

Global Conference on Global Warming

GCGW 2015



Short Conference programme
& General information

Athens, Greece, 24-27 May 2015



GCGW 2015

Global Conference on Global Warming
Focus on Energy-Transport-Greenhouse Effects

24 - 27 May 2015, Athens, Greece

REGISTRATION DESK

A registration desk will be open on-site at the Royal Olympic Hotel.

Opening hours: Sunday 24/05: 19.00 - 22.00 hrs
 Monday 25/05: 08.00 - 17.00 hrs
 Tuesday 26/05: 08.00 - 17.00 hrs
 Wednesday 27/05: 08.00 - 17.00 hrs

Conference bags containing the final programme, a name badge, conference proceedings in USB sticks, ticket for welcome reception, promotional materials, etc. will be obtained by registered participants from the registration desk.

All registered participants must wear their name badge during all Sessions and Lunches.

CONFERENCE PROCEEDINGS AND LANGUAGE

GCGW 2015 Conference proceedings will be distributed on USB memory sticks integrated in pens. A short roundup of the main Conference conclusions, keynote papers, and papers in plenary sessions will be published in paper form as well.

All authors should allow the use of their abstracts and full papers at the Conference materials through signing a "Consent letter" (to be sent to you together with the final paper review result).

The official **language** of the Conference is English. No Translation is foreseen at any of the events of the Conference.



SESSIONS

All papers of the Conference are to be presented in "Oral" or "Poster" Sessions.

There is no distinction, as to the merit or quality of the respective papers, between an oral and a Poster Session. All papers evaluated by the Conference evaluators are equally eligible for a poster or oral presentation – the selection between the two, being made randomly.



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The **Speakers** in each Session can upload their presentations at least 15 minutes before the start of the session in the presentation computers in the Session rooms. Alternatively, presentations can be sent at ztentokal@lignite.gr. PowerPoint presentations are assumed, but a PDF format can work as well. An assistant will be available at the room to assist with this procedure.

During the Sessions each speaker is allocated for his/her presentation an estimated time of 15-18 minutes +3 minutes for questions. The chair of each Session will make the final arrangements in cooperation with the speakers.

The Posters will be displayed at the specially designated room on the ground floor of the Royal Olympic Hotel on the specially foreseen for this purpose Tablets. Each Poster Session is postulated in the Conference programme. The authors of the papers in the Poster Sessions should go to place their posters at the designated positions half an hour before the scheduled beginning of the Poster Session. The same (i.e. the authors) should take their posters down at the designated end of their Poster Session.

PARALLEL EVENTS

On the 26th of May, the parallel event "Bioeconomy & Industrial symbiosis: concepts for promoting sustainable growth and development" will be held at the Conference Room on the 1st floor of the Royal Olympic Hotel.

The conference is jointly organized in the framework of the European projects BERST (BioEconomy Regional Strategy Toolkit, www.berst.eu), supported by the Seventh Framework Programme, and EPIC 2020 (Symbiotic bio-Energy Port Integration with Cities by 2020, www.epic2020.eu), co-funded by the Intelligent Energy Europe Programme of the European Union.

Attendance to the parallel event is free of charge. For attendance / registration please contact berst@certh.gr or the Registration Desk.

LUNCHES – COFFEE BREAKS – RECEPTIONS

All registered participants can participate in the **evening welcoming reception** (cocktail) at the Royal Olympic Hotel on Monday 25/05/2015 from 19:00 to 20:00 hrs.



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The **guided tour** to the Acropolis museum, and the gala dinner at the Acropolis museum restaurant, is reserved for registered participants who have paid the extra gala dinner ticket.

Lunches and coffee breaks will be offered at the *Kallirhoe* 2 Room on the Ground Floor of the Royal Olympic Hotel.

Only the Conference participants who are staying at the Royal Olympic Hotel can get **breakfast** at the hotel. Breakfast is available between 07:00 -10:00 at the Ioannis Roof Garden Restaurant.

CONFERENCE CERTIFICATES

Conference certificates will be issued to all registered attendants of the Conference and will be delivered upon their request by e-mail or at the registration desk. These certificates will be ready for delivery at the registration desk. If you are unable to pick up your certificate, please kindly inform the registration desk and provide a mailing address.

TRANSPORTATION ARRANGEMENTS

Transportation to and from the historical building of the Academy for the Opening Session on Monday morning (May 25th) will be provided by the organizers as follows:

- ◆ Two bus departures will be provided from the Royal Olympic Hotel to the Academy, at 8.40am and 9.10am on Monday morning.
- ◆ Two return bus schedules, from the Academy to the hotel, will also take place with the first departing the Academy building 10 minutes after the end of the Opening Session, and the second, half an hour later.

For the transfer to the ACROPOLIS Museum on Tuesday 26th May, the participants will go on foot (distance from the Royal Olympic hotel approximately 500m). Participants that wish to go together, can gather at the hotel lobby between 7.15 and 7.30pm. The group will walk to the Museum, accompanied by a Conference assistant, at 7.30pm.

For the one-day Cruise to the Aegean Sea on Sunday 24th May, there will be a bus transfer from and to



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the Royal Olympic Hotel. The bus will depart from the Royal Olympic Hotel, at 07.25am and will wait at the port (at a designated point to be shown to the passengers during the morning transfer) at the time of the boat's return. The estimated time of arrival at the hotel is 20:45 – 21.00pm). For more information please visit: <http://www.astoria.gr/onedaycruise-CERTH.html>

MISCELLANEOUS

No smoking is allowed in all areas of the Conference, inside the hotel or at the Academy building.

Wireless internet is available at the Royal Olympic Hotel - password is needed and can be provided free of charge by the reception.

For all sessions **mobile phones** should be put on the silent mode, or switched off.

May **weather** in Athens is expected to be sunny with an average temperature of 25° to 30° Celsius.

The **electricity** in Greece is 220 volts 50Hz.

Tipping is not mandatory in Greece. However, it is customary to add 5% in restaurants if you are satisfied with the service.

In May, the Summer (Daylight-Saving) **Time** is observed in Greece, which is three hours ahead of Greenwich Mean Time (GMT +3).

The Organizers will accept no liability for personal injuries sustained by Conference participants on the Conference venues or elsewhere. Also, no liability is accepted for any loss or damage to any property belonging to Conference participants, either during, or as a result of, the Conference or during all tours and events.

Participants are recommended to seek insurance coverage for health and accident, or lost luggage and trip cancellation.



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MONDAY 25th MAY, 2015

Venue: **Academy of Athens** (Central building, 28, Panepistimiou Ave., Athens)

SUMMARY CONFERENCE PROGRAMME

OFFICIAL OPENING SESSION

8.00 - 17.00 REGISTRATION DESK OPEN AT THE ROYAL OLYMPIC HOTEL

Session Co-chairs:

Prof. L. Christophorou, Director, Research Office of Experimental Physics, Academy of Athens, President of Energy Committee, Academy of Athens &

Prof. Em. Kakaras, Director of Chemical Process and Energy Resources Institute of Centre of Research and Technology Hellas (CERTH/CPERI)

9.30 - 9.35 Welcome by **Prof. L. Christophorou**, Director, Research Office of Experimental Physics, Academy of Athens, President of Energy Committee, Academy of Athens

9.35 - 9.50 Address by the Chairman of the Board of Directors and Director of Central Directorate of CERTH, **Prof. Ath. Konstandopoulos**

9.50 - 10.00 Address, on behalf of the Conference co-chairs, by **Prof. C. S. Zerefos**, Director, Professor Emeritus, Center for Environmental Effects on Health, Academy of Athens

10.00 - 10.10 Address by GCGW Founding Chair, **Prof. Ibrahim Dincer**, Professor of Mechanical Engineering and Programs Director, University of Ontario, Institute of Technology

KEYNOTE SPEECHES

10.10 - 10.40 "Making Europe stronger in energy and innovations through a more active science-policy dialogue", **Prof. Peter Lund**, Chair Energy Programme European Academies Science Advisory Council (EASAC).

10.40 - 11.10 "Energy Technologies for minimum carbon footprint", **Prof. Shozo Kaneko**, Professor of the Endowed Research Unit : Advanced Energy Conversion Engineering, Institute of Industrial Science, the University of Tokyo, Deputy Director, Collaborative Research Center for Energy Engineering.



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Venue: **Academy of Athens** (Central building, 28, Panepistimiou Ave., Athens)

- 11.10 - 11.40** “Transport sector adaptation actions and prospects”, **Prof. George A. Giannopoulos**, Professor Emeritus Aristotle University of Thessaloniki, Director of the Hellenic Institute of Transport, Centre for Research and Technology Hellas.
- 11.40 - 12.10** “First-Mover Advantages of the European Union’s Climate Change Mitigation Strategy”, **Prof. Pantelis Kapros**, E3MLab, National Technical University Athens.

Note: Two bus departures from the Academy, towards the hotel, will be made after the end of the opening ceremony: the first 10 minutes after the end of the Session, and the second half an hour later.



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MONDAY 25th MAY, 2015 (Afternoon Session)

Venue: **The Royal Olympic Hotel**

13:30 - 14:15 LIGHT LUNCH AT THE ROYAL OLYMPIC HOTEL_KALLIRHOE 2 (ground floor)

14:15 - 14:45 Room: Kallirhoe 1, Chair: Prof. Dincer Ibrahim, UOIT (Canada)

LECTURE IN PLENARY

“Reduce CO₂ emissions by using the UN FoRFITS tool”, **Konstantinos Alexopoulos**, Secretary Rail Secretariat Transport Trends and Economics Secretariat UNITED NATIONS Economic Commission for Europe.

Room: Kallirhoe 1 (ground floor)

14:45 - 16:15 Chair: Assoc. Prof. Hande Demirel, ITU (Turkey)

Theme II. Securing Sustainable Mobility to Mitigate Climate Change

Room: Templar's (ground floor)

Chair: Prof. Dincer Ibrahim, UOIT (Canada)

Theme I. Global Warming and Climate Change : General issues and challenges



Session II.1: Transport Operation and Resilience Issues

1. Improvement of transport networks resilience against extreme weather events: Adaptation measures identified within the MOWE-IT project (#122), *I. Stamos, E. Mitsakis, G. Aifantopoulou, M. Nokkala*
2. Road transport induced GHG emissions calculation for urban transportation networks; The case of Athens and Thessaloniki in Greece (#120), *C. Samaras, I. Stamos, L. Ntziachristos, E. Mitsakis, Z. Samaras, G. Ayfantopoulou*
3. Effects of flooding on vehicle circulation; the 2013 Athens case study (#177), *I. Stamos, M. Diakakis, E. Mitsakis*
4. Experimental investigation to reduce CO₂ emission in a single cylinder CI engine using low carbon fuel blend with Karanja oil methyl ester and amine injection in the exhaust Manifold (#134), *S. Thiagarajan, V. Edwin Geo, L. Jesu Martin, B. Nagalingam*
5. A Floating car data driven approach for exploring the impacts of extreme precipitation on vehicle circulation (#121), *I. Stamos, J. M. Salanova Grau, E. Mitsakis*

Session I.1: General Aspects of Global Warming, Current Policies and Challenges

1. Air quality in the urban environment: the gender approach (#106), *T. Slini, F. N. Pavlidou*
2. Potential impact of global warming on whiting in a Semi-Enclosed Gulf (#295), *A. Shanableh, M. Imteaz, K. Hamad, M. Omar, T. Merabtene, M. Siddique*
3. Potential environmental and economic benefits from the interconnection of the Greek islands (#189), *E. Zafeiratou, C. Spataru*
4. The interaction of land use, agriculture and global warming (#209), *G. O. Denli, H. Hakan Denli, D. Z. Seker*
5. Air temperature data analysis of the period 1983-2012 in Athens and Thessaloniki climate change effect in Greek cities (#169), *T. Slini, K. T. Papakostas*



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MONDAY 25th MAY, 2015 (Afternoon Session)

Venue: **The Royal Olympic Hotel**

Room: Kallirhoe 1 (ground floor)

16:45 - 18:15

Chair: Prof. Yildiz Ilhami,
Dalhousie University (Canada)

Theme I. Global Warming and Climate Change : General Issues Challenges

Session I.2: Climate change Mitigation Measures and Prospects.

1. Ground response to global warming (#243), *M. Kharseh, M. Al-Khawaja*
2. Possible effects sea level rise: A case study of Izmir Bay, Turkey (#205), *H. Aksoy, H. Demirel*
3. Air conditioning based on hydroxides with solar driving for low GHG emissions (#13), *R. J. Romero, S. Silva - Sotelo, Y. R. Galindo - Luna, C. V. Valdéz - Morales, J. Ibarra - Bahena, A. Hdz - Jasso, A. Rodríguez - Martínez*
4. Regional estimates of global climate change: A dynamical downscaling approach to Southeast Europe (#167), *R. - E. P. Sotiropoulou, E. Tagaris, A. Sotiropoulos, I. Spanos, P. Milonas, A. Michaelakis*
5. Group comparison, trends and cluster analysis to understand historical precipitation (#40), *R. Abrahão*

Room: Templar's (ground floor)

Chair: Dr. Antoniou Constantinos,
NTUA (Greece)

Theme II. Securing Sustainable Mobility to Mitigate Climate Change

Session II.2: Climate Impact Effects of Air and Maritime Transport

1. Tropospheric volcanism and Air-traffic (#200), *C. Zerefos, I. Kapsomenakis, E. Gerasopoulos, V. Amoiridis, K. Eleftheratos, C. Meleti, H. Eskes, U. Köhler*
2. Determination of minimum emission route in maritime transportation (#283), *L. Bilgili, U. B. Celebi*
3. Pollution effects onboard and its generated solution for minimized pollution effect (#229), *M. Suner, T. Yildiz*
4. Carbon-mitigating air transport: Analysis of current policy instruments (#262), *I. Pagoni, V. Psaraki-Kalouptsidi*
5. The effect of parameter selection on fume formation rate in smaw of AH36 shipbuilding steel using ANOVA method (#286), *T. Mert, L. Bilgili, K. M. Senoz, U. B. Çelebi, S. Ekinici*

19:00 - 20:00

WELCOMING COCKTAIL AT THE ROYAL OLYMPIC HOTEL_PANORAMA HALL
(6th floor)



9:00 - 9:30

Room: Kallirhoe 1, Chair: Prof. Carvalho Monica, Federal University of Paraíba, (Brazil),
LECTURE IN PLENARY

"Pollutant emissions from the transport sector and their impact on urban air quality and health", Prof. Nicolas S. Moussiopoulos, Vice President, International Hellenic University, Former Dean of the Faculty of Engineering Thessaloniki- AUTH.

Room: Kallirhoe 1 (ground floor)

9:30 - 11:00

Chair: Prof. Carvalho Monica,
Federal University of Paraíba, (Brazil)

Co - Chair: Dr. Panopoulos Kyriakos,
CERTH/CPERI (Greece)

Theme I. Global Warming and Climate Change : General Issues and Challenges

Session I.4: Climate Prediction Tools

1. Development of models for the estimation of global solar radiation over selected stations in India (#213),
M. Maroof Khan, M. Jamil Ahmad, B. Jamil
2. Rainfall trend analysis in the region of Curitiba using regional climate model scenarios (#92), *R. Ploszai*
3. The driving factors of CO₂ emissions from electricity generation: An Index decomposition analysis for Greece and EU-28 (#197), *D. Diakoulaki, C. Chatzifoti, D. Giannakopoulos, C. Karaboiki, S. Karellas*
4. Modelling of wind speed using artificial neural networks for university campus of Burdur (Turkey) (#343), *A. Kerem, Ö. Kizilkan, S. Salman*

Room: Templar's (ground floor)

Chair: Assoc. Prof. Kizilkan Onder,
SDU (Turkey)

Theme I. Global Warming and Climate Change: General Issues and Challenges

Session I.3: Climate Change Observatory

1. Investigation of drought conditions in Turkey between 2004 and 2013 via drought indices derived from remotely sensed data (#206), *N. Molavizadeh, E. Sertel, H. Demirel*
2. Carbon foot print calculation of a turbofan engine at landing and take-off cycle (#31), *Y. Şöhret, T. Hikmet Karakoç*
3. Changes of bioclimatic conditions of importance to tourism over the Eastern Mediterranean (#201), *C. Zerefos, I. Kapsomenakis, P. Nastos, A. Matzarakis*
4. An assessment on the impacts of sea level rise in the Çukurova Deltaic Region in Turkey (#207), *Ö. Simav, H. Demirel, D. Zafer Şeker*



5. Cultural landscapes as a means of energy reduction at global warming (#199), *A. Venetsanou, A.-T. Venetsanos, L. Mantziou*

5. Measurement and analysis of solar radiation data over Aligarh (India) (#176), *B. Jamil, N. Akhtar*

11:00 - 11:30 COFFEE BREAK at the room Kallirhoe 2 (ground floor)

Room: Kallirhoe 1 (ground floor)

11:30 - 13:00 *Chair: Prof. Lund Peter, Aalto, University (Finland)*

Theme III: Solar Energy - Solar Based Plants

1. Theoretical and experimental study of cascade solar still (#12), *N. Bellel, I. Tabet*
2. Solar-driven continuous methane reforming reactor (#163), *M. Lange, J. Lapp, R. Rieping, L. de Oliveira, M. Roeb, C. Sattler*
3. Solar assisted organic Rankine cycle for power generation: A comparative analysis for natural working fluids (#342), *Ö. Kizilkan, S. Nižetić, G. Yildirim*
4. Life cycle analysis as a decision criterion for the implementation of solar photovoltaic panels in a Northeast Brazil hospital (#32), *M. Carvalho, D. Bandeira de Mello Delgado, R. Chacartegui*

Room: Templar's (ground floor)

Chair: Assoc. Prof. Çolpan Can Özgür, DEU (Turkey)

Theme IV. Carbon Capture & Storage (CCS) and Geotechnology Issues

Session IV.1: Carbon Capture & Storage

1. Energy storage combined with conventional power plants - innovative concepts for sustainable energy conversion and use (#224), *T. Buddenberg, C. Bergins, B. Stöver, E. Kakaras*
2. Flue gas CO₂ sequestration by turkish coal fly ashes and Anatolian geothermal hot waters (#218), *Y. İ. Tosun*
3. Low cost minerals and industrial waste materials as oxygen carriers for chemical looping combustion (#267), *L. Nalbandian, A. Evdou, V. Zaspalis*
4. CaO-Based sorbents for post-combustion CO₂ capture via carbonate looping (#270), *Z. Skoufa, A. Antzara,*



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Venue: **The Royal Olympic Hotel**

5. Use of solar energy in fishing:
Community Initiatives (#9), J. V. Jain,
S. Babu, D. J. Raju

I. Milios, E. Heracleous, A. Lemonidou
5. Kinetics of CO₂ capture by carbon
dioxide binding organic liquids (#61),
O. Y. Orhan, H. Kayi, E. Alper

13:00 - 14:00 LIGHT LUNCH AT THE ROYAL OLYMPIC HOTEL_KALLIRHOE 2 (ground floor)

14:00 - 14:30 Room: Kallirhoe 1, Chair: Dr. Voutetakis Spyridon, CERTH/CPERI (Greece),
LECTURE IN PLENARY
"Changed ecosystem services by marine phytoplankton because of global
warming", Prof. Dr. Habil. Ulrich Sommer, GEOMAR Helmholtz Centre for Ocean
Research Kiel University of Kiel

Room: Kallirhoe 1 (ground floor)

14:30 - 16:00 Chair: Dr. Voutetakis Spyridon,
CERTH/CPERI (Greece)
**Theme XII. Boosting Renewable Energy
Technologies**
1. Environmental impact assessment
of renewables and conventional fuels
for different end use purposes (#294),
C. Acar, I. Dincer
2. Effect of gap between absorber
plate and condenser cover on the
performance of a solar still (#111),
B. Jamil, N. Akhtar
3. Heat and mass transfer in a capillary
film solar still (#57), A. Chaker,
I. Saouane

Room: Templar's (ground floor)

Chair: Prof. Ebrahim Esmailzadeh,
UOIT (Canada)
**Theme IV. Carbon Capture & Storage
(CCS) and Geotechnology Issues**
**Session IV.2: Innovation in
Geotechnology**
1. Gas production in offshore reservoirs
in Brazil's pre-salt region: Challenges
and estimates (#36), I. Vaz Leal da Costa,
P. Rochedo, M. Império, A. Salem Szklo,
R. Schaeffer
2. Development of a geological model
for the investigation of CO₂ natural
analogues: Florina case study, Greece
(#55), A. Tasianias, N. Koukouzas



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4. Smart hybrid renewable microgeneration system for residential applications (#244), *E.J. Lee, E. Entchev, L. Yang, M. Gorab, A.C. Khan*

3. Studies on the consequence of graphite on soil CEC values estimated using hexamine cobalt trichloride (COHEX) method and other physical and chemical properties (#277), *A. M. Haroon Basha, R. Chandramohan*

4. Investigating the effect of different refrigerants on the performance of a supercritical organic Rankine cycle (#315), *D. M. Çakıcı, C. Ö. Çolpan*

16:00 - 16:30 COFFEE BREAK at the room Kallirhoe 2 (*ground floor*)

16:30 - 18:00 POSTER SESSION

Posters will be exposed in their stands at the Conference Room Ground for the whole duration of the Conference, but their authors will be available to answer questions during this session.

20:00 - 23:30 GALA DINNER AT THE ACROPOLIS MUSEUM WITH GUIDED TOUR OF THE MUSEUM



9:00 - 9:30

Room: Kallirhoe 1, Chair: Dr. Gypakis Antonios, GSRT (Greece),

LECTURE IN PLENARY

"The German Energiewende: challenges and solutions for Germany and Europe",

Prof. Dr. -Ing. Klaus Görner, University of Duisburg-Essen, Environmental Process Engineering and Plant Design, Head of Institute, Gas and Heat Research Institute, Essen, Scientific Director VGB, Association of Power Plant Operators, Scientific Advisory Board, Deputy Chairman.

Room: Kallirhoe 1 (ground floor)

9:30 - 11:00

Chair: Dr. Gypakis Antonios,
GSRT (Greece)

Theme VII. Fossil fuels and Climate Change

1. Toward the improvement of thermal efficiency in lignite power generation: Concerning lignite for modern coal technology (#291), *Y. Komatsu, A. Sciazko, M. Zakrzewski, T. Akiyama, S. Kimijima, A. Hashimoto, N. Shikazono, S. Kaneko, J. S. Szmyd*
2. Hybridization of parabolic trough power plants with natural gas through integration of industrial gas turbines (#304), *T. Vogel, G. Oeljeklaus, K. Görner*
3. Numerical investigation of the Megalopolis IV PP under low thermal loads, along with the application of a lignite pre-drying technology (#391), *A. Georgiadis, F. Plagakis, A. Nikolopoulos,*

Room: Templar's (ground floor)

Chair: Prof. Benko Imre,
BME (Hungary)

Theme VI: Waste Water Treatment - Cross - Cutting Issues

1. Produced water pre-treatment using dissolved air flotation technique and ionic liquids (#104), *S. Abbasi, A. Henni*
2. Utilization opportunities of apricot process wastes: An evaluation from the point of view of sustainability (#102), *B. Kiyak, N. Colak-Gunes*
3. Sustainable management of sewage sludge conditioning and valorization (#139), *S. Igoud, F. Souahi, C-E Chitour*
4. Produced water treatment by combined process of organoclay adsorption and dissolved air floatation (#83), *M. R. Faisal, A. Henni*
5. Photocatalytic degradation of tylosin



I. Malgarinos, N. Nikolopoulos

4. Environmental impact assessment of electricity production in Turkey (#145),
F. Yilmaz, M. T. Balta, R. Selbaş, D. Demiral
5. Life cycle analysis and life cycle costing of electricity generation based on lignite: Applied case study in Greece (#399),
D. S. Kourkoumpas, G. Stamatiou, S. Karellas, P. Grammelis, A. Gypakis, E. Kakaras

and spiramycin in water by using TiO₂ and ZnO catalysts under UV radiation (#305),
D. Tassalit, N. Chekir, O. Benhabiles, F. Bentahar

11:00 - 11:30 COFFEE BREAK at the Room Kallirhoe 2 (ground floor)

11:30 - 13:00 **Chair: Dr. Koukouzas Nikolaos,**
CERTH/CPERI (Greece)

Theme X. Thermodynamic System Analysis and Optimization

1. Analysis of the start-up and variable load operation of a combined cycle power plant for off-grid mines (#21),
A. Romero, R. Chacartegui, M. Carvalho, D. L. Millar
2. Performance analyses of CO₂- N₂O cascade system for cooling (#64),
F.Yilmaz, R. Selbaş, A. E. Özgür, M. T. Balta
3. Transient thermodynamic analysis of a supercritical hard coal fired boiler (#398),
D. Rakopoulos, I. Avagianos, D. Almpandis, N. Nikolopoulos, P. Grammelis

Chair: Dr. Rakopoulos Dimitrios,
CERTH/CPERI (Greece)

Theme IX: Water Resources and Management Issues

1. Spatial and temporal patterns of the water quality in the Hammam Boughrara Reservoir In Algeria (#37),
B. Djelita, S. Bouzid-Lagha, N. Camellia
2. Vulnerability and impact of climate change processes on water resource in semi-arid areas; In Essaouira Basin (Morocco) (#115),
S. Ouhamdouch, M. Bahir, A. Souhel, C. Paula
3. Palmer drought severity index for the North Cyprus (#184),
S. Çakal, B. Akıntuğ



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Venue: **The Royal Olympic Hotel**

4. Comparison of thermal repowering alternatives for thermal power plants (#257), *M. Zeki Yilmazoglu*

4. Cartographic and statistical analysis of the phenomenon of rising water table in Southeast Algeria (#166), *C. Bouzegag, S. Bouzid - Lagha*

13:00 - 14:00 LIGHT LUNCH AT THE ROYAL OLYMPIC HOTEL_KALLIRHOE 2 (*ground floor*)

14:00 - 14:30 Room: Kallirhoe 1, Chair: Dr. Panagiotis Grammelis, CERTH/CPERI (Greece),
LECTURE IN PLENARY
"Thermodynamics - Education - Energy - Exergy - Environment", **Dr. A. Özer Arnas**,
United States Military Academy at West Point Professor of Mechanical Engineering
Department of Civil and Mechanical Engineering

Room: Kallirhoe 1 (*ground floor*)

14:30 - 16:00 Chair: **Dr. Panagiotis Grammelis**,
CERTH/CPERI (Greece)
Theme V: Green Buildings Technology - Buildings Performance Optimization

1. Modelling of a solar assisted floor heating system with TRNSYS (#195),
E. Bellos, C. Tzivanidis, A. Prassas, K. A. Antonopoulos
2. A new cogeneration residential system based on solid oxide fuel cells for a Northern European climate (#26),
G. Vialletto, M. Rokni
3. Energy conservation through sunrays reflecting coating on buildings (#158),

Room: Templar's (*ground floor*)

Chair: **Dr. Nikolopoulos Nikolaos**,
CERTH/CPERI (Greece)

Theme VIII: Bioenergy - Biofuel Technologies

1. Residual lipids incorporation in a petroleum refinery (#241),
S. Bezergianni, A. Dimitriadis
3. Biogas production from napier grass at various cutting intervals (#133),
N. Sinbuathong, Y. Sangsil, S. Sawanon
4. Sustainability assessment of fuels production via hydrotreating waste lipids and co-processing waste lipids with petroleum fractions (#173),



I. Benkö

4. Investigation of temperature decreasing on roof in green roof systems with artificial neural network - Comparison of Athens and Izmir (#317), *T. Ayata, D. Erdemir*
5. Comparison of heating and cooling loads of a typical building with TRNSYS and EQUEST (#194), *E. Bellos, C. Tzivanidis, A. Kouvari, K. A. Antonopoulos*

S. Bezergianni, L. P. Chrysikou, A. Dimitriadis

16:00 - 16:30 COFFEE BREAK at the room Kallirhoe 2 (ground floor)

Room: Kallirhoe 1 (ground floor)

16:30 - 18:00 **Chair: Dr. Nikolopoulos Aristeidis,**
CERTH/CPERI (Greece)

Theme XI: Hydrogen Energy and Technologies

1. Degradation mechanism of solid-state proton-conducting electrolyte of solid oxide fuel cells (#78), *N. Yan, T. Gao, W. Wang, J. Luo*
2. CFD code validation and combustion analysis of a spark-ignition engine fueled with methane-hydrogen blends (#400), *G. M. Kosmadakis, F. Moreno, J. Arroyo, M. Muñoz, C. D. Rakopoulos*
3. Perspectives of hydrogen automotive

Room: Templar's (ground floor)

Chair: Dr. Giannakopoulos Dionisios,
CERTH/CPERI (Greece)

Theme XIII. Hazardous Waste

1. Elimination of toxic gas emissions by MGO soaked expanded clay in waste combustion chambers (#214), *Y. İ. Tosun*
2. Experimental study of transverse mixing of pollutants in trapezoidal open channel (#49), *A. M. Lagoun, S. Benziada*
3. Ship life cycle green - house gas emissions (#284), *S. Chatzinikolaos, N. Ventikos, L. Bilgili, U. B. Celebi*



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WEDNESDAY 27th MAY, 2015

Venue: **The Royal Olympic Hotel**

applications in Croatia (#16), A. Đukić,
I. Güttler, R. Pašičko

4. The effect of microwave irradiation
on the structure of Ni incorporated
MCM-41 and hydrogen uptake (#211),
E. Dündar-Tekkaya, Y. Yürüm

Room: Kallirhoe 1 (ground floor)

18:00 - 18:30

CONCLUSIONS AND CLOSING SESSION OF THE CONFERENCE
from **Prof. I. Dincer** and **Dr. P. Grammelis**



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Posters' Appendix

List of Papers in Poster Sessions

Note: Posters will be exposed in their stands at the Conference Room Ground for the whole duration of the Conference, but their authors will be available to answer questions during this session.

Paper No.	Paper full Title	Authors	Board Number
#23	Experimental study of longitudinal dispersion of pollutants in trapezoidal open channel.	L. A. Mansour, S. Benziada	1
#33	Promotion of sustainability by quantifying and reducing the carbon footprint: New practices for organizations.	M. Carvalho, R. Freire, A. Brito	2
#45	Comparison between the photocatalytic degradation of a textile dye under sun light and artificial irradiation.	N. Sahraoui, K. Akhrib, N. Chekir, D. Tassalit	3
#56	The impacts of co-operative mobility systems on CO ₂ emissions: A simulation-based study.	J. M. Salanova Grau, E. Mitsakis, I. Stamos, V. Mintsis	4
#60	Determination of the optimum insulation thickness for cooling applications using a novel method that combines exergy and environmental methods.	B. N. Daldal, I. Sarioğlu, G. Özel, E. Açıkkalp, H. Yalık	5



Paper No.	Paper full Title	Authors	Board Number
#74	Contribution to multi-criteria evaluation of the impacts of air pollution: Case of cement plant (Ain Touta- Algeria).	L. Bahmed, S. Daas, M. Chebila, L. K. Aggabou	6
#100	Global warming and changes in atmospheric climate.	Maheshwar S. & Madhuri S.	7
#107	Mitigation and adaptation policies related to climate change in Greece.	I. Sebos, A. Progiou, L. Kallinikos, P. Eleni, I. Katsavou, K. Mangouta, I. Ziomas	8
#108	Greenhouse gas emissions trends from waste in Greece.	L. Kallinikos, I. Sebos, A. Progiou, P. Eleni, I. Katsavou, K. Mangouta, I. Ziomas	9
#109	Greenhouse gas emissions trends from transport in Greece.	A. Progiou, I. Sebos, L. Kallinikos, P. Eleni, I. Katsavou, K. Mangouta, I. Ziomas	10
#123	An online visualization tool for assessing the robustness of multimodal transport networks in case of extreme weather events and natural hazards.	I. Stamos, E. Mitsakis, G. Aifantopoulou	11
#124	Big data supporting sustainable mobility in smart cities.	J. M. Salanova Grau, I. Stamos, E. Mitsakis, G. Aifantopoulou	12



Paper No.	Paper full Title	Authors	Board Number
#146	Photocatalytic degradation of hazardous water soluble pesticides in a tubular reactor.	N.Chekir, O. Benhabiles, D.Tassalit, N A. Laoufi, F.Bentahar	13
#149	Cooperative intelligent transport systems for freight transport.	J. M.Salanova Grau, E. Mitsakis, A. Stathakopoulos, G. Aifantopoulou	14
#162	Exceptionally cold and exceptionally mild winters in Europe, 1951-2010.	R. Twardosz, U. Kossowska-Cezak	15
#170	Experimental study of heat transfer for a non-Newtonian fluid in a heated cylindrical pipe.	M. Mellal, H. Abchiche, S. Ait Ouazzou	16
#186	Investigation of reaction parameters of oleic acid esterification with methanol by using zirconium sulphate as a heterogeneous acid catalyst.	M. İ. Şenoyma, O. İlgen	17
#188	Synthesis of fuel bioadditive from biomass based chemicals by an innovative process: Catalytic membrane reactor.	D. Unlu, N. Durmaz Hilmioglu	18
#191	Membrane based hybrid process for bioethanol production and purification.	F. U. Nigiz, N. Durmaz Hilmioglu	19



Paper No.	Paper full Title	Authors	Board Number
#192	Urban development policy and urban sprawl in Turkey.	M. O. Balta	20
#193	Hydrogen fueled airplanes towards sustainable aviation in Libya.	S. P. Bindra	21
#203	Mygdonia basin (N. Greece) in the view of isotope geochemistry.	P.Chantzi, E. Dotsika	22
#204	Natural tracers for identifying causes of the quality reduction in groundwater emerging along the Aegean volcanic arc (Greece).	E. Dotsika, P.Chantzi	23
#208	Designing a web based GIS for monitoring air quality at the Marmara region of Turkey.	F. Sari, D. Z. Seker, S. Yeni, H. I. Domanic, E. Yilmaz, H. Demirel	24
#217	Synthesis of tungsten bronze nanoparticles for shielding near infrared ray and decreasing CO ₂ emission.	T. Sato, C. Guo, S. Yin	25
#238	The SOC estimation of LCO battery based on BP neural network.	S.-R. Huang, Y.-H. Ma, J.-S. Li, J.-H. Chan	26
#254	Performance of Ep-Kalina OTEC cycle using various working fluids.	J. I. Yoon, C. H. Son, S. H. Seol, C. M. Son, H. Lee, H. Ju Kim	27



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#259	Diagnostic of sensors for induction machine powered by photovoltaic generator based on fuzzy logic techniques.	A. Amrane, A. Larabi, A. Hamzaoui	28
#263	Perspectives on the implementation of climate change public policies in Brazil.	R. Freire, M. Carvalho, C. Carmona, A. Brito	29
#297	Measurement quality enhancement using digital filter in power grid integrating TCSC.	A. Zitouni, H. Bentarzi, A. Ouadi	30
#301	Elimination of micropollutant lysine acetylsalicylate by adsorption on natural and synthetical supports.	A. Djouadi, F. Bentahar	31
#312	The chloroplast as a combined automatic control system.	V. Kypraiou	32
#321	Prediction of sea level rise in strait of Hormuz: Evaluation of climate change impacts.	H. Goharnejad	33
#327	Energy study of a greenhouse type chapel single wall glass (Case of Algerian site).	S. Bezari, K. Gairaa, S. M. Benaalem	34



Paper No.	Paper full Title	Authors	Board Number
#389	Integrated system for optimized data collection and processing of end of life tires: Case of Greece.	P. Vounatsos, I. Vournas, G. Mavrias, P. Grammelis	35
#402	EU-SOLARIS - European solar research infrastructure for concentrated solar power.		36
#404	Smart recovery of materials and upgrade of organic compost & RDF in existing mechanical biological treatment plants by using NIR technology.	D. S. Kourkoumpas, G. Kontopoulos, I. Vournas, D. Koulocheris, P. Grammelis, E. Kakaras	37

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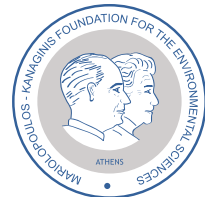


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