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Technical Program at a glance

	Tuesday, July 4th	Wednesday, July 5th	Thursday, July 6th	Friday, July 7th
14:00	Registration	08:30 Registration	08:30 Registration	08:30 Registration
14:30	Workshop "Water and Local SDGs"	09:10 Opening Ceremony	09:00 Keynote Talk 2: "Hydrogen and renewable gases production from waste and biomass"	09:00 Keynote Talk 3: "Pressure for food nonthermal pasteurization and hyperbaric storage as a variable for more sustainable food preservation"
17:30	Coffee-break	09:40 "Digitalization and the sustainability of urban water services"	09:50 Session 6: "Sustainable energy generation and management"	09:50 Session 12: "Sustainable food processing and food waste solutions"
18:00		10:30 Coffee-break Session 1: Poster session	10:50 Coffee-break Session 7: Poster session	10:30 Coffee-break Session 13: Poster session
		11:00 Session 2: "Special Session on Water management challenges"	11:20 Session 8: "Smart and sustainable buildings and cities"	11:00 Session 14: "Food safety and quality engineering"
		13:00 Lunch	12:20 Session 9 (part 1/2): "Special Session on Technological advances in construction sustainability"	12:20 Session 15: "Information technology and artificial intelligence applied to sustainability"
		14:30 Session 3: "Climate change, circular economy and risk mitigation"	13:00 Lunch	13:00 Lunch
		16:10 Coffee-break Session 4: Poster session	14:30 Session 9 (part 2/2): "Special Session on Technological advances in construction sustainability"	14:30 Session 16: Technical Session
		16:40 Session 5: Technical Session	16:10 Coffee-break Session 10: Poster session	15:30 Closing Ceremony
		17:40	16:40 Session 11: Virtual poster session	16:00 Bus to Faro downtown
		18:10 Bus trip to Loulé Welcome reception in Loulé	18:00 Bus to Faro downtown	16:20
		18:40 Welcome reception with visit to Islamic Baths and the Barreto Stately Home, and cocktail at Loulé's Castle	18:20	18:00 Conference Party with access to Faro Rooftop Festival "Açoteias"
		21:00 Return to Faro by Bus	19:00 Gala dinner at EVA Hotel	00:00
		21:30	22:30	



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Detailed Technical Program

Wednesday, July 5, 2023

- 08.30-09.10 **Registration Open – Room 1.5 & Room ONE (virtual)**
- 09.10-09.40 **Opening session – Room 1.5 & Room ONE (virtual)**
- 09.40-10.30 **Keynote Talk 1 – Room 1.5 & Room ONE (virtual)**
Digitalization and the sustainability of urban water services
Enrique Cabrera-Rochera – University of Valencia, Spain
- 10.30-11.00 **Coffee Break – Entrance Hall**
- 10.30-11.00 **Session 1 - Poster Session on Water Management – Room 1.4 & Room TWO (virtual)**
Chair: Gonçalo Prates
- 10.30-10.36 1.1 Pollutants of Emerging Concern in Treated Urban Effluents and Surface Water – Portugal in the Last Decade
Camila Caroline Zeni Silva, Anabela Rebelo, Manuela Moreira da Silva
- 10.36-10.42 1.2 Estimating open channel surface flow velocities using quinine-based tracers and a UAS under low luminosity conditions
Soheil Zehsaz, João L. M. P. de Lima, Jorge M. G. P. Isidoro, M. Isabel P. de Lima, Ricardo Martins
- 10.42-10.48 1.3 Sustainable solutions for water management in arid and semiarid regions: examples from Chile and Brazil
Jorge Isidoro, Abelardo Montenegro, Joel Soto
- 11.00-11.20 **Session 2 - Special Session on Water management challenges – Room 1.5 & Room ONE (virtual)**
Chair & organizer: Manuela Moreira da Silva

- 11.00-11.20 2.1 Rainwater harvesting in university buildings. Feasibility analyses in Mediterranean climate
Armando Silva Afonso, Carla Pimentel Rodrigues
- 11.20-11.40 2.2 Stormwater Attenuation & Enhanced Infiltration to Mitigate Flood & Drought Conditions
Stephen D. Thomas, George R. French, Joseph A. O'Meara and Matthew P. Dale
- 11.40-12.00 2.3 Microplastics in Portuguese Effluents: Extraction and Characterization
Solange Magalhães, Luís Alves, Anabela Romano, Maria da Graça Rasteiro and Bruno Medronho
- 12.00-12.20 2.4 Sorraia's Valley Restoration Project – Strategies, Problems and Experiences
Carla Rolo Antunes and Miguel Azevedo Coutinho
- 12.20-12.40 2.5 Water Use Efficiency in School Environment - The School as a Living Lab for Sustainability
Anabela Cordeiro, Nadir Almeida and Manuela Moreira da Silva
- 12.40-13.00 2.6 Engaging Community on Water Circularity in Culatra Island, Algarve – Portugal
Torres, M.A., Moreira da Silva, M., Sequeira C., and Pacheco A.

13.00-14.30 **Lunch Break**

14.30-16.10 **Session 3 - Climate change, circular economy, and risk mitigation – Room 1.5 & Room ONE (virtual)**

Chair: Pedro Coelho

- 14.30-14.50 3.1 ERA5-Land Reanalysis Temperature Data Addressing Heatwaves in Portugal
Luis Angel Espinosa Villalpando, Maria Manuela Portela, José Pedro Matos
- 14.50-15.10 3.2 Climate change impact in a Green Building
Laura Almeida, Keivan Bamdad, Mohammad Reza Razavi
- 15.10-15.30 3.3 A Generic Operational Tool for Early Warning Oil Spills – Application to Cartagena Bay and the Algarve Coast
Diogo Moreira, João Janeiro, Marko Tomic, Flávio Martins
- 15.30-15.50 3.4 Manufacture of an acoustic absorption veil by using recycled materials of agro-industrial sector
José Antonio López Marín, Miguel Suffo Pino, Daniel Espinosa Corbellini

16.10-16.40 **Coffee Break – Entrance Hall**

16.10-16.40 **Session 4 - Poster Session on Sustainable development and climate change – Room 1.4 & Room TWO (virtual)**

Chair: Nelson Sousa

- 10.10-16.16 4.1 Innovation reactions as an engine for regional resilience: The case of a traditional industry cluster in Brazil
Luiz Fernando Câmara Viana, Valmir Emil Hoffmann, Hugo Pinto, Newton da Silva Miranda Júnior
- 16.16-16.22 4.2 Civil Construction Waste: A Management Model Via Digital Application, for the city of Fortaleza - Ceará - Brazil
Eder Paulus Moraes Guerra, Audelis de Oliveira Marcelo Junior

- 16.22-16.28 4.3 Sustainable ceramics for building structures with mining waste from coal mining.
Juan María Terrones-Saeta, Miguel Ángel Caparrós Espinosa, Francisco Javier Manzano Diosdado, Nuria Balades Ruíz, Jesús Franco Oliva, Francisco Javier Moreno Aguado, María José Rodríguez Aranda, Manuel García Pareja
- 16.28-16.34 4.4 Recovery of the Monumental Clock of the Cathedral of the Holy Cross of Cádiz
R. Martín-García, A. Illana-Martos, A. Herrero-González
- 16.34-16.40 4.5 Evaluation of new water treatment technology IP System.
Joel Barraza, German Merino
- 16.40-17.20 **Session 5 – Technical Session – Room 1.5 & Room ONE (virtual)**
Chair: Paulo Brito
- 16.40-17.00 5.1 Start Campus Projeto SINES 4.0
Fabíola Bordino
- 17.00-17.20 5.2 Integration of carbon sinks in the datacenter ecosystems
Índia Oliveira
- 18.10-21.00 **Welcome Reception – Visit to Loulé’s Islamic Baths and Castle**

Thursday, July 6, 2023

- 9.00-9.50 **Keynote Talk 2 – Room 1.5 & Room ONE (virtual)**
Hydrogen and renewable gases production from waste and biomass
Paulo Sérgio Duque de Brito – Polytechnic of Portalegre, Portugal
- 9.50-10.50 **Session 6 - Sustainable energy generation and management – Room 1.5 & Room ONE (virtual)**
Chair: Ana Filipa Ferreira
- 9.50-10.10 6.1 The influence of the fan-controlled chimney draft on the pollutants emission to the environment
Krzysztof Drozdol, Robert Junga, Damian Beben, Thor Kielland and Pawel Jarzynski
- 10.10-10.30 6.2 Analytical and Numerical Simulation of a Commercial Thermoelectric Module
André van der Kellen and Pedro J. Coelho
- 10.30-10.50 6.3 Implementation Process of a Local Energy Community in Portugal - The case of Culatra Island
Jóni Santos, André Pacheco and Jânio Monteiro
- 10.50-11.20 **Coffee Break – Entrance Hall**
- 10.50-11.20 **Session 7 - Poster Session on Sustainable technologies for renewable energy systems – Room 1.4 & Room TWO (virtual)**
Chair: Miguel Suffo
- 10.50-10.56 7.1 Addressing the issue of siloxanes in biogas from wastewater treatment plants
Nuno Ratola, Vera Homem, Arminda Alves

- 10.56-11.02 7.2 Identification of potential district heating networks in Temuco and Valdivia (Chile) using bottom-up energy mapping
François Simon, Waldo Bustamante
- 11.02-11.08 7.3 Life cycle analysis of Sustainable Aviation Fuels production
Ana Ferreira, Leandro Magalhães, Mauro Rocha, André Silva
- 11.08-11.14 7.4 New Fuels and sustainable housing
Amando Herrero, Juan A. Viso, Raul Martin
- 11.14-11.20 7.5 SUR Project. School engagement for the engineers of the future
Yolanda Ceada, Borja Millán, Joaquín del Pino, Daniel Ruíz, Antonio J. Barragán, Juan M. Enrique, Ramón Tirado, José M. Andújar

11.20-12.20 **Session 8 - Smart and sustainable buildings and cities – Room 1.5 & Room ONE (virtual)**

Chair: Krzysztof Drozdol

- 11.20-11.40 8.1 Santa Catarina's Tiles: An Artisanal Heritage to Preserve. Manufacturing process and characteristics
Miguel Oliveira, Marta Marçal Gonçalves, Elisa da Silva, Fátima Farinha and Elisabete Rocha
- 11.40-12.00 8.2 Technical and sustainability analysis of construction processes and covering systems for outdoor swimming pools
Miguel José Oliveira, Fátima Farinha, David Marín-García and Elbes Muniz
- 12.00-12.20 8.3 Sustainable Bus Stops for Inclusive and Smart Cities
Manuela Pires Rosa, Nelson Sousa, João Rodrigues, Rui Cavaleiro and Hugo Lamarão

12.20-13.00 **Session 9 (part I) - Special Session on Technological advances in construction sustainability – Room 1.5 & Room ONE (virtual)**

Chair & organizer: Miguel José Oliveira

- 12.20-12.40 9.1 The 7D BIM model used in the maintenance of buildings
Alcinia Sampaio, Inês Domingos and Augusto Gomes
- 12.40-13.00 9.2 The 6D BIM model applied to evaluate the building energy performance
A. Zita Sampaio and Luis Araújo

13.00-14.30 **Lunch Break**

14.30-16.20 **Session 9 (part II) - Special Session on Technological advances in construction sustainability – Room 1.5 & Room ONE (virtual)**

Chair & organizer: Miguel José Oliveira

- 14.30-14.50 9.3 Finite element modelling of the behaviour of thin-walled arch bridge made with UHPFRC and ordinary concrete
Tomasz Maleska, Damian Beben and Arkadiusz Mordak
- 14.50-15.10 9.4 Partial Replacement of Portland Cement by Stone Cutting Sludge in Mortars – Hygrometric Performance
Fernando G. Branco, José Marcos Ortega, Luis Marques and Luis Pereira
- 15.10-15.30 9.5 Evaluation of different sustainable solutions to enable an increased utilization of outdoor swimming pools
Armando Inverno, Miguel Oliveira, Jânio Monteiro, Cristiano Cabrita, Fátima Farinha, Gina Matias, and Francisco Carmo
- 15.30-15.50 9.6 3D Concrete Printing: Factors Affecting the US and Portugal

- Andrew P. McCoy, Manuel Vieira, Miguel Jose Oliveira, Akhileswar Yanamala and Philip Agee*
- 15.50-16.10 9.7 Feasibility, applicability and incentives in the use of sustainable materials: comparative between Brazil and Portugal
Clauciana Schmidt Bueno de Moraes, Stephani Cristine de Souza Lima, Cíntia Mara Vital Bonaretto, Giulia Malaguti Braghini Marcolini Martires, Natasha Nême Gonçalves de Almeida, Manuel Duarte Pinheiro, Miguel Pires Amado, Rodrigo Prieto Rocha, Leonardo Prudente Torres Gualter
- 16.10-16.30 **Coffee Break – Entrance Hall**
- 16.10-16.40 **Session 10 - Poster Session on Sustainable engineering technologies – Room 1.4 & Room TWO (virtual)**
Chair: Damian Beben
- 16.10-16.16 10.1 Internal Thermal Insulation for Swimming Pools – In Situ Validation Tests
Miguel Oliveira, Fátima Farinha, Maria Segura, Gina Matias, Luís Silva, Francisco Carmo
- 16.16-16.22 10.2 Laboratory model for the simulation of the plate load test for road surfaces
Miguel. A Caparrós Espinosa, F. J. Manzano Diosdado, N. Balades Ruiz, J. Franco Oliva, F. J. Moreno Aguado, J. M. Terrones Saeta, M. J. Rodriguez Aranda, M. García Pareja
- 16.22-16.28 10.3 Occupational Safety and Health Management in Explosive Atmospheres Workplaces
J. E. Díaz-Vázquez, P. A. Macías-Quintero, R. Tur-Cano and D. Repeto-García
- 16.28-16.34 10.4 Feasibility of hybrid plants in microregions of the state of Ceara: analysis of temporal complementary of wind solar energy sources
Brenda Medeiros, Audelis Júnior, Eder Guerra, Enio Deus
- 16.40-17.46 **Session 11 – Virtual poster Session – Room 1.4 & Room TWO (virtual)**
Chair: Jorge Semião
- 16.40-16.46 11.1 Uncertainty analysis on Budyko framework's runoff estimations for climate change scenarios
Pâmela Melo, Lívia Alvarenga, Javier Tomasella, Carlos Mello, Gilberto Coelho, Ana Santos
- 16.46-16.52 11.2 Secil Group: Cement Decarbonization
Nuno Ramos, Lília Alexandre
- 16.52-16.58 11.3 Alkalinity enhancement in intertidal environments: a tool to mitigate climate change?
Isabel Mendes, Julia Lübbers, Alexandra Cravo, Joachim Schönfeld, Cátia Correia, Patricia Grasse, A. Rita Carrasco, Ana Gomes
- 16.58-17.04 11.4 Evaluation of lignin extraction processes from sugarcane by-products: a sustainable approach
Filipa Antunes, Inês Mota, João Burgal, Manuela Pintado, Patrícia Costa
- 17.04-17.10 11.5 Simulation of the thermal performance of multiple rooms and associated air conditioning system without control of indoor relative humidity
Celestino Ruivo
- 17.10-17.16 11.6 Foamed polyurethane plaster for isolation uses
Raquel Arroyo, Álvaro Urbaneja, Verónica Calderón, Saul Vallejos, José Miguel García
- 17.16-17.22 11.7 Sustainable building technologies by using admixtures to increase the durability of concrete structures

- Visar Krelani, Driton Kryeziu, Muhamet Ahmeti, Theodor Mentzikofakis*
- 17.22-17.28 11.8 Thermal Performance Evaluation of a Building
Ricardo Nóbrega, Lília Alexandre
- 17.28-17.34 11.9 Sodium reduction in green apples (*Malus domestica*) pickling: effects on quality characteristics
Daniela Constandache, Doina-Georgeta Andronoiu, Gabriel-Dănuț Mocanu, Oana-Viorela Nistor, Oana-Emilia Constantin, Ira Adeline Simionov, Elisabeta Botez
- 17.34-17.40 11.10 Contributions to the evaluation and improving of Romanian military diet
Ana-Maria Fundeanu
- 17.40-17.46 11.11 Reefer Cable Reel
M. Vílchez-Vílchez, A. Illana-Martos and R. Martín-García
- 19.00-22.30 **Gala dinner – EVA Hotel**

Friday, July 7, 2023

- 09.00-09.50 **Keynote Talk 3 – Room 1.5 & Room ONE (virtual)**
Pressure for food nonthermal pasteurization and hyperbaric storage as a variable for more sustainable food preservation
Jorge A. Saraiva – University of Aveiro, Portugal
- 09.50-10.30 **Session 12 - Sustainable food processing and food waste solutions – Room 1.5 & Room ONE (virtual)**
Chair: Jorge A. Saraiva
- 09.50-10.10 12.1 Freshness, spoilage dynamics and safety of deep-water pink shrimp, *Parapenaeus longirostris*, stored in ice
Eduardo Esteves, João Lagartinho and Jaime Aníbal
- 10.10-10.30 12.2 Food Waste Assessment in Universidade do Algarve's canteen
Jaime Aníbal, Neshum Sapkota and Eduardo Esteves
- 10.30-11.00 **Coffee Break – Entrance Hall**
- 10.30-11.00 **Session 13 - Poster Session on Food technologies and Information technologies – Room 1.4 & Room TWO (virtual)**
Chair: Rui Cruz
- 10.30-10.36 13.1 Use of nixtamalization in the Algarve' corn dish "milhos aferventados": does the ash matter?
Ludovina Galego, Oscar Cabral
- 10.36-10.42 13.2 Data and Text Processing for Sustainability
Francisco Couto
- 10.42-10.48 13.3 Detecting artificial reefs' usefulness for people using Industry 4.0 tools
Ana Camelo, Francisco Leitão, Jorge Ramos
- 11.00-12.20 **Session 14 - Food safety and quality engineering – Room 1.5 & Room ONE (virtual)**
Chair: Rui Cruz

- 11.00-11.20 14.1 HACCP methodology implementation in a small company of goat yoghurt production
Vera Drago and Isabel Ratão
- 11.20-11.40 14.2 Revisiting solar dryers for small to medium production
Bernardo Farrero, Paulo Bruno Rossi da Silva and Luis Frolen Ribeiro
- 11.40-12.00 14.3 How to reduce the ethanal or acetaldehyde in *Arbutus unedo* L. fruit distillate
Ludovina Galego and Vera Francisco
- 12.00-12.20 14.4 Effect of edible chitosan/clove oil films and high pressure processing on the quality of trout fillets
Irene Albertos, Isabel Jaime, Ana Belén Martín-Diana, María José Castro-Alija and Daniel Rico
- 12.20-13.00 **Session 15 - Information technology and artificial intelligence applied to sustainability – Room 1.5 & Room ONE (virtual)**
Chair: Francisco Couto
- 12.20-12.40 15.1 Comparing noise vessel azimuth tracking with a planar hydrophone array and a single vector sensor
Cristiano Soares, Friedrich Zabel, Paulo Santos and António Silva
- 12.40-13.00 15.2 Development of artificial intelligence applied to the production of biopolymers with a focus on sustainability
Audelis de Oliveira Marcelo Júnior, Arthur Brito Gomes, Eder Paulus Moraes Guerra and Enio Pontes de Deus
- 13.00-14.30 **Lunch Break**
- 14.30-16.00 **Session 16 – Technical Session – Room 1.5 & Room ONE (virtual)**
Chair: António Silva
- 14.30-14.50 16.1 Industry 4.0 and Digital Twins
Victor Muñoz (Univ. Málaga)
- 14.50-15.10 16.2 IoT and AI to Promote Energy Efficiency and Sustainability in Hotels
Miguel Silva (Managing The Intelligence)
- 15.10-15.30 16.3 How technology can help feed humanity with fewer resources
Tiago Andrade (Hubel)
- 15.30-16.00 **Closing session – Room 1.5 & Room ONE (virtual)**
- 18:00-20:00 **Conference Party – Restaurant “Tertúlia Algarvia” – Faro downtown**
- 18:00-00:00 **Faro Rooftop Festival “Açoteia”**