Kocer, Afsin Gungor

19:15 – 19:30 A STATISTICAL COSTING APPROACH FOR EXERGOECONOMIC ANALYSES APPLIED TO A HEAT PUMP
A. Dietrich, F. Dammel, P. Stephan

19:30 – 19:45 SIMPLIFIED PERFORMANCE EXERGY ANALYSIS TOOLS FOR THERMAL POWER PLANTS
J. Taillon, R. E. Blanchard

19:45 – 20:00 BENCHMARK ON COST AND EMISSION REDUCTIONS OF PIPE INSULATION OPTIMIZATION USING EXERGY ANALYSIS
Y. Başoğlu, B. Gürel, S.S. Aylak, M. Şimşek, A. Keçebaş

20:00 – 20:15 AUTOMATED PET CLASSIFICATION IN WASTE MANAGEMENT SYSTEMS USING KERNEL PCA
Zuhal Kurt, Kemal Ozkan, Erol Seke
Session 3
Environment, Life Cycle Assessment

16:00 – 16:15  INTERDEPENDENCIES IMPACT ON SUSTAINABLE WATER INFRASTRUCTURE SERVICES
A. Zabasta, E. Casaliccio, N. Kunicina

16:15 – 16:30  THE CLIMATIC CHANGE. A MODEL OF OSCILLATORS COUPLING
Fidel Franco

16:30 – 16:45  GREEN ENERGY SOLUTIONS AND CITIZENS’ PARTICIPATION IN ENERGY PLANNING AND MANAGEMENT: A CASE STUDY FOR BASILICATA REGION

16:45 – 17:00  EVALUATING THE CARBON FOOTPRINT ASSOCIATED WITH AIR TRAVEL FROM EU MEMBER COUNTRIES AS WELL AS SWITZERLAND AND RUSSIA TO GREECE
S. Pieri, V. Sakagianni, E. Zafeiratou, I. Tzouvadakis

17:00 – 17:15  URBAN LABORATORY NUREMBERG WEST
P. Geyer, W. Lang, I. Nemeth, J. Schinabeck

17:15 – 17:30  SOLAR MAP
Rodrigo Antonio Vásquez Paredes, Jaume Roset

17:30 – 18:00  COFFEE BREAK

18:00 – 18:15  URBAN RESPONSES TO CLIMATE CHANGE IN ITALY
M. Salvia, F. Pietrapertosa, S. De Gregorio Hurtado, D. Geneletti, V. D’Alonzo, S. Di Leo, D. Reckien

18:15 – 18:30  ENERGY EFFICIENCY MANAGEMENT OF PUBLIC BUILDINGS: A CHALLENGE FOR LOCAL COMMUNITIES
Metka Sitar, Vlasta Krmelj
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<th>Time</th>
<th>Session</th>
<th>Speaker/Authors</th>
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<tr>
<td>18:30 – 18:45</td>
<td>LIFE CYCLE ASSESSMENT BASED COMPARISON OF ELECTRICITY</td>
<td>M.Banar, A. Özdemir, Z. Çokaygil, A. Ozkan</td>
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<td>POWER GENERATION ALTERNATIVES IN TURKEY</td>
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<td>18:45 – 19:00</td>
<td>CEMIS FOR PRODUCTION - INTEGRATED ENVIRONMENTAL PROTECTION; PIPE DREAM OR</td>
<td>H. Junker</td>
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<td>REALITY?</td>
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<td>19:00 – 19:15</td>
<td>CHARACTERIZATION OF THE PYROLYSIS PRODUCTS OF RDF</td>
<td>A. Ozkan, M. Banar, Z. Çokaygil, O. Tezer, A. Mergen,</td>
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<td>G. Kucukacil, G. Gokce, O. Ceren</td>
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<td>19:15 – 19:30</td>
<td>THE PYROLYSIS OF STERILIZED HEALTHCARE WASTES</td>
<td>A. Özkan, M. Banar, Z. Çokaygil, A. Mergen, Ö. Tezer,</td>
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<td>G. Küçükaçıl, G. Gökçe &amp; O. Ceren</td>
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<td>19:30 – 19:45</td>
<td>ECOLABEL DECISION SUPPORT SYSTEM</td>
<td>P. D. Panagiotakopoulos</td>
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<td>19:45 – 20:00</td>
<td>IN SEARCH FOR PERFECT CITY-LAND RELATIONSHIP</td>
<td>R. Castañón, J. Roset</td>
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<td>20:00 – 20:15</td>
<td>SUPPLY CHAIN CHALLENGES OF CARBON FOOTPRINT AT THE WHOLESALE LEVEL: THE</td>
<td>P. Panagiotakopoulos</td>
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<td>CASE OF OLIVE OIL</td>
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<td>20:15 – 20:30</td>
<td>QUESTIONS AND DISCUSSION</td>
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**Session 4**

Plenary

08:30 – 11:00, Morning – **Room A**

**INVITED KEYNOTE SPEAKERS:**

**08:30 – 09:00**  
EXERGY-BASED METHODS APPLIED TO THE CHAIN “NATURAL GAS – LNG – NATURAL GAS”  
*George Tsatsaronis*

**09:00 – 09:30**  
LIFE CYCLE SUSTAINABILITY ASSESSMENT  
*Walter Klöpffer*
09:30 – 09:45 SUSTAINABILITY ASSESSMENT OF POWER GENERATION IN COMBINATION WITH LNG EVAPORATION: A COMPARISON OF LCA METHODS AND EXERGY ANALYSIS

L. Stougie, H.J. van der Kooi

09:45 – 10:00 EXERGY-BASED METHODS APPLIED TO THE CHAIN “NATURAL GAS – LNG – NATURAL GAS” – REGASIFICATION OF LNG

T. Morosuk, N. Yılmaz, G. Tsatsaronis

10:00 – 10:15 ENVIRONMENTAL PERFORMANCE OF ANTIMICROBIAL PAINTS ENHANCED WITH BIOCIDE SMART RELEASE TECHNOLOGIES

M. Taxiarchou, A. Peppas, M. Krokida, Kyriakopoulou K.

10:15 – 10:30 QUESTIONS AND DISCUSSION

10:30 – 11:00 COFFEE BREAK

Session 5
Life Cycle Assessment, Exergy and Industrial Systems

11:00 – 14:00, Morning – Room A
Monday 08 July 2013

11:00 – 11:15 SMALL SCALE HYDRO POWER RENAISSANCE IN THE UK: A LIFE CYCLE ASSESSMENT OF A WATER WHEEL

V.D. Kouloumpis

11:15 – 11:30 SOCIAL LIFE CYCLE ASSESSMENT: SOCIOECONOMIC EVALUATION OF RENEWABLE ENERGY

S. Henke, L. Theuvsen

11:30 – 11:45 COMPARATIVE ANALYSIS OF SOLAR POWER TECHNOLOGIES THROUGH LIFE CYCLE ASSESSMENT APPROACH

F. Asdrubali, G. Baldinelli, A. Presciutti, C. Baldassarri, F. Scrucca

11:45 – 12:00 EXTENDED LCA MODEL FOR THE EVALUATION OF POWER GENERATION TECHNOLOGIES WITHIN THE FUTURE ENERGY SYSTEM

M. Schwarz
12:00 – 12:15  STRUCTURES: INVESTIGATION OF THE ENVIRONMENTAL IMPACTS USING A LIFE CYCLE APPROACH
S. Toniolo, A. Fedele, A. Manzardo, A. Scipioni

12:15 – 12:30  COMPARATIVE LIFE CYCLE ASSESSMENT OF CONCRETE ROAD PAVEMENTS
E. Anastasiou, I. Papayianni, A. Liapis, Memet M.

12:30 – 12:45  TRAVEL BEHAVIOR AND GREENHOUSE GAS IMPACTS – A CASE STUDY OF THE HELSINKI METROPOLITAN REGION
J. Heinonen, S. Ala-Mantila, S. Junnila

12:45 – 13:00  EVALUATION OF THE LIFE CYCLE ASSESSMENT OF MILK PRODUCTION IN MEDITERRANEAN COUNTRIES
M. Demertzí, A.C. Dias, S. González-García, L. Arroja

13:00 – 13:15  REFURBISHMENT OF THE FORTRESS OF SANT’ANDREA WITH THE USE OF THE LCA
S. Fortuna, P. Neri, F. Peron

13:15 – 13:30  GOAL PROGRAMMING METHOD FOR THE SELECTION OF THE MOST SUSTAINABLE HYDROGEN SYSTEM IN LIFE CYCLE PERSPECTIVE
Jingzheng Ren, M. Longo, A. Manzardo, S. Toniolo, A. Scipioni

13:30 – 13:45  APPROACHING S-LCA DATA DEFECTS VIA SOCIAL NETWORKS - AN EXPLORATIVE STUDY
A. Meyer

13:45 – 14:00  TECHNICAL AND SUSTAINABILITY ASSESSMENT OF SMALL SCALE BIOENERGY SYSTEMS
A. Zabaniotou, P. Manara, D. Mertzis, Z. Samaras

14:00 – 16:00  LUNCH BREAK

Session 6
Exergy and Buildings
11:00 – 14:00, Morning – Room B
Monday 08 July 2013

11:00 – 11:15  A CONTRIBUTION TO BUILDING LIFECYCLE ANALYSIS: EMBODIED ENERGY ANALYSIS OF MECHANICAL INSTALLATIONS FOR A TYPICAL URBAN GREEK DWELLING
D.G. Koubogiannis, A. Daskalaki, C.A. Balaras
11:15 – 11:30 ASSESSMENT OF SUBURBAN APARTMENT BUILDINGS REFURBISHMENT FROM ENERGY AND ENVIRONMENTAL ASPECTS
A. Krstic-Furundzic, A. Djukic

11:30 – 11:45 THE ADOBE WALL AS AN ECOLOGICAL BUILDING STRUCTURE
Á. Nemcsics, A. Ürmös

11:45 – 12:00 THERMAL AND LIGHTING DYNAMICS IN BUILDINGS WITH-active envelope controls
A. Tzempelikos, K. Moustakas, I. Zisis

12:00 – 12:15 AIR TEMPERATURE VARIATION, PRODUCTIVITY AND ENERGY CONSUMPTION ANALYSIS IN OFFICE BUILDING: CASE STUDY OF KAUNAS (LITHUANIA)
A.Jurelionis, R.Valancius, L.Seduikyte

12:15 – 12:30 SIMULATION AND EVALUATION OF THE ENERGY PERFORMANCE OF BIOCLIMATIC SYSTEMS IN TOURIST RESORTS.
M. Xenakis, S.P. Pieri, M. Tongelidou, I. Tzouvakadakis

12:30 – 12:45 QUALITY ASSESSMENT METHODS AND TOOLS FOR BUILDING REFURBISHMENT IN EUROPE
S. Brunoro

12:45 – 13:00 ENVIRONMENTAL IMPACT OF AN INDUSTRIAL ESTATE REFURBISHMENT INTO A HOUSING COMPLEX
A. Krstic-Furundzic, B. Stankovic, M. Miljus, S. Spasojevic

13:00 – 13:15 PROMOTION OF SUSTAINABLE RENOVATION IN EUROPE

13:15 – 13:30 THERMAL PERFORMANCE OF RECYCLED GLOBIGERINA LIMESTONE AS A BUILDING MATERIAL
M. Cremona, V. Buhagiar

13:30 – 13:45 BUILDING INTEGRATION OF SOLAR THERMAL SYSTEMS
S. A. Kalogirou

13:45 – 14:00 QUESTIONS AND DISCUSSION

14:00 – 16:00 LUNCH BREAK
Session 7
Exergy and Industrial Systems, Environment
16:00 – 20:30, Afternoon – Room A
Monday 08 July 2013

16:00 – 16:15 RENEWABLE ENERGY POTENTIAL AND MOUNTAINOUS AREAS: EXPLORING AN INTRINSIC RELATION
N. Katsoulakos, D. Kaliampakos

16:15 – 16:30 MESO AND MICRO SCALE NUMERICAL MODELLING FOR THE ASSESSMENT OF URBAN WIND AND THERMAL ENVIRONMENT
M. Petridou, Y. Perivolaris, K. Rados, D. Bouris

16:30 – 16:45 OPTIMIZATION OF LOW ENTHALPY GEOTHERMAL SYSTEMS FOR GREENHOUSE APPLICATIONS
K.L. Katsifarakis, E. Tsagkari, E. Papadopoulos, S. Kourgiantaki

16:45 – 17:00 PARAMETRIC LIFE CYCLE ASSESSMENT OF AN EXPERIMENTAL BUILDING FOR AQUACULTURE
R. Albatici, I. Marchiori, G. Manzini, F. Scavazza, S. Gialanella

17:00 – 17:15 EXERGY-BASED METHODS APPLIED TO THE CHAIN “NATURAL GAS – LNG – NATURAL GAS” – LIQUEFACTION USING A SINGLE MIXED-REFRIGERANT PROCESS
T. Morosuk, A. Hiemann, N. Bin Omar, G. Tsatsaronis

17:15 – 17:30 ENERGY OPTIMIZATION PRACTICES FOR SUSTAINABLE OPERATION OF MBR WASTEWATER TREATMENT SYSTEMS
Tolkou Athanasia, Zouboulis Anastasios and Samaras Petros

17:30 – 18:00 COFFEE BREAK

18:00 – 18:15 BRINE MANAGEMENT & SUSTAINABILITY: THE EXAMPLE OF AN ENERGY AUTONOMOUS PILOT SYSTEM IN TINOS ISLAND
D. Xevgenos, K. Moustakas, M. Loizidou

18:15 – 18:30 SUSTAINABLE URBAN DEVELOPMENT IN PRACTICE: ZEUS 2020 - A SHOWCASE
Kaltenegger I.

18:30 – 18:45 THERMAL COMFORT IN PUBLIC SPACE AND SUSTAINABILITY - Test of alternative solutions for the renovation of a square in Porto, Portugal
J. Cortesão, F. Brandao Alves, H. Corvacho, C. Rocha
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<tr>
<td>18:45 – 19:00</td>
<td>APPROACH FOR THE PRACTICAL APPLICATION OF EXERGY ANALYSIS WITHIN BRANCH-ORIENTED ENTERPRISE NETWORKS, TOWARDS THE REALIZATION OF AN EXERGY LIFE CYCLE ASSESSMENT (ELCA)</td>
<td>I. Álvarez</td>
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<td>19:15 – 19:30</td>
<td>COOPERATION INITIATIVES FOR INCREASE OF ENERGY-EFFICIENCY IN REGIONS ACROSS EUROPE</td>
<td>Mitic, A.</td>
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<td>19:30 – 19:45</td>
<td>METHODOLOGICAL APPROACH FOR SUSTAINABLE DEVELOPMENT IN A RURAL AFRICAN COMMUNITY (NYAHO’O, CAMEROON)</td>
<td>J. Taberna, E. Sánchez</td>
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<td>19:45 – 20:00</td>
<td>DOUBLE-EFFECT DISTILLATION AND THERMAL INTEGRATION APPLIED TO THE ETHANOL PRODUCTION PROCESS FROM SUGAR CANE</td>
<td>R. Palacios-Bereche, A. V. Ensinas, M. Modesto, S. A. Nebra</td>
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<td>20:00 – 20:15</td>
<td>ESTIMATING THE INFLUENCE OF CLIMATE CHANGE OVER THE HEATING AND COOLING ENERGY NEEDS OF A SIMPLE BUILDING</td>
<td>G. Safouri</td>
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<td>20:15 – 20:30</td>
<td>QUESTIONS AND DISCUSSION</td>
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Session 8
Exergy and Sustainability, Life Cycle Assessment

16:00 – 20:30, Afternoon – Room B
Monday 08 July 2013

16:00 – 16:15 | LIFE CYCLE ENVIRONMENTAL IMPACTS OF HEAT AND ELECTRICITY MICRO-GRIDS COVERING DISTRICT ENERGY DEMANDS | D. Giannopoulos, E. Malliotakis, M. Founti                      |
| 16:15 – 16:30 | IS A NET POSITIVE ENERGY WASTEWATER TREATMENT PLANT FEASIBLE?                                         | P. Gikas                                                        |
16:30 – 16:45  LIFE CYCLE ASSESSMENT OF TWO 2MW WIND TURBINES USED IN MEXICO  
A. V. Vargas, E. Zenón, U. Oswald, L. P. Güereca, F. Manzini

16:45 – 17:00  AN ENVIRONMENTAL ASSESSMENT FOR ANAEROBIC DIGESTION OF BIOWASTE BASED ON LIFE CYCLE ANALYSIS PRINCIPLES  
D. Kourkoumpas, N. Nikolopoulos, M. Agraniotis, P. Grammelis, E. Kakaras

17:00 – 17:15  LIFE CYCLE ASSESSMENT OF BRAZILIAN BEEF PRODUCTION  

17:15 – 17:30  ENERGO AND EXERGO-ENVIRONMENTAL ANALYSIS OF A MULTIPURPOSE PROCESS FOR ETHANOL PRODUCTION FROM SUGARCANE AND CORN  
A.C.G. Donke, M.I.S.F. Matsuura, E.T. Sugawara, L. Kulay

17:30 – 18:00  COFFEE BREAK

18:00 – 18:15  LCA OF BIOMASS POWER PLANTS: FROM SOIL TO ELECTRICITY  

18:15 – 18:30  EVALUATION OF THE OPTIMAL GEOMETRY OF AIR COOLED CONDENSERS FOR CONCENTRATED SOLAR POWER PLANTS THROUGH THE LCA APPROACH  
F. Asdrubali, G. Baldinelli, C. Baldassarri, F. Scrucca

18:30 – 18:45  ASSOCIATING THE THERMODYNAMIC APPROACH WITH LCA FOR SUSTAINABLE PRODUCTION OF ELECTRICITY IN COGENERATION SYSTEMS USING SUGARCANE BAGASSE  
J. P. Guerra, L. Kulay

18:45 – 19:00  ASSESSMENT OF SHIP EMISSIONS IN A LIFE CYCLE PERSPECTIVE  
S. D. Chatzinikolaou, N. P. Ventikos

19:00 – 19:15  CHALLENGES OF LIFE CYCLE ASSESSMENT (LCA) IN THE BIOPHARMACEUTICAL INDUSTRY  
S.V. Ramasamy, N.J. Titchener-Hooker, Lettieri P.

19:15 – 19:30  DEVELOPING A SUSTAINABLE MICROALGAE BIOFUEL PRODUCTION PROCESS MODEL THROUGH LIFE CYCLE ASSESSMENT (LCA)  
D.C. Mathew, G. Di Lorenzo, P. Pilidis

19:30 – 19:45  EXERGETIC THINKING: AN INSIGHT  
J. Roset, R. Andújar, D. Matic, R. Castañón
19:45 – 20:00  EXERGETIC PERFORMANCE PREDICTION OF GEOTHERMAL DISTRICT HEATING SYSTEM BY USING ANN METHOD
A. Keçebaş, B. Gürel, Y. Başoğlu, S.S. Aylak, M. Şimşek

20:00 – 20:15  LIFE CYCLE ANALYSIS FOR SUSTAINABLE ARCHITECTURE
N. Manou-Andreadis, M. Milona

20:15 – 20:30  QUESTIONS AND DISCUSSION

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**Poster Session**

**URBANISTICAL RELATIONSHIP IN GLOBAL SCALE**
Á. Varga, A. Ürmös, Á. Nemcsics

**URBANISTICAL COMPARATION OF TWO HUNGARIAN REGIONS IN THE VIEWPOINT OF GEOMORPHOLOGICAL INFLUENCE**
A. Ürmös, Á. Nemcsics

**COMPARATIVE ANALYSIS OF BIOSPLASTICS PRODUCTION METHODS**
V.Tsamili, E.Angeli, C. Koroneos
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<td>08:30 – 08:45</td>
<td>IT-Supported Energy Efficiency Networks as starting point for Life Cycle Databases</td>
<td>C. Manthey</td>
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<td>08:45 – 09:00</td>
<td>DEMAND RESPONSIVE TRANSPORT SYSTEMS: ENERGY AND SOCIAL EFFICIENCY IN THE SPARSELY POPULATED REGIONS OF BULGARIA</td>
<td>E. Dimitrova, A. Barov, H. Nikolov</td>
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<td>09:00 – 09:15</td>
<td>APPLE WOODY RESIDUES IN THE AUTONOMOUS PROVINCE OF BOZEN-BOLZANO: A SUSTAINABLE ALTERNATIVE BIOENERGY SOURCE?</td>
<td>M. Boschiero, R. Gallo, P. Neri, M. Kelderer and Zerbe S.</td>
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<td>09:15 – 09:30</td>
<td>EXERGY ANALYSIS OF ALUMINUM RECOVERY FROM MUNICIPAL SOLID WASTE INCINERATION</td>
<td>D. Vyzinkarova, E. Allegrini, D. Laner &amp; Astrup T.F.</td>
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<td>09:30 – 09:45</td>
<td>SOLAR CITY NEAR LINZ- A CASE STUDY</td>
<td>G.M.Leindecker</td>
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<td>09:45 – 10:00</td>
<td>TECHNICAL AND SUSTAINABILITY ASSESSMENT OF END OF LIFE TYRES DEPOLYMERISATION</td>
<td>N. Antoniou, A. Zabaniotou</td>
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<td>10:00 – 10:15</td>
<td>FLUIDS IN LOW TEMPERATURE THERMODYNAMIC POWER CYCLES</td>
<td>B.F. Tchanche, M. Pétrissans, P. Loonis</td>
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<td>10:15 – 10:30</td>
<td>INVESTIGATION OF THE RELATIONSHIP BETWEEN URBAN FORM AND ENERGY CONSUMPTION IN THE GREEK CITY CONTEXT: CASE STUDY ANALYSIS IN A TYPICAL URBAN BLOCK IN THESSALONIKI</td>
<td>D. Tsirigoti</td>
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<td>10:30 – 11:00</td>
<td>COFFEE BREAK</td>
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<td>Time</td>
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<td>11:15 – 11:30</td>
<td>THE USAGE OF ADVANCED EXERGETIC ANALYSIS FOR IMPROVING A GEOTHERMAL DISTRICT HEATING SYSTEM</td>
<td>A. Hepbasli, A. Keçebaş, Y. Başoğlu</td>
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<td>11:30 – 11:45</td>
<td>PHYSIOLOGY OF THERMOREGULATION: HUMAN BODY EXERGY BALANCE IN DIFFERENT CLIMATE TYPES</td>
<td>M. Dovjak, M. Shukuya, Krainer A.</td>
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<td>11:45 – 12:00</td>
<td>MODELING THE GREEK ENERGY SYSTEM: SCENARIOS OF CLEAN ENERGY USE AND THEIR IMPLICATIONS</td>
<td>A. Roinioti, C. Koroneos, I. Wangensteen</td>
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<td>12:00 – 12:15</td>
<td>A CRITICAL LOOK AT BIOFUELS AS AN ALTERNATIVE ENERGY SOURCE</td>
<td>S. Rokem</td>
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<td>12:30 – 13:00</td>
<td>CHAIRMAN’S CONCLUSIONS – CLOSURE</td>
<td>C. Koroneos</td>
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<tr>
<td><strong>Session 1, Opening - Plenary</strong></td>
<td><strong>10:00 – 14:00, Morning – Room A</strong></td>
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<tr>
<td><strong>Session 2</strong></td>
<td><strong>16:00 – 20:30, Afternoon – Room A</strong></td>
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<td><strong>Session 3</strong></td>
<td><strong>16:00 – 20:30, Afternoon – Room B</strong></td>
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<td><strong>Session 4, Plenary</strong></td>
<td><strong>08:30 – 10:30, Morning – Room A</strong></td>
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<td><strong>Session 5</strong></td>
<td><strong>11:00 – 14:00, Morning – Room A</strong></td>
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<td><strong>Session 6</strong></td>
<td><strong>11:00 – 14:00, Morning – Room B</strong></td>
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<td><strong>Session 7</strong></td>
<td><strong>16:00 – 20:30, Afternoon – Room A</strong></td>
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<td><strong>Session 8</strong></td>
<td><strong>16:00 – 20:30, Afternoon – Room B</strong></td>
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<td><strong>Poster Session</strong></td>
<td><strong>08:30 – 20:30, Room A</strong></td>
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<td><strong>Session 9, Plenary - Closure</strong></td>
<td><strong>08:30 – 13:00, Morning – Room A</strong></td>
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