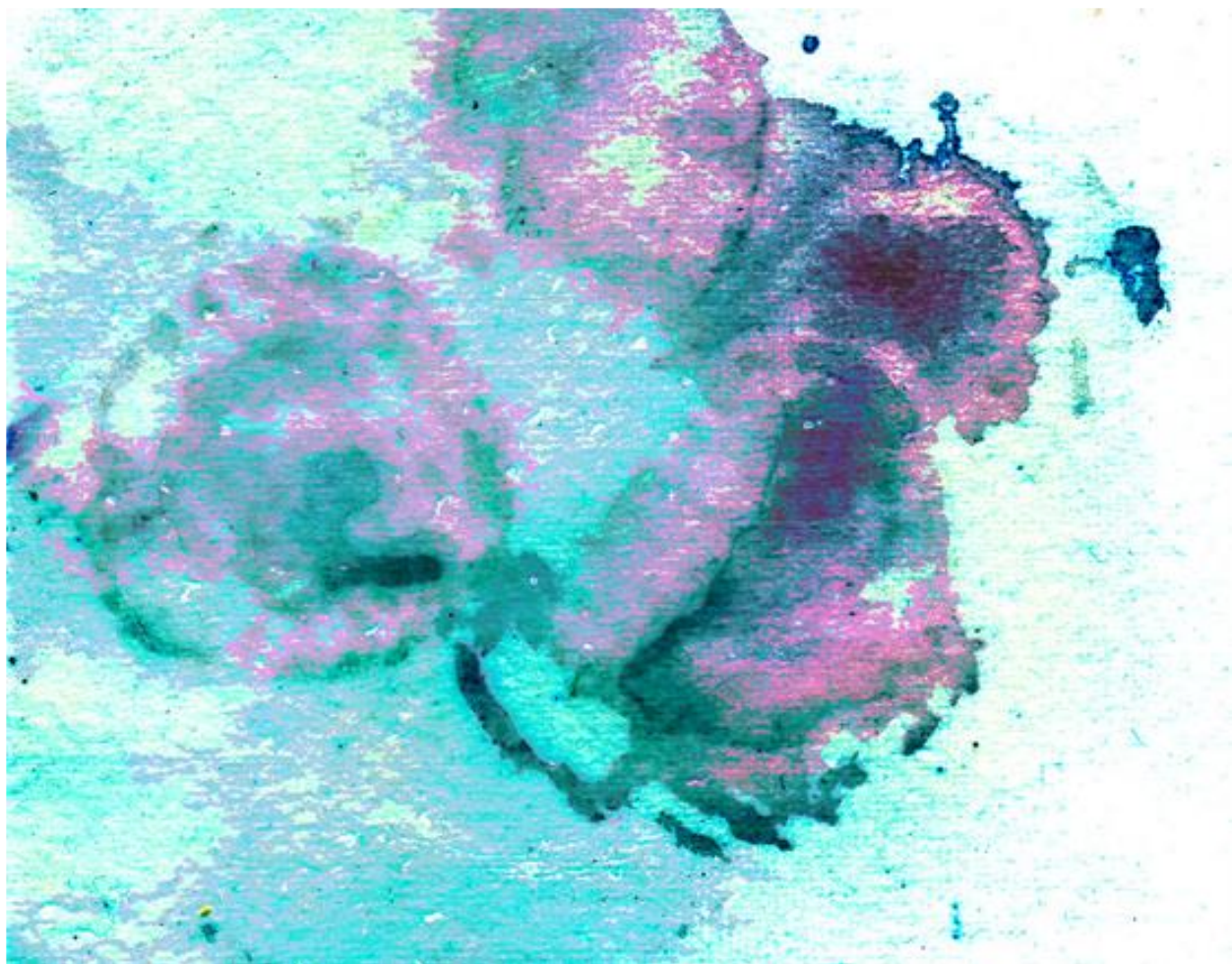


International Symposium and Workshop **RE-Greece 2016**

Nisyros, 20-22 July 2016



Circular Economy and Sustainable Use of
REnewable **RE**sources
in the context of
Climate Change and Social Upheavals



Welcome Address



As Chairperson of the International Symposium and Workshop **RE-Greece 2016** and on behalf of the chairpersons and organizers, it is my great pleasure and honor to welcome you to Greece and especially to the island of Nisyros in the Aegean Sea. This symposium was designed to promote scientific dialogue to support sustainable management and usage of natural renewable resources, based upon ethically and ecologically sound paradigms, practices and policies at the local, Mediterranean, European and Global scales. The technical, socio-economic, ecological and sustainability dimensions will be addressed in the context of "Accelerating the Transition to Equitable, Sustainable, Post-Fossil Carbon Societies!"

The symposium was designed to bring together experts, researchers, engineers, practitioners, designers and artists globally, to increase environmental awareness in the context of climate change and to discuss sustainable solutions for the environmental challenges of "vulnerable communities" in which local food, water, and energy resources are under serious threat by migration, environmental, and related socio-economic factors.

There is an urgent need for integrating resilience and equity into all levels of society to reduce vulnerabilities and social upheavals. The Symposium will be held on Nisyros, a small Greek volcanic island in the Aegean Sea, as a paradigm of areas where the access to and supply of resources is limited and under pressure and where the cultural heritage and old knowledge/experience are very valuable for societal resilience.

The scientific program of the RE-Greece 2016 is structured as a Symposium and Workshops, all of which will be concluded with plenary discussions. Each workshop will address topics of utmost scientific and practical importance. The participants are kindly invited to constructively contribute to the technical and socioeconomic dimensions in order to seek solution approaches. We invite you to discuss and approach the interrelations of Environment, Science, Society, Sustainability, Technology, Art and Design with an interdisciplinary approach.

We invite you to submit your paper for any of the Special Volumes of the journal of Cleaner production, Elsevier.

I acknowledge and express my deep thanks to all keynote speakers, moderators, chairpersons and speakers. I also wish to thank the scientific committee, the organizing committee and especially the Municipality of Nisyros for the hospitality and the people of the island and the Mayor of Nisyros, Prof Christofis Koroneos who dreams to transform Nisyros into a place of science, culture and environmental awareness. We have the pleasure and honor to have with us Prof Don Huisingh, the Emeritus Editor-in-Chief of the Journal of Cleaner production, as the honored Chairperson and Keynote speaker. He is an inspiring person and a 'change agent' for students, researchers, universities and societies to utilize multidisciplinary and sustainability visions, concepts, tools and approaches to effect the needed transitions to sustainable societies.

I am excited and honored to share with all who came from 20 countries, to this very special island of the Aegean sea, and I am confident that the symposium being held during the magical Greek summer, will be an unforgettable event for all because of the vivid dialogues on crucial environmental and societal issues, which will help to strengthen collaboration, natural-living, easy-living and friendships!

Nisyros is a small island in the Aegean Sea, untouched by tourism. It is a peaceful, alternative destination for a simple, natural life. Its volcano gives Nisyros an apocalyptic dimension where someone can think and be inspired about human futures upon this planet. The picturesque villages with traditional architecture and great views will bring us close to the Greek Cultural Heritage. The beaches are clean and have a relaxing atmosphere. The following schedule of social events has been planned: Epicurean philosophy and ideas will be presented during the reception party under the full moon of summer in a garden overlooking the island sea with poetry, music, dance and local food and wine, the gala Dinner at Emporio village, famous for its architecture, food and wine, climbing the ancient castle for contemplation and meditation during the sunset, visiting the crater of the volcano.

I wish you a very pleasant stay in Nisyros for a unique, magical and unforgettable experience in a highly stimulating, natural, blue and white environment!

Welcome!

Anastasia Zabaniotou, prof
Chair of the Symposium

Tuesday 19th July 2016

18:00-20:30	Participants arrivals and registration
21:00	<i>Welcome Party</i> <i>A Guide to Happiness : Philosophy by Epicurus</i>

Wednesday 20th July 2016

8:00-9:30	Registration
9:30-10:00	Opening- Welcome speeches A. Zabaniotou, Chr. Koroneos, V. Zaspalis, D. Huisingh
10:00-10:10	<i>Welcome to Greece, an eternal Journey</i>
	Symposium <i>Keynote speaker</i> <i>Moderator: A. Zabaniotou</i>
10:10-10:40	D. Huisingh , Institute for a Secure and Sustainable Environment, Univ. of TN, USA, Emeritus Editor in Chief of JCPR <i>Accelerate the Transition to Equitable, Sustainable, Post-Fossil Carbon Societies</i>
11:40-12:10	M. Guarascio , Sapienza University, Rome, Italy and RMEI <i>Mediterranean Facing Environmental and Social Challenges</i>
12:10-12:40	J. J. Perez , Chemical Engineering Dept., Technical University of Catalonia, Barcelona, Spain <i>Social Responsibility as a Transversal competence of University Graduates</i>
12:40-13:10	P. Fetsis , Climate Change expert, NEEMO EEIG – AEIDL, Belgium <i>EU sustainable use of renewable resources in the context of climate change</i>
13:10-13:40	T. Baddeley , Social Designer, UK <i>Earth Houses: Design Facing Societal Challenges, Inspired by Resources Recycling</i>
13:40-14:00	<i>Film projection</i> <i>Mediterranean Migration: Ancient Greek Colonies by Kostas Vakkas</i>
14:00 - 15:00 Lunch and Midday Break	
	<i>Keynote speaker</i> <i>Chairs: Ch. Koroneos, V. Zaspalis, N. Abatzoglou</i>
15:00-15:20	L. Carafa , Barcelona Centre for International Affairs, Barcelona, Spain <i>Climate finance under the Paris Agreement: Leveraging low-carbon private investments through public policy?</i>
15:20-15:40	C. Velis , University of Leeds, Head of Scientific Committee – Waste Atlas Partnership, V Chair ISWA European Working Group <i>Complex value optimization for resource recovery – CVORR: a novel framework and methodology for circular economy</i>
15:40-16:00	M. Monteleone , Star Agroenergy, University of Foggia, Italy <i>From Biotechnology to Ecotechnology - An ecological approach in designing productive systems according to a “circular” economy concept</i>
16:00-16:20	V. Zaspalis* and L. Nalbandian, Chemical Eng. Department, Aristotle University of Thessaloniki, Thessaloniki, Greece <i>Environmental Friendly Technologies based on Fossil Fuels for Energy Production</i>
16:20-16:40 Coffee Break	

16:40-17:00	M. Ganesapillai , VIT University, Vellore, India <i>Challenges, Practices and Cultural Influences in Sanitation: An Indian Perspective</i>
17:00-17:20	D. Sarigiannis and I.S. Zarkadas, Chemical Eng. Department, Aristotle University of Thessaloniki, Thessaloniki, Greece <i>High dimension biological processes for the valorization of agro-industrial waste towards a circular Bio-economy</i>
17:20-17:40	R. Lozano , AMIChemE FHEA, The Netherlands, Editor of JCLP <i>Sustainable public procurement within circular economies</i>
17:40-18:00	Panel Discussion Moderator D. Huising
21:00	<i>Get Together. A drink in a local terrace-bar.</i>

Thursday 21th July 2016

Workshop I. Bio-resources and Bio-refineries Chairs: F. Ashour, M. Monteleone

8:30-8:50	Plenary speaker N. Abatzoglou , Chemical and Biotechnological Engineering Dept., Université de Sherbrooke, Sherbrooke, Canada <i>Canada's BioFuelNet for Sustainable Biorefineries: New Catalytic ways for the Pyrolysis & Gasification Platforms</i>
8:50-9:10	M. Dicko , F. Lamari, G. Lepasant, P. Silar, C. Bilodeau, M. Cohen., CNRS LSPM UPR 3407, Université Paris 13-Sorbonne Paris Cité, Villetaneuse, France <i>The OLIZERO project: Closing loops in olive groves and olive mills with integrated biorefineries</i>
9:10-9:30	E. Alexopoulou* , X. Heping, A. Monti, L. Pari, L. Trindade, S. Bertucelli, A. L. Fernando, K. Heller, S. Jankauskiene, S. L. Cosentino, V. Gronberg, C. Pocaterra, S. Amaducci, M. Reinders, J. van Dam and S. Piotrowski, *Center for Renewable Energy Sources and Savings, Athens, Greece <i>The importance of fibre crops as a sustainable biomass resource for bio-based products and bioenergy in Europe And China</i>
9:30-9:50	M. Christou* , E. Alexopoulou, K. Tsiotas, I. Papamichael, E. Namatov, M. Stolarski, M. Krzyżaniak, *Center for Renewable Energy Sources and Savings, Athens, Greece <i>Oil crops for renewable energy and bio-based products: Sustainable cropping strategies and logistics</i>
9:50-10:10	N. Moussiopoulos* and G. Perkoulidis, * Mechanical Engineering Dept., Aristotle University of Thessaloniki, Thessaloniki, Greece <i>Forestry residues in Greece: Resource availability and options for utilization</i>
10:10-10:30	Discussion

10:30-11:00 Coffee Break

Workshop II. Sustainable use of Bio Mass within the context of Circular Economies Chairs: K. Velis, P. Fetsis

11:00-11:20	Plenary speaker F.H. Ashour* , M.A. Gadalla, I. A. Emara, *Chemical Engineering Department, Faculty of Engineering, Cairo University, Cairo, Egypt <i>Management of Supply Chain Networks for Biofuel Production from Biomass Wastes</i>
11:20-11:40	S. Chatzidakoula* , K. Panopoulos, S. Voutetakis, P. Seferlis, *Mechanical Engineering Dept., Aristotle University of Thessaloniki, Thessaloniki, Greece <i>Biomass Torrefaction Process Design for Integration with Energy Intensive Industries</i>
11:40-12:00	C.G. Jung* , N. Manirakiza, Th. Ndikumana, *Centre Emile Berheim, FSA-4MAT, Université Libre de Bruxelles, Brussels, Belgium <i>Evaluation of Biomass Residues as Substitutes for Briquettes</i>

12:20-12:40	P. Kamaterou* , V. Kachrimanidou, A. Vlysidis, A. Koutinas, A. Zabaniotou, *Dept of Chemical Engineering, Aristotle University of Thessaloniki, Greece Sunflower meal cascade biorefinery for the production of proteins and pyrolysis of solid waste-streams towards biochar production
12:40-13:00	L. Fryda* , R. Visser, A. Hensen, *Energy research Centre of the Netherlands (ECN), Petten, The Netherlands <i>Evaluation of biochars from pyrolysis and gasification and their function in ammonia release</i>
13:00-13:30	Poster Presentations
13:30 -15:00 Lunch and Midday Break	
Workshop III. Renewable Energy Sustainable Systems	
<i>Chairs: E. Alexopoulou, M. Dicko</i>	
15:00-15:20	Plenary speaker S. Reddy , Indira Gandhi Institute of Development Research, Goregaon (E), Mumbai, INDIA <i>Sustainable transition paths towards renewable energy technology trajectories</i>
15:20-15:40	Th. Tsoutsos* , S. Tournaki, C. Mantero *Renewable and Sustainable Energy Systems Lab, Technical Univ. of Crete, Chania, Greece <i>Green energy for the city of Rethymnon</i>
15:40-16:00	C. Borgianni and M. Paolucci , Roma. Italy <i>Sizing of a pyrolyzer as stage one of a three-stage gasifier</i>
16:00-16:20	Kaldis F. , Sarigiannis D., Zarkadas I., Chemical Eng. Department, Aristotle University of Thessaloniki, Thessaloniki, Greece <i>The enzymatic pre-treatment of different agro-industrial wastes as a method to improve their anaerobic biodegradability</i>
16:20-16:40	N. M. Katsoulakos* and D. C. Kaliampakos, * Metsovion Interdisc. Research Center, National Technical Univ. of Athens, Athens, Greece <i>Biomass utilization in mountainous areas: A sustainable possibility for improving local energy systems and tackling energy poverty</i>
16:40-17:00 Coffee Break	
<i>Chair: M. Christou, M. Ganesapillai</i>	
17:00-17:20	N. Enano , School of Electrical Eng. and Telecommunications, University of New South Wales, Sydney, Australia <i>Trade-off based scenarios for the high penetration of renewable energy sources in the Philippine electricity system</i>
17:20-17:40	E. Mamut , Institute for Nanotechnologies and Alternative Energy Sources, "Ovidius" University of Constanta, Romania <i>Integration of Intermittent Wind Energy in Circular Economy Loops based on Biomass</i>
17:40-18:00	P. Morone, P. M. Falcone, E. Imbert, A. Morone. Department of Law and Economics, Unitelma-Sapienza, University of Rome, Rome, Italy <i>Tackling Food Waste through a sharing economy approach: an experimental analysis</i>
18:00- 18:15	Discussion
20:30	<i>Visit Emporio Village and Gala Dinner</i>

Friday 22nd July 2016

Workshop IV. Holistic Sustainability		<i>Chairs: S. Reddy, P. A. Fokaides</i>
8:30-8:50	I.P. Tatsiopoulos* , K. Aravossis, G. Chatzistelios, Th.I. Psimouli, *Operations Management and Head of the Industrial Engineering Laboratory, School of Mechanical Engineering, National Technical University of Athens <i>A Market Research for a Pay-As-You-Throw System of Waste Management in Dense Built Cities</i>	
8:50-9:10	V. Karayannis* , E. Lakioti, X. Spiliotis, A. Zabaniotou, A. Domopoulou, G. Papapolymerou, *Environmental Eng. Dept, Technol. Education Inst. of West. Macedonia, Kozani, Greece <i>Social acceptance of innovation in renewable resources and energy efficiency towards sustainable development</i>	
9:10-9:30	B. Škrbić* and Nataša Durišić-Mladenović, *University of Novi Sad, Faculty of Technology, Novi Sad, Serbia <i>Sustainability of the energy sources in Serbia</i>	
9:30-9:50	E. Melis* , P.F. Orrù, G. Uras, *Interdepartm. Centre of Eng. and Environmental Sciences, Univ. of Cagliari, Cagliari Italy <i>Environmental impacts of biomass transportation for the wood-energy supply chain design, through Capacitated Vehicle Routing Problem and GIS tools</i>	
9:50-10:10	S. P. Dayaratne* , G.H.K. Wickremathilleke, S. Wickremathillake, K. D. Gunawardena, D. Huisingh, W. Hafkamp, Jan-jaap Bauma, * ¹ Erasmus Un., Rotterdam, The Netherlands, ² Sri Jayewardenepura Un., Nugegoda, Sri Lanka <i>Sustainable City Development in Sri Lanka: An implementation Model</i>	
10:10-10:30	Il. Kakanis and G. Gaidajis, Production Eng. and Management Dept., Democritus University of Thrace, Xanthi, Greece <i>Eco-industrial Development in Greece: Barriers and Opportunities</i>	
10:30-10:50	G.Zhao , X. Zhang, C. Fang, W.Qin, School of Machinery and Automation, Wuhan University of Science and Technology, Wuhan, P.R.China <i>The systemic evolution of metabolism of steel Industry driven by the strategy of low carbon C.</i>	
10:50-11:10 Coffee Break		
Workshop V. LCA		<i>Chairs: Th. Tsoutsos, I.P. Tatsiopoulos</i>
11:10-11:30	T. Daddi* , S. Tessitore, F. Testa, *Institute of Management, Sant'Anna School of Advanced Studies, Pisa, Italy <i>Exploring benefits and barriers of Life Cycle Assessment (LCA): a survey of Italian companies</i>	
11:30-11:50	A. Mouaky* , E. G. Bennouna, A. Kharoub, M. Arrad, * Thermal Systems Department, Institut de Recherche en Energie Solaire et en Energies Nouvelles (IRESEN), Benguerir, Morocco <i>A Life Cycle Assessment for a 1 MWe CSP ORC Plant</i>	
11:50-12:10	P. A. Fokaides and A. Kyllili, * Frederick University, School of Engineering and Applied Sciences, Nicosia, Cyprus <i>Eco-Hestia: A Whole-Building Life Cycle Assessment (LCA) Tool</i>	
12:10-12:30	A. Liapis* , Papachristoforou M., Stefanidou M., Anastasiou E., Papayianni I., * Civil Engineering Dept., Aristotle University of Thessaloniki, Greece <i>Environmental and economic benefits from the use of steel-industry byproducts in concrete</i>	
12:30-12:50	S. Lamprakopoulos* , V. Tivikelis, G. Mantzaris, X.D. Spiliotis, Civil Engineering Dept., Technological Education Institute of Thessaly, Larissa, Greece <i>Ceramic clay materials incorporating alternative solid fuel (ASF) - Material properties and environmental impact</i>	

12:50-13:10	Ingrao* , R. Rana, C. De Lucia, C. Tricase, *Department of Economics, University of Foggia, Foggia, Italy <i>The circular economy as a tool to prevent food losses</i>
13:10-13:30	M. Chordia* and A. Ramakrishnan, *University of Chicago Urban Labs (Delhi), New Delhi, India <i>Economizing Electric Vehicles: Closing the loop through Recycle and Reuse</i>
13:30-13:45	Discussion
13:45 -15:00 Lunch and Midday Break	
Workshop VI. SD and Education Chairs: J.J. Perez, N. Moussiopoulos	
15:00-15:30	Fotis Chatzisarlis , Katerina Chatzisari, Zina Tsi trouli, Antonis Mavromanolis, Chief Operating Officer for European chapters, Founder of The Triple Helix Aristotle and Innovation Lab, School of Chemical Engineering, AUTH Prof. Anastasia Zabaniotou , Advisor and Mentor of The Triple Helix Aristotle, School of Chemical Engineering, AUTH <i>The Triple Helix: An International Forum for Science in Society Cultivating an explorative culture to Greek students and exposing them to their global counterparts</i>
15:30-16:00	M. Guarascio , O. Boiron, RMEI <i>RMEI Engineering Education and Sustainable Development</i>
16:00-16:10	<i>Philosophy: A Guide to Happiness: Socrates on Self-Confidence</i>
16:10-16:30	Discussion
16:30-17:00 Coffee Break	
Closing Session Chairs: A. Zabaniotou, D. Sarigiannis	
17:00-18:30	Master class on collaboration and Networking Chair: A. Zabaniotou, E. Mamut Panel: M. Christou, A. Mouaky, P. A. Fokaides, M. Dicko, Th. Tsoutsos
	Working groups under RMEI Chair: M. Guarascio, F. Ashour Panel: J. J. Perez, A. Zabaniotou, E. Mamut, N. Moussiopoulos, Tatsiopoulos,
	H2020: Innovative research projects Chair: D. Sarigiannis, M. Dicko Panel: P. Fokaides, C. Borgianni, G Jung, N. Abatzoglou
	CONCLUSIONS Moderator: Don Huisin gh Panel: N., Abatzoglou, V. Zaspalis, M. Monteleone, M. Guarascio, M. Christou, S. Reddy, L. Carafa, P. Fetsis, Th. Tsoutsos
	<i>Farewell with music: Manos Hadjidakis - Gioconda's Smile (Santorini, Orchestra of colours)</i>
19:30	<i>Climbing the Ancient Castle</i>

Saturday 23th July 2016

9:00-12:00	Visit the Volcano and Museum
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**CHAIR**

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Leader of Biomass Group

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