

Interreg

Ελλάδα-Κύπρος

Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης



ΕΥΡΩΠΑΪΚΗ ΕΝΩΣΗ



16th -18th June 2023

Limassol, Cyprus

hybrid event

www.anelixi.tuc.gr



ΑΝΕΛΙΞΗ

Τελικό Συνέδριο Πράξης ΑΝΕΛΙΞΗ

ANELIXI Final Conference

Πρόγραμμα Συνεργασίας Interreg V-A για αναβάθμιση ΕΕΛ
Συγχρηματοδοτείται από την Ευρωπαϊκή Ένωση (ΕΤΠΑ) και
από Εθνικούς Πόρους της Ελλάδας και της Κύπρου

Συντονιστής | Coordinator



ΠΟΛΥΤΕΧΝΕΙΟ ΚΡΗΤΗΣ
TECHNICAL UNIVERSITY
OF CRETE

Εταίροι | Partners



Δ.Ε.Υ.Α.Π.

ΣΥΜΒΟΥΛΙΟ
ΑΠΟΧΕΤΥΞΕΩΝ
ΚΥΠΡΟΥΝΤΑΣ

Κυπριακή Δημοκρατία



Design of
Environmental
Processes Lab

PROGRAMME

2nd International Conference on Sustainable Chemical & Environmental Engineering



SUST
ENG
2023

14th -18th June 2023

Limassol, Cyprus

hybrid event

www.susteng2023.tuc.gr



Design of
Environmental
Processes Lab



Technical University of Crete
School of Chemical and
Environmental Engineering



Cyprus
University of
Technology

Dear friends and colleagues,

I am pleased to welcome you to the **Final Conference of the ANELIXI Project “Upgrade of WWTPs for the management of increased demands and the reduction of the operational cost”**, in the frame of **Interreg V-A Greece-Cyprus 2014-2020** between **16th to 18th June 2023**. Parallel to ANELIXI Final Conference we organize the **2nd International Conference on Sustainable Chemical and Environmental Engineering (SUSTENG 2023)**, between **14th to 18th June 2023**. Both events will be held in Limassol, Cyprus and you may participate in either event with **physical** or **virtual** presence.

The **purpose of the ANELIXI final conference** is to describe and present the outcomes of ANELIXI project, an innovative wastewater treatment process. Additionally, hot issues on water and wastewater management and reuse will also be discussed with water specialists in an **open forum**.

The **main objectives of the ANELIXI project** are:

- Increase the capacity of existing WWTPs
- Low construction and operation cost compared to alternative technologies
- Reduction of energy cost of existing WWTPs by approximately 35%
- Production of biosolids with solids content over 35%

SUSTENG 2023 aims to encourage the exchange of knowledge between academicians, scientists and engineers on hot issues and current developments **in chemical and environmental engineering through sustainable perspective**. The participants will have the opportunity to present their recent research findings on an extended spectrum of conference topics and be informed about new challenges, future trends, and technological innovations on sustainable processes following the principles of circular economy.

The **ANELIXI project** of the Cooperation Program INTERREG V-A Greece - Cyprus 2014-2020 is co-financed by the **European Regional Development Fund (ERDF) and national resources of Greece and Cyprus**.

The SUSTENG 2023 is organized by the "Design of Environmental Processes Laboratory", of the School of Chemical and Environmental Engineering, **Technical University of Crete**, the **Cyprus University of Technology** and the **Company Spirito Group**.

After the completion of the both events all abstracts/full papers will be published in the Final Conference of the ANELIXI | SUSTENG 2023 Conference Proceedings with **ISBN number**.

The conference Chair

Petros Gikas

Professor

Head of the "Design of Environmental Processes Lab"
School of Chemical and Environmental Engineering
Technical University of Crete



TOPICS

1. Industrial Waste Management
2. Air Emissions/ CO₂ Separation
3. Policies, Regulatory and Social Acceptance
4. Adsorption Processes
5. Solid Waste Management/ Biosolids Management and Valorization
6. Water Resources Management
7. Wastewater Treatment & Bioremediation (part I & part II)
8. Biochemical and Biomedical Engineering & Biotechnology
9. Waste to Energy/Hydrogen Production
10. Nanomaterials
11. Environmental Economics/ Industrial Economics
12. Agricultural Engineering/ Agricultural & Livestock Waste





**Prof. Soteris
Kalogirou**
Professor, University of
Technology, Limassol,
Cyprus



**Prof. Maria
Cristina Fragkou**
Associate professor,
Universidad de Chile



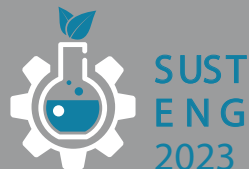
Prof. Hassan Azaizeh
Professor, Tel Hai Academic
College & Institute of
Applied Research, Tel Hai,
Israel



Prof. Isam Janajreh
Professor and the
associate chair in the
Mech, Khalifa
University, Abu Dhabi



Prof. Ezio Ranieri
Professor, University
of Bari, Italy



Organizing Committee

Head of Organizing Committee

Petros Gikas, Professor, Director of the Design of Environmental Processes Laboratory, School of Chemical and Environmental Engineering, Technical University of Crete.

Members of Organizing Committee

Michalis Koutinas, Associate Professor, Department of Chemical Engineering, Cyprus University of Technology.

Ioannis Vyrides, Assistant Professor, Department of Chemical Engineering, Cyprus University of Technology.

Konstantinos Tsamoutsoglou, PhD candidate, Environmental Engineer, Design of Environmental Processes Laboratory, School of Chemical and Environmental Engineering, Technical University of Crete.

Xanthi-Evangelia Manaroli, Architect Engineer M.Sc., School of Chemical and Environmental Engineering, Technical University of Crete.

Anthoula Manali, PhD candidate, Chemist M.Sc. Design of Environmental Processes Laboratory, School of Chemical and Environmental Engineering, Technical University of Crete.

Scientific Committee

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Alexandros Stefanakis, Technical University of Crete, Greece
Anastasios Zouboulis, Aristotle University of Thessaloniki, Greece
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Andrew Livingstone, Queens Mary University, UK
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Gerassimos Lyberatos, National Technical University of Athens, Greece
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Herve Boileau, University of Savoie Mont-Blanc, France
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Ioannis Kalavrouziotis, Hellenic Open University, Greece
Ioannis Manariotis, University of Patras, Greece



Ioannis Tsanis, Technical University of Crete, Greece
Ioannis Vyrides, Cyprus University of Technology
Ioannis Yentekakis, Technical University of Crete, Greece
Isam Janajreh, Khalifa University, UAE
Jacek Dach, Poznan University of Life Sciences, Poland
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Keisuke Kuroda, Toyama Prefectural University Japan
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Stratow Pistikopoulos, Texas A&M University, USA

Stylianios Rozakis, Technical University of Crete, Greece
Theocharis Tsoutsos, Technical University of Crete, Greece
Therese Lee Chan, The University of the West Indies, Trinidad and Tobago
Timothy Ginn, Washington State University, USA
Tonni Agustiono Kurniawan, Xiamen University, China
Vasileios Takavakoglou, Hellenic Agricultural Organization – DEMETER, Greece
Vassilios Tsihrintzis, National Technical University of Athens, Greece
Wei-Qin Zhuang, University of Auckland, New Zealand
Yaoyu Zhou, Hunan Agricultural University, China



PROGRAMME AT A GLANCE



SUST
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2023

Wednesday 14 June Susteng 2023

Building Tasos Papadopoulos- Hall 1

Registration	14:00 - 16:00
Welcome	16:00 - 16:15
PLENARY LECTURE: Prof. S. Kalogirou	16:15 - 17:00
Welcome Banquette	17:00 - 19:00

Thursday 15 June Susteng 2023

Building Tasos Papadopoulos- Hall 1

Greetings Welcome Speeches	09:30 - 11:00
Break - Posters viewing	11:00 - 11:30
PLENARY LECTURE: Prof. P. Gikas	11:30 - 12:15
SESSION 1: Industrial Waste Management	12:15 - 13:15
Break	13:15 - 14:45
SESSION 2: Air Emissions/ CO ₂ Separation	14:45 - 15:30
SESSION 3: Policies, Regulatory and Social Acceptance	15:30 - 16:15
SESSION 4: Adsorption Processes	16:15 - 17:00
Break - Posters viewing	17:00 - 17:30
PLENARY LECTURE: Prof. E. Ranieri	17:30 - 18:15
SESSION 5: Solid Waste Management/ Biosolids Management and Valorization	18:15 - 19:30

Friday 16 June Anelixa | Susteng 2023

Building Tasos Papadopoulos- Hall 1

Greetings Welcome Speeches	09:30 - 11:00
Break - Posters viewing	11:00 - 11:30
PLENARY LECTURE: Prof. I. Janajreh	11:30 - 12:15
SESSION 6: Water Resources Management	12:15 - 13:15
Break	13:15 - 14:45
SESSION 7: Wastewater Treatment & Bioremediation (part I & part II)	14:45 - 17:15
Break - Posters viewing	17:15 - 17:30
Round table (in Greek)	17:30 - 19:00
Gala Event	20:00 - 23:00



PROGRAMME AT A GLANCE



SUST
ENG
2023

Saturday 17 June Anelixa | Susteng 2023

Building Tasos Papadopoulos- Hall 1

SESSION 8: Biochemical and Biomedical Engineering & Biotechnology	09:30 - 11:15
Break - Posters viewing	11:15 - 11:45
PLENARY LECTURE: Prof. H. Azaizeh	11:45 - 12:30
SESSION 9: Waste to Energy/ Hydrogen production	12:30 - 13:45
Break	13:45 - 15:00
SESSION 10: Nanomaterials	15:00 - 16:00
SESSION 11: Environmental Economics/ Industrial Economics	16:00 - 17:00
Break - Posters viewing	17:00 - 17:30
PLENARY LECTURE: Prof. M. C. Fragkou	17:30 - 18:15
SESSION 12: Agricultural Engineering/ Agricultural & Livestock Waste	18:15 - 19:15
Closing Ceremony	19:15 - 20:00

Sunday 18 June Anelixa | Susteng 2023

Field visit at Troodos mountain and Kyperounta wastewater treatment plant.	09:30 - 16:00
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You can find the programme



with more information and details

HERE

Wednesday 14 June Susteng 2023

Registration 14:00 - 16:00

Welcome 16:00 - 16:15

PLENARY LECTURE: Prof. S. Kalogirou 16:15 - 17:00
Renewable Energy Systems: Current status in the World and Prospects
Chair: P. Gikas & M. Koutinas

Welcome Banquette 17:00 - 19:00

Thursday 15 June Susteng 2023

Greetings | Welcome Speeches 09:30 - 11:00

Andreas A. Gregoriou, Permanent Secretary, Ministry of Agriculture, Rural Development and Environment, Cyprus

Maria Panayiotou, Environment Commissioner, Cyprus

Lia Georgiou, Acting Director, Water Development Department, Cyprus

Nikolaos Nikolaidis, Mayor of Limassol, Cyprus

Yiannis Tsouloftas, General Manager, Sewerage Board Limassol Amathus, Cyprus

Panayiotis Zaphiris, Rector, Cyprus University of Technology

Michalis Zervakis, Rector, Technical University of Crete, Greece

Break - Posters viewing 11:00 - 11:30

PLENARY LECTURE: Prof. P. Gikas 11:30 - 12:15
Upgrade of overloaded wastewater treatment plants: The ANELIXI project
Chair: M. Koutinas & I. Vyrides

SESSION 1: Industrial Waste Management

Chair: M. Patsalou & T. Thodosiadis-Thomaidis

12:15 - 13:15

Artificial Neural Network for the quantification of cobalt recovered from Li-ion batteries

12:15 - 12:30

I.I. Pérez Juárez, B.M. González Contreras, M.A. Munive Rojas, J.A. Guevara-García and E. Bonilla Huerta

A citrus processing wastewater-based biorefinery approach for production of high-added value commodities

12:30- 12:45

P. Karanicola, M. Patsalou, P. Christou, G. Panagiotou and M. Koutinas

Molybdenum recovery in a sulphate-reducing bioreactor

12:45 - 13:00

D. A. Strongyli, P. Kousi, A. Hatzikioseyan and E. Remoundaki

Valorization of olive processing industry waste through biorefinery development for sustainable production of polyphenols, algal biomass, and lipids

13:00- 13:15

A. Nicodemou, M. Kallis and M. Koutinas

Break

13:15 - 14:45

SESSION 2: Air Emissions/ CO₂ Separation

Chair: A. Agapiou & M.D. Damaceanu

14:45 - 15:30

Effect of the polymer blend-based membranes composition on CO₂ separation efficiency

14:45 - 15:00

M.D. Damaceanu, I. Butnaru, C.P. Constantin, and A. Wolińska-Grabczyk

Reliable fugitive emissions measurements at a gas transmission network

15:00 - 15:15

N. Tsochatzidis and N. Katsis

Monitoring of goat cheese whey wastewater VOCs by extraction techniques

15:15 - 15:30

S. Elia, M. Stylianou and A. Agapiou

SESSION 3: Policies, Regulatory and Social Acceptance

15:30 - 16:15

Chair: N. Tsochatzidis & F. Dziike

Evaluation of MULESL technology for wastewater reuse in light of Regulation (EU) 2020/741 15:30 - 15:45

V.G. Altieri, M. De Sanctis and C. Di Iaconi

Social acceptance of sustainable bioenergy transition policies for public health 15:45 - 16:00

E. Lakioti, A. Itziou, I. Vasiliadou, V. Karayannis and C. Tsanaktsidis

Sustainable siting of offshore wind farms. Application in Crete (SusTainable siting of offshore wind Parks. Application in Crete) Step – Ap 16:00 - 16:15

P. Gkeka-Serpetsidaki and T. Tsoutsos

SESSION 4: Adsorption Processes

16:15 - 17:00

Chair: K. Tsamoutsoglou & P. Gkeka-Serpetsidaki

Studies on rare earth elements recovery on alginate sorbent modified with ion exchanger with phosphonic groups 16:15 - 16:30

D. Fila, Z. Hubicki and D. Kołodzyńska

16:30 - 16:45

Hydrotalcite modified biochar as a sorbent to remove cerium ions from water media

J. Bąk and D. Kołodzyńska

Column adsorption of polyphenols from olive mill wastewater by activated biochar 16:45 - 17:00

E. Karefylaki, C. Galanakis, A. Veksha, G. Lisak and A. Giannis

Break - Posters viewing

17:00 - 17:30

PLENARY LECTURE: Prof. E. Ranieri

17:30 - 18:15

Influence of climate change on wastewater treatment plants performances and energy costs in Apulia, south Italy

Chair: P. Gikas & M.C. Fragkou

SESSION 5: Solid Waste Management/ Biosolids Management and Valorization

18:15 - 19:30

Chair: H. Azaizeh & G. Gatidou

Decontamination of antibiotics from aqueous solution using citrus fruit waste biochar – silicate composite adsorbents

18:15 - 18:30

M. Gamble and **C. Mangwandi**

Pretreatment of cotton stalk residues for biogas production

18:30 - 18:45

A. Makri, P. Melidis and S. Ntougias

Usefulness of waste from the cultivation of tobacco for energy production

18:45 - 19:00

M. Piłuła, A. Kowalczyk-Juśko, P. Pochwatka and **J. Dach**

Biodegradation of phenolic compounds from grape pomace of *Vitis vinifera* Asyrtiko by *Chlamydomonas reinhardtii*

19:00 - 19:15

M. Belenioti, **E. Mathioudaki**, E. Spyridaki, D. Ghanotakis and N. Chaniotakis

Valorization of spent coffee grounds for removal of chromium from wastewater

19:15 – 19:30

R. Campbell and **C. Mangwandi**

Challenges with Strategic Planning for Disaster Waste Management in Developing Countries

19:30- 19:45

M. Massoud and L. Al Tawil

Friday 16 June Anelixi | Susteng 2023

Greetings | Welcome Speeches

09:30 - 11:00

Petros Gikas, Professor, School of Chemical and Environmental Engineering, (Scientific leader of the project ANELIXI), Technical University of Crete, Greece

Tsiagande Vaya, Communication Officer & Technical Assistance JS, INTERREG V-A Greece-Cyprus 2014-2020

Nikolas Karamanes, Director General, Water Supply and Sewerage of Paros, Greece

George Panayiotou, Vice President, Kyperounta Sewerage Board, Cyprus

Angeliki Larcou Yiannakou, Coordinator, Division of Wastewater and Reuse, Water Development Department, Cyprus

Break – Posters viewing

11:00 - 11:30

PLENARY LECTURE: Prof. I. Janajreh
Low Energy Desalination: Direct Contact Membrane Distillation (DCMD) and Freeze Desalination (FD)
Chair: P. Gikas & E. Ranieri

11:30 - 12:15

SESSION 6: Water Resources Management
Chair: N. Tsochatzidis & M. Karim

12:15 - 13:15

Smart Irrigation recommendation system using Machine Learning
K. Dolaptsis, X.E. Pantazi, G.Tziotzios, D.Stavridou, A.Morellos, C.Paraskevas, S. Arslan, Y. Tekin and A. Mouazen

12:15 - 12:30

HRES: The solution to cover water and energy needs in a Greek arid island 12:30 - 12:45
S. Skroufouta, A. Lemonis and E. Baltas

Environmental, Health and Safety Challenges of 300MW Floating Solar Plant 12:45- 13:00
M. Karim and R. Rimsa

Assessing the value of seasonal forecasts for improved reservoir operations in a water-stressed Mediterranean basin: A case study in the Faneromeni reservoir, Crete 13:00 - 13:15
A. Tsilimigras, N. Crippa, M. Grillakis, G. Yang, M. Giuliani and A. Koutroulis

Break 13:15 - 14:45

SESSION 7: Wastewater treatment & Bioremediation (part I) 14:45 – 15:45
Chair: J. Dach & M. Vatyliotou

Presentation of the Wastewater Treatment Plants of Paros, Greece 14:45 - 15:00
M. Mavri

Benzotriazoles and perfluorinated substances removal using thermal pretreatment and biochemical methane potential (BMP) test 15:00 - 15:15
G. Gatidou, A. Koukoura, E. Gkalipidou, E. Zkeri, M. Fountoulakis and A. Stasinakis

Sustainable municipal wastewater treatment through novel pilot-scale aerated Vertical Flow Constructed Wetlands 15:15 - 15:30
P. Regkouzas, I. Asimakoulas, K. Paragioudakis, E. E. Koukouraki and A. Stefanakis

**SESSION 7: Wastewater Treatment &
Bioremediation (part II)**
Chair: I. Vyrides & D. Constantinou

15:45 - 17:15

**Removal of chromium from aqueous solution using CeO₂@starch
nanocomposite material and olive stone in a continuous system**
O. Jaiyeola and C. Mangwandi

15:45 - 16:00

Reclaimed Water Reuse in Cyprus
M. Vatyliotou

16:00 - 16:15

Presentation of Sewage Treatment Plant at Kyperounta
Member of Water Development Department of Cyprus

16:15 - 16:30

**Primary Filtration Systems for upgrade of overloaded municipal
Wastewater Treatment Plants in the Mediterranean Countries**
K. Tsamoutsoglou, I. Maniaki and P. Gikas

16:45 - 17:00

**The rehabilitation of the main sewer collector of Limassol - An
innovative approach**
G. Panayiotou

17:00 - 17:15

Break - Posters viewing

17:15 - 17:30

Round table (in Greek)
**Hot issues on water and wastewater management and
reuse**
Chair: P. Gikas, A. Larkou & I. Tsouloftas

17:30 - 19:00

Gala Event
(Filitos, Gerasa)

20:00 - 23:00

**SESSION 8: Biochemical and Biomedical
Engineering & Biotechnology**
Chair: M. Koutinas & A. Nicodemou

09:30 - 11:15

Development of biochar-based biocatalysts for fermentative bioethanol overproduction via whole-cell immobilisation under multiple environmental stresses

09:30 - 09:45

M. Kyriakou, M. kyria, A. Ioannou, V. Fotopoulos and M. Koutinas

Can biodiesel become a determinant Bioeconomy factor towards sustainability: Mixture physicochemical composition and Input-Output (I-O) indicators of biodiesel sector

09:45 - 10:00

M.E. Kyriklidis, C. Kyriklidis, V. Vasileiadis, E. Loizou and C. Tsanaktsidis

Cultivation of Clorella sorokiniana in a flat-plate gas-lift photobioreactor and harvesting with the use of Pleurotus ostreatus fungal pellets

10:00 - 10:15

S. Schiza, A.S. Stasinakis and M.S. Fountoulakis

Optimization of microalgae bio-products under industrial flue gas exposure

10:15 - 10:30

G. Makaroglou and P. Gikas

CO₂ utilization in a system of anaerobic granular sludge and magnesium ribbon for acetic acid production

10:30 - 10:45

C.G. Samanides and I. Vyrides

Optimal Biodiesel Mixtures: Cost and Density Evaluation Function Application by Genetic Algorithm

10:45 - 11:00

V. Vasileiadis, M.E. Kyriklidis, C. Kyriklidis, E. Terzopoulou and C. Tsanaktsidis

Impact of organic and biodynamic vineyard management on microorganism community, chemical and sensory properties of Cabernet Sauvignon wines in Ningxia, China

11:00 - 11:15

Y. Sun, F. Zhang, F Y Guo and J. Zhang

Break - Posters viewing

11:15 - 11:45

PLENARY LECTURE: Prof. H. Azaizeh

11:45 - 12:30

Biomass valorization for lactic acid production to produce polylactic acid as a biodegradable plastic

Chair: P. Gikas & I. Janajreh

SESSION 9: Waste to Energy/ Hydrogen Production

12:30 - 13:45

Chair: A. Makri & K. Tsamoutsoglou

The impact of a biogas plant on the energetic and economic situation of a dairy farm

12:30 - 12:45

J. Dach, P. Pochwatka, A. Kowalczyk-Juško and A. Mazur

Spent coffee grounds and orange peel residues based biorefinery development towards biolubricants production and biodiesel properties estimation

12:45 - 13:00

E. Stylianou, K. Zygouraki, M. Carmona-Cabello, N. Giannakis, M.P. Dorado and A. Koutinas

Hydrogen gas generation by anaerobic oxidation of metallic iron Fe⁰ or scrap iron under low-temperature carbonates conditions and the role of citric acid

13:00 - 13:15

D. Constantinou and I. Vyrides

In situ hydrogen peroxide (H₂O₂) production in carbonaceous electrodes with different interfacial properties

13:15 - 13:30

P. Petsi, K. Plakas, Z. Frontistis and A. Karabelas

Biosolids gasification: state-of-the-art and industrial-scale application at the WWTP of Rethymno

13:30 - 13:45

K. Pothoulaki, A. Manali and P. Gikas

Break

13:45 - 15:00

SESSION 10: Nanomaterials

15:00 - 16:00

Chair: F. Galatopoulos & P. Pochwatka

Solution Processed Perovskite Nanocrystal Photovoltaics

15:00 - 15:15

F. Galatopoulos, P. Papagiorgis, A. Ioakeimidis, C. Christodoulou, A. Chrusou, E. Charalambous, A. Manoli, C. Bernasconi, M. I. Bodnarchuk, M. V. Kovalenko, G. Itskos and S.A. Choulis

Metal nanoparticles as pesticide alternatives

15:15 - 15:30

A. Malandrakis, N. Kavroulakis, C. Chrysikopoulos

High Mechanical Strength Carbon Nanofibers Fabrication: A Comparative Study of Biomass Electrospun Nanofibers and CVD Synthesized Nanofibers Over Nickel Decorated RANR

15:30- 15:45

F. Dziike, T. D. Ntuli, and O.A. Olagunju

Fabrication of Ceramic Composite Films for Solid Oxide Electrochemical Cells (SOEC) by Solution Spray Pyrolysis(SSP)

15:45 - 16:00

C. Ziazias, C. Matsouka, C. Tsanaktisidis and N.E. Kiratzis

SESSION 11: Environmental Economics/ Industrial Economics

16:00 - 17:00

Chair: A. Pournara & E. Stylianou

Sustainable blue economy and ecosystem services in transitional water bodies: Case study of a lagoon and a river delta in Northern Greece

16:00 - 16:15

A. Pournara and F. Sakellariadou

The role of standards for the transition to a Sustainable Blue Economy

16:15 - 16:30

A. Pournara

Techno-economic learning in biorefinery research – a meta-level perspective on three exemplary cases

16:30 - 16:45

P. Krassnitzer

Cost-benefit analyses for agricultural soils health: a literature review 16:45 - 17:00
S. Rozakis and E. Androulidaki

Break - Posters viewing 17:00 - 17:30

PLENARY LECTURE: Prof. M. C. Fragkou 17:30 - 18:15
An interdisciplinary approach towards seawater desalination for human consumption in the Atacama desert, Chile
Chair: P. Gikas & J. Dach

**SESSION 12: Agricultural Engineering/
Agricultural & Livestock Waste** 18:15 - 19:15
Chair: P. Pochwatka & K. Tsamoutsoglou

Machine Learning based Prediction of Fusarium Head Blight spatial distribution in wheat fields 18:15 - 18:30
A. Morellos, X.E. Pantazi, C. Tsitsopoulos, K. Dolaptsis, G. Tziotzios, D. Stavridou, C. Paraskevas, O.E. Apolo-Apolo, M.B. Almoujahed, R. Whetton, Z. Kriauciuniene, M. Kazlauskas, E. Šarauskiš and A. Mouazen

Valorisation of agricultural waste towards enhanced biopolymer via cathodic electrofermentation 18:30 - 18:45
O. Vittou, M. Sarafidou, O. Psaki, C. Pateraki and A. Koutinas

Modeling of methane production with the application of artificial intelligence techniques 18:45 - 19:00
P. Pochwatka, A. Kowalczyk-Juško, A. Mazur and J. Dach

Treatment and technology of rural domestic wastewater in China 19:00 - 19:15
J. Zhang, S. Lu, Yungeng Jiang and H. Zhang

Closing Ceremony 19:15 - 20:00
Chair: P. Gikas, E. Ranieri, H. Azaizeh, I. Janajreh, M. C. Fragkou, I. Vyrides, M. Koutinas

Field visit at Troodos mountain and Kyperounta wastewater treatment plant

09:30 - 16:00

Posters

Biogas upgrading with membrane gas separation; Construction and operation of a pilot-scale polyimide membrane system

P. Gkotsis, C. Koutsiantzi, T. Deligiannis, A. Zouboulis, M. Mitrakas and E. Kikkinides

Digestate from agriculture biogas plants as a potential source of tetracycline antimicrobials and antibiotic resistance genes

E. Korzeniewska, I. Wolak, M. Harnisz, Magdalena Męcik, K. Stando and S. Bajkacz

Variations of Organic Characteristics for Influent and Effluent of BAC Filter in AOC Bioassay Using SFS with Integrated Areas

S.C. Chen, W.L. Lai and T.Y. Hong

The energetic potential of surgical masks: a possible approach as solid recovered fuels

S. Pinho

A nanopore long-read sequencing points out a modification of hospital wastewater microbiome after chlorine disinfection

D. Rolbiecki, Ł. Paukzto, K. Krawczyk, E. Korzeniewska, J. Sawicki, and M. Harnisz

Experimental and Mathematical study on CO₂ separation performance of biogas using commercial polyimide hollow membrane in a 2-stage process.

C. Koutsiantzi, P. Gkotsis, A. Zouboulis, M. Mitrakas and E. Kikkinides

Analysis of the Impact of Renewable Energy Promotion Policy on Taiwan's Electricity Mix

S.K. Ning and J.S. Huang

Screen-printing interdigitated microelectrodes for dielectrophoretic alignment MWCNT-based flexible gas sensors

I. Turcan, T.A. Filip and M.A. Olariu

Valorization of citrus processing industry waste for production of essential oils, pectin and bacterial cellulose

P. Karanicola, M. Patsalou, A. Nicodemou, N. Evripidou, P. Christou, G. Panagiotou, C. Damianou and M. Koutinas

Enhancement of glucose yield from potato starch through hydrolysis via immobilization of *Aspergillus awamori* and *Aspergillus niger* on carbonaceous materials

M. Patsalou and M. Koutinas

Evaluating the environmental benefits of utilizing hydrolyzed municipal biowaste for agricultural and biochemical value-added products

M. Christodoulou, M. Koutinas, M. Kallis, P. Photiou, E. Montoneri, I. Vyrides and N. Tzortzakis

Augmented Regression of Municipal Solid Waste Generation Rate Based on Economic and Social Data

M.Gavrilescu and **D.Gavrilescu**

The Sustainability of the Household Food Waste Management System in Romania

D. Gavrilescu, D. Oprisor and C. Teodosiu

Microplastic aging in freshwater and marine ecosystems

S.D. Martinho, V. Cruz Fernandes, S.A. Figueiredo, R. Vilarinho, J.A. Moreira and C.D. Matos

Coastline Protection & Management at Kythera Kapsali Bay through Summer School Project, the case of Island Kythera

E. Loupas and M. Kalogeraki

Circular bioeconomy strategy in Greek livestock sector: The integration of bakery meal to pig diets

L. Melas, M. Batsioula, S. Skoutida, A. Malamakis, C. Karkanias, D. Geroliolios, S.Patsios and G. Banias

A Systematic Investigation of Pb²⁺ Removal from High-Salinity Wastewater by Electrocoagulation – Flocculation Process [ECF]

V. Chatzis, V. Korovesi, **P. Petsi** and K. Plakas

Removal of benzotriazoles during municipal wastewater treatment in suspended-growth and attached-growth systems containing *Chlorella sorokiniana* and activated sludge

A. Koukoura, E. Gkalipidou, E. Zkeri, **G. Gatidou**, M. Fountoulakis and A. Stasinakis

Experience of using IoT technologies and decision-support systems for smart-farming with real-time irrigation management and assessment of its impact on tree crops' economy in Greece.

T. Theodosiadis-Thomaidis and G. Panagopoulou

Fabrication, characterization, and application of ternary magnetic recyclable Bi₂WO₆/BiOI@Fe₃O₄ composite for photodegradation of tetracycline in aqueous solutions

T.A. Kurniawan

Application of the advanced primary filtration process at activated sludge wastewater treatment plants

K. Tsamoutsoglou and P. Gikas

Improving prediction of bioethanol production through construction of a gene regulatory model in *Saccharomyces cerevisiae*

M. Christodoulou, M. Kyriakou, P.S. Stephanou and M. Koutinas

Seasonal response of soil microbiomes to conservation practices.

M. Frantzeskou, N. Paranychianakis and S. Tul

Recovery of phosphate from wastewater using by-pass dust (BPD) from cement industry

P. Photiou, P. Christou and I. Vyrides

Treatment of municipal wastewater primary effluent by trickling filters

E. Gika, E. Kyriotakis, I. Chourdakis and P. Gikas

Soil enzymes activity in conservation and conventional agroecosystems

M. Frantzeskou, N. Paranychianakis and S. Tul

A generalized differential constitutive equation for polymer melts

P. C. Konstantinou, and P. S. Stephanou

Cultivation of immobilized microalgae in a pilot-scale photo-bioreactor for CO₂ sequestration

D. Mitrogiannis, G. Makaroglou and P. Gikas

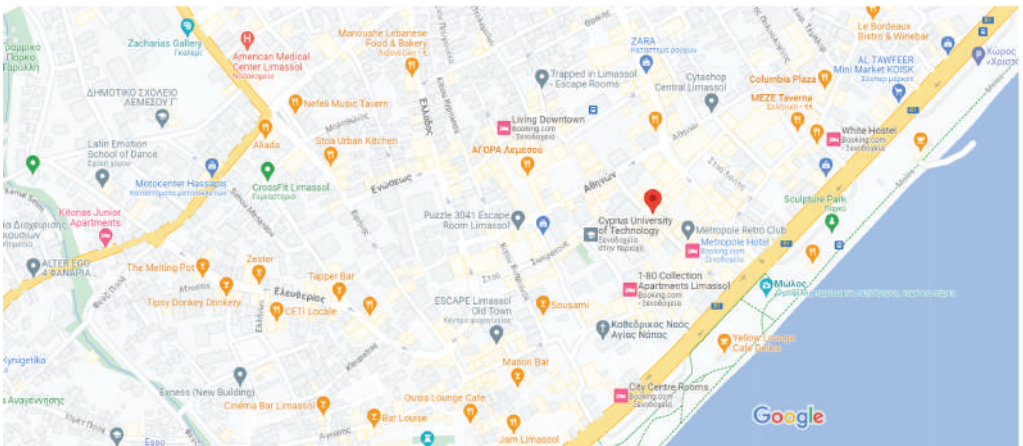
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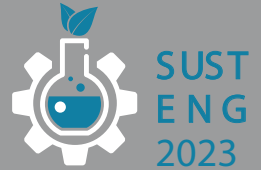
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