



ICoWEFS

2024

MAY 8 - 10 2024
PORTALEGRE, PORTUGAL

INTERNATIONAL CONFERENCE ON WATER, ENERGY, FOOD AND SUSTAINABILITY

Portalegre, Portugal

8 -10 May 2024

Program

Important notes:

- Oral presentations will have 15 minutes + 5 minutes for discussion.
- Poster presenters should deliver their posters at the registration desk, to be placed in the designated room

Zoom link: <https://videoconf-colibri.zoom.us/j/95405332337>

May 8th

08.45-9.00 h: Registration

9.00-9.30 h: Opening Ceremony

(Room 235 – BioBIP II)

Luís Loures, President of IPPortalegre, Paulo Brito, IPPortalegre and João Rafael Galvão, IPLeiria

9.30-9.45 h: Poster delivery

Keynote

(Room 235, BioBIP II, Chair: Paulo Brito)

9.45-10.15 h: Ana Luisa Fernando – “Increasing the sustainable production of biofuels – prospects of cultivating oilseed crops in soils contaminated with heavy metals”



Organization:



Sponsors and Exhibitors:



Event's editor:





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10.15-10.45 h: Coffee break and Poster Session

(Room 135 – BioBIP II)

Parallel Sessions

Session 1 - Energy

(Room 235, BioBIP II, Chair: Flávio Craveiro)

10.45-11.05 h: Alejandro Martín – “Software-based fluid dynamic simulation of a combustion chamber”

11.05-11.25 h: João Nuno Garcia – “Sustainably Energy-Efficient Vegetable Dehydration through Active Air Ventilation, Supported by Solar Thermal and PV Energy”

11.25-12.05 h: Pedro Miguel – “The electric vehicle challenge for the distribution electricity grid”

12.05-12.25 h: Ana Maria Barreiros – “Marginal land irrigated with treated wastewater. An opportunity for biofuel production in Portugal?”

12.25-12.45 h: Andrii Toporov – “Sludge From Household Setting Tank As A Raw Material Base For Obtaining Low Calorie Gaseous Fuel”

Session 2 – Agrifood

(Room 209, BioBIP II, Chair: Vânia Ribeiro)

11.00-11.20 h: Isabel Duarte - “Nutritional composition and bioactive content in various traditional Portuguese vegetable soups”



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11.20-11.40 h: Teresa Mouga – “Assessing Ecological Quality on the Rocky Coast of Abalo Beach, Portugal”

11.40-12.00 h: Marta Jiménez – “The attractiveness of an e-marketplace for smallholder farmers: lessons from the consumer approach”

12.00-12.20 h: Susana Isabel Campos – “Barriers and Facilitators to improve short food supply chains to schools in Alto Minho: Multi-actor approach”

12.20-12.40 h: Maria da Graça Carvalho – “Future-proof a mediterranean soup”

12.45-14.15 h: Lunch

14.15–15.05 h: Poster Session
(Room 135 – BioBIP II)

Session 3 – Water, Sustainability and Nexus (Room 235, BioBIP II, Chair: Sandra Mourato)

15.05-15.25 h: Flávio Craveiro – “Reshaping Africa’s Sustainable Future through 3D Printing”

15.25-15.45 h: Ounísia Santos – “Ornamental plants for urban wastewater hydroponic treatment”

15.45-16.05 h: Bruno Cardoso – “Priorities in the Portuguese Water Sector: A comparison between upstream and downstream water utilities”

16.05-16.25 h: Daniel Delgado – “Spatio-temporal distribution of rainfall erosivity (RUSLE R-Factor) in Ecuadorian basins: an analysis of the last century”



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16.25-16.45 h: Elsa Gonçalves – “Development and characterization of biodegradable films based on pectin and Galega kale by-products”

16.45-17.05 h: Carmen Medina – “Teaching how to be ethical in research for final degree students in Engineering degrees”

Special Session

(Room 209 – BioBIP II, Chair: Paulo Brito)

15.05-17.05 h: AP2H2 – Hydrogen solutions

End of Day 1

May 09th

Round Table

(Room 235 – BioBIP II)

9.30-10.30 h: “Exploring agrivoltaics: Opportunities, trade-offs and potential solutions – integrating key aspects through a multifactor perspective discussion”,

Moderator: Susana Filipe, CHANGE

Participants:

- Luís Fialho – Cátedra das Energias Renováveis, Universidade de Évora
- Maximilian Stange – Fraunhofer IWU – Group Leader – Business Models for Sustainability
- Filipe Alves – Biovilla, Cooperativa para o Desenvolvimento Sustentável e CHANGE, cEc3, Faculdade de Ciências de Lisboa
- Miguel Sequeira – CHANGE, CENSE, Universidade Nova de Lisboa
- Fernando Ascensão CHANGE, cE3c, Faculdade de Ciências de Lisboa



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10.30 – 11.00 h: Poster session and coffee break

Parallel Sessions

Session 4 – Sustainability

(Room 235, BioBIP II, Chair: Luiz Rodrigues)

11.00-11.20 h: José Carlos Rico – “Use GIS tool for biomass management: A case study for Portugal within the TANGO-Circular Project”

11.20-11.40 h: Pedro Santos – “Exploration of mineral resources – sustainability perceived by the population”

11.40-12.00 h: Carmen María Medina – “Assessment of atom economy in biogas steam reforming and possible solutions in a biorefinery context”

12.00-12.20 h: Ana Maria Barreiros – “Do plants improve indoor air quality? Myth or Reality? A case study in a university environment using treated wastewater for plants irrigation”

12.20-12.40 h: Henrique Almeida – “Two different approaches for recycled polypropylene using injection moulding technique – comparison studies on mechanical and thermal properties”

12.40-13.00 h: Olena Kovtun – “European Union policy on sustainable rural development: challenges for Ukraine in unstable times”



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Session 5 – Energy

(Room 209, BioBIP II: João Galvão)

11.00-11.20 h: Mohammed Karim Ben Hachmi – “Estimation the Economic Level of Non-Revenue Water (ENRW) and Economic Leakage Level (ELL) in Water Distribution Systems: A Comparative Study of Al-Hoceima city and Marrakech city, Morocco”

11.20-11.40 h: Raquel García Mateos – “Study of corn crop residue pelletising in a semi-industrial system”

11.40-12.00 h: Natália Roque – “An assessment of wind resources with micro-generation applied on farmland in inland Portugal”

12.00-12.20 h: Santa Margarida Santos – “Characterization of Refuse Derived Fuel pellets and feasibility assessment of their application in CO₂ gasification”

12.20-12.40 h: Cristina Matos – “Energy to Water nexus in Wastewater Treatment Plants”

12.40-13.00 h: Teresa Eugénio – “Application of renewable energy – The case of San Tomé Island”

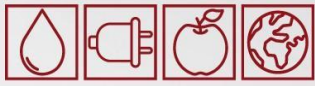
13.00-14.40 h: Lunch and poster session

(Room 135 – BioBIP II)

Keynote

(Room 235, BioBIP II, Chair: Catarina Nobre)

14.40-15.00 h: Paulo Mourão – “Activated Carbon and Biochar: Complementary Carbon Materials”



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Session 6 – Agrifood, Sustainability and Nexus

(Room 235, BioBIP II, Chair: Henrique Almeida)

15.00-15.20 h: Liliana Ferreira – “Evolution of the usage of natural fibers in sustainability”

15.20-15.40 h: Tiago Miguel Mendes – “Ready-to-eat sterilised vegan meals incorporating the seaweed *Porphyra* sp.”

15.40-16.00 h: László Buics – “Municipal Household Waste Management Methodologies in the EU Countries: A Reverse Logistics Benchmarking Approach”

16.00-16.20 h: Flávio Craveiro – “Infrashelter Platform: Analysis of Materials Applied in Furniture Solutions for Planned Temporary Camps (PTC) in Disaster Scenarios”

16.20-16.40 h: Yevgen Zbykovskyy – “Study of iron content in drinking water: Ukrainian case from the territories affected by military actions”

Session 7 – Sustainability

(Room 209, BioBIP II, Chair: Andrei Longo)

15.00-15.20 h: Pedro Bento – “Unveiling the Sustainable Layers of Barcelona’s Metropolitan Public Sphere”

15.20-15.40 h: Julia Martins – “Application of red mud in additive manufacturing of geopolymers for heavy metal adsorption”

15.40-16.00 h: Cristina Matos – “Identification of influencing factors of energy and water consumption at the residential end use level”



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16.00-16.20 h: Natália Roque - "Cultural Agroecosystem Services framework (Agro-CES): a tool to support agricultural sustainability assessment"

16.20-16.40 h: Maryna Stiurko – "Similarity as the main indicator of seed quality"

Closing Ceremony

(Room 235, BioBIP II)

16.40-17.00 h: Prof. Paulo Brito, IPPortalegre and Prof. João Rafael Galvão, IPLeiria.

17.00-17.30h: Award ceremony for best oral presentation and best poster presentation

18.30 h: Visit and Cocktail in "Museu da Tapeçaria de Portalegre – Guy Fino"
Address: R. da Figueira 9, 7300-231 Portalegre

End of Day 2

May 10th

(Departure from Portalegre Polytechnic Campus)

09.00-13.00 h: Optional Technical Visit - Hydrogen fuelling station (Tomar).

Registration link:

https://docs.google.com/forms/d/e/1FAIpQLSdvTKdx_WRWdgdNWo9XBPngPGakm1e_8QbJKnjT-_C9vswgrQ/viewform

13.00-15.00 h: Free lunch

15.00-17.00 h: Return to Portalegre Polytechnic Campus.





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End of Day 3

May 08 - 10th

Poster Sessions

Ana Maria Barreiros – "Do plants improve indoor air quality? Myth or Reality? A case study in a university environment using treated wastewater for plants irrigation"

Carlos Alberto Pires – "Forecasting Water Flow Distribution in Water Supply Networks using Deep Learning: LSTM Case Study"

Carmen Rangel – "Brewer's Spent Grain Valorization to Reduce the Energy Bill of Small Craft Breweries in Portugal"

Cristina Matos – "Energy to Water nexus in Wastewater Treatment Plants"

Daniel Delgado – "RUSLE C-factor estimation from remote sensing in Ecuadorian basin over the period 2001-2020"

Fernanda Azeredo – "Hydrotreated Vegetable Oil (HVO): A review on production, properties, environmental impact, and future perspectives"

Flávio Craveiro - "Physical Properties of Earth-Based Materials Stabilised with Biopolymer Binder"

Flávio Craveiro - "Reshaping Africa's Sustainable Future through 3D Printing"

Henrique Almeida - "Design with spent coffee grounds: The coffee cup project"



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Henrique Almeida - "Processing and Characterization of Polymeric Matrix Composites Reinforced with Short Chestnut Shell Fibers"

João Galvão – "Greenhouse Digitalization and Water Irrigation Nutrient Liquid Management"

José Carlos Almeida – "The significance of concrete cover in enhancing the longevity and eco-friendliness of reinforced concrete bridges"

Margarida Gonçalves – "Circular economy model for valorization of by-products and effluents from a Portuguese olive oil production unit"

Margarida Gonçalves – "Torrefaction and oxidative carbonization of pine sawdust and chlorella vulgaris"

Maria da Graça Pacheco Carvalho – "Soup was an emotional trigger"

Maria Isabel Silva – "Antioxidant and antimicrobial properties of extracts of wild and commercialized Mentha pulegium L."

Maria Lizete Heleno – "The relevance of safety and health at work literacy in SDG8"

Miguel Sequeira – "Assessing the inclusiveness of the draft updated National Energy and Climate Plans 2030 of Belgium and Portugal through a hard-to-reach energy users lens"

Mohammed Karim BEN HACHMI - "Sustainable Management: A Comprehensive Analysis and Economic Level of Leakage Estimation in the Water Distribution Systems of Tangier and Kenitra, Morocco"

Nelson Oliveira – "Design of pyrolysis system to convert waste plastic to fuels"

Pedro Bento – "Exploring Sustainable Dynamics in Urban Commerce"



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Pedro Gala – “Influence of the addition of a Green Roof in the Seismic Performance of an Existing Steel Building”

Rodrigo Ferreira Ramos – “Cruise ships inspections, a Contribution to sustainability”

Sandra Mourato – “Water efficiency perception among Higher Education students”

Sara Hassan – “The short-term effect of prescribed burning on aboveground biomass, and soil properties”

Susana Filipe – “Barriers, Drivers and Opportunities for Valorization of Agricultural Plastic Waste”

Susana Isabel Campos – “Willingness to pay for eco-label in food products: mapping publications over the past twenty years”

Vânia Ribeiro – “Antioxidant and antimicrobial properties of extracts of wild and commercialized *Mentha pulegium* L.”

Vânia Ribeiro – “Cricket-based food production (*Acheta Domesticus*): nutritional and sustainability considerations, production methods and HACCP implementation – a narrative review”

Vânia Ribeiro – “Quantification of Food Waste in a Portuguese Nursing Home”