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## Technical Program at a glance

| Wednesday<br>July, 2nd, 2025 |                                                        | Thursday<br>July, 3rd, 2025 |                                       | Friday<br>July, 4th, 2025 |                                         |
|------------------------------|--------------------------------------------------------|-----------------------------|---------------------------------------|---------------------------|-----------------------------------------|
| Morning                      |                                                        | Morning                     |                                       | Morning                   |                                         |
| 9:10-9:40                    | Opening ceremony                                       | 9:00-9:50                   | Keynote Speaker<br>Prof. Pedro Coelho | 9:00-9:50                 | Keynote Speaker<br>Dr. Arantzazu Valdés |
| 9:40-10:30                   | Keynote Speaker<br>Dr. Pedro Maciel                    | 09:50-10:30                 | Oral Sessions                         | 09:50-10:30               | Oral Sessions                           |
| 10:30-11:00                  | Coffee-break/poster session                            | 10:30-11:00                 | Coffee-break/poster session           | 10:30-11:00               | Coffee-break/poster session             |
| 11:00-13:00                  | Oral Sessions                                          | 11:00-13:00                 | Oral Sessions                         | 11:00-13:00               | Oral Sessions                           |
| 13:00-14:20                  | Lunch                                                  | 13:00-14:30                 | Lunch                                 | 13:00-14:30               | Lunch                                   |
| Afternoon                    |                                                        | Afternoon                   |                                       | Afternoon                 |                                         |
| 14:20-16:20                  | Oral Sessions                                          | 14:30-16:10                 | Oral Sessions                         | 14:30-15:30               | Oral Sessions                           |
| 16:00-16:30                  | Coffee-break/poster session                            | 16:10-16:40                 | Coffee-break/poster session           | 15:30-15:50               | Closing ceremony                        |
| 16:30-17:50                  | Technical Sessions<br>Research Proj. On Sustainability | 16:40-17:40                 | Oral Sessions                         | 18:00                     | Conference party                        |
| 18:30                        | Welcome reception                                      | 20:00                       | Conference dinner                     |                           |                                         |



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## Detailed Technical Program

### Wednesday, July 2, 2025

- 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)**  
 Harnessing Machine Learning for Next-Generation Climate Resilience at ECMWF  
*Pedro Maciel – European Centre for Medium-Range Weather Forecasts (ECMWF), UK, Germany, Italy.*
- 10.30-11.00    **Coffee Break – Entrance Hall**
- 10.30-16.40    **Session 1 - Poster Session Day 1 – Entrance Hall & Room 1.4 & Room TWO (virtual)**  
*Chair: Gonçalo Prates*
- 10.30-10.35    1.1    Sustainability Challenges in Urban Landscaping: Assessing Irrigation Demands in Coquimbo, Chile  
*Jorge M. G. P. Isidoro, Romina Ayala Tapia, Joel Barraza Soto, João L. M. P. de Lima*
- 10.35-10.40    1.2    The frequency of extreme discharge and rainfall: the case study of Muriaé River (southeast Brazil)  
*Carla Larissa Fonseca da Silva, Maria Manuela Portela, José Pedro Matos*
- 10.40-10.45    1.3    Sustainable Neutralization of Acidic Wastewater in the Petrochemical Industry Using Alkaline Industrial Residues and Real-Time Monitoring Technologies  
*Amando Herrero-González, Fidel Ruíz-Torres, David Guerrero-Correro, Arturo Pérez-Mejías, Juan María Terrones-Saeta, Miguel Ángel Caparrós-Espinosa*
- 10.45-10.50    1.4    Drone-based methodologies for monitoring deformation in coastal breakwaters

|             |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |      | <i>Mercedes Vélez Nicolás, Marcia Salazar Rojas, Veronica Ruiz Ortiz, Pedro Zarandona Palacio, Santiago García López, Mercedes Vélez Nicolás, Pedro Zarandona Palacio, Santiago García López</i>                                                                                                                                                                                                                                                     |
| 10.50-10.55 | 1.5  | Estimation of Evaporation in Andalusian Reservoirs: Proposal of an Index for the Assessment and Classification of Dams<br><i>Marcia Salazar Rojas, Santiago García López, Mercedes Vélez Nicolás, Jorge M.G.P Isidoro, Verónica Ruiz Ortiz</i>                                                                                                                                                                                                       |
| 10.55-11.00 | 1.6  | Comparison of different potential evapotranspiration datasets for mainland Portugal<br><i>João Pedro Pegas, Maria Manuela Portela, João Filipe Santos</i>                                                                                                                                                                                                                                                                                            |
| 11.00-11.05 | 1.7  | Ecotoxicity of Sulfamethoxazole: Impact on Freshwater Ecosystems and Oxidative Stress in Fish<br><i>Stefania Gheorghe, Catalina Stoica, Laura Feodorov, Vasile Ion Iancu, Daniel Gheorghe Rudaru, Anca Maria Patrascu, Mihai Nita-Lazar.</i>                                                                                                                                                                                                         |
| 11.05-11.10 | 1.8  | eDNA Metabarcoding as an Alternative Tool for Biodiversity Monitoring in Romanian Freshwater Ecosystems<br><i>Catalina Stoica, Mihai Nita-Lazar</i>                                                                                                                                                                                                                                                                                                  |
| 11.10-11.15 | 1.9  | Sustainable Rehabilitation: Water and Energy Management in a House in Northern Portugal<br><i>Paulo Carneiro, Alina Jerónimo, Armando Silva-Afonso, Carla Pimentel-Rodrigues.</i>                                                                                                                                                                                                                                                                    |
| 11.15-11.20 | 1.10 | Evaluation of Gridded Precipitation Datasets in the Metropolitan Region of Belo Horizonte, Brazil<br><i>Pâmela Rafanele França Pinto, Lívia Alves Alvarenga, Javier Tomasella, Pâmela Aparecida Melo, Jorge M. G. P. Isidoro</i>                                                                                                                                                                                                                     |
| 11.20-11.25 | 1.11 | Relationship of air quality with other influencing parameters in the cities of Algeciras and Faro<br><i>Raul Martin, Nelson Sousa</i>                                                                                                                                                                                                                                                                                                                |
| 11.25-11.30 | 1.12 | Micropollutants in blue-green infrastructures<br><i>Nuno Ratola, João Morais, Ana Rita Ribeiro, Vera Homem, Larissa Medeiros, Talles Alem, Arminda Alves.</i>                                                                                                                                                                                                                                                                                        |
| 11.30-11.35 | 1.13 | Development of Geopolymers from Industrial Waste: Mechanical Properties Analysis and Sustainable Applications<br><i>Juan María Terrones-Saeta, Elisa M. J. Da Silva, Arturo Pérez-Mejías, Antonia Terrones-Saeta, Emilio M. Romero Macías, Juan Asensio Lozano, Miguel A. Caparrós-Espinosa</i>                                                                                                                                                      |
| 11.35-11.40 | 1.14 | Geotechnical Stabilisation of Marls Using Ashes from Coal-Fired Thermal Power Plants: Analysis of Mechanical Properties and Soil Behaviour Optimisation<br><i>Miguel A. Caparrós-Espinosa, Nuria Baladés Ruíz, Jesús Franco Oliva, Manuel García Pareja, Amando Herrero-González, Juan Agustín Herrera Rubia, Francisco J. Manzano Diosdado, Francisco J. Moreno Aguado, María J. Rodríguez Aranda, Fidel J. Ruíz Torres, Juan M. Terrones-Saeta</i> |
| 11.40-11.45 | 1.15 | Development of chemometrics techniques for the analysis of temporal spectral data<br><i>António Brázio, Adriana Guerreiro, Rui Guerra</i>                                                                                                                                                                                                                                                                                                            |

**Please note:** The physical posters will be available in the corridor near the entrance hall, during all day;  
The videos for the virtual posters will be presented on ROOM 1.4 & Virtual ROOM TWO, and will run in loop during all day.

11.00-12.20 **Session 2 - Climate change and mitigation, environmental risk assessment and carbon reduction – Room 1.5 & Room ONE (virtual)**

*Chair: Manuela Moreira da Silva*

- 11.00-11.20 2.1 Contribution to the Study of Carbon Fluxes in Mediterranean Citrus Orchards  
*Pedro Matias, Ana Rita Trindade, Adélia Reis, Manuela Moreira da Silva, Amílcar Duarte*
- 11.20-11.40 2.2 When the Summer Night Doesn't Cool: Extreme Minimum Temperatures in Portugal (1980–2024)  
*Luis Angel Espinosa, Maria Manuela Portela*
- 11.40-12.00 2.3 Improving Environmental Assessment and Pollution Monitoring in Algarve Marinas  
*Maria C. Neves, Alexandra Cravo, José Jacob*
- 12.00-12.20 2.4 Assessments of risks in underwater cultural heritage sites vulnerable to oceanic hazards  
*Juan L. Garzon, Flavio Martins, Claudio Mazzoli, Tomás Fernández-Montblanc*

12.20-13.00 **Session 3 (Part I) – Water management and Fluids modelling – Room 1.5 & Room ONE (virtual)**

*Chair: José Manuel Gonçalves*

- 12.20-12.40 3.1 Hydrodynamic processes in the Arade estuary – A field-based and modelling analysis  
*Anika Manz, Juan L. Garzon, Flávio Martins*
- 12.40-13.00 3.2 Resource Recovery from Synthetic Domestic Wastewater Using Single and Multi-Batch Electrodialysis  
*Asifa Anwar, Sinan Ates, Burak Yuzer, Yusuf Bicer*

13.00-14.20 **Lunch Break**

14.20-15.00 **Session 3 (Part II)– Water management and Fluids modelling – Room 1.5 & Room ONE (virtual)**

*Chair: José Manuel Gonçalves*

- 14.20-14.40 3.3 3D Hydrodynamical Modelling of a Marine Protected Area near Cartagena, Colombia  
*Diogo Moreira, Marko Tosic, Flávio Martins*
- 14.40-15.00 3.4 Validation of a Hydrodynamic Model for the Dominican Republic Coastal and Offshore Waters Using Gliders Salinity and Temperature Data  
*Francisco Santos Mella, Flávio Martins*

15.00-16.00 **Session 4 – Special Session on Water for People, Planet and Prosperity: Challenges and Opportunities – Room 1.5 & Room ONE (virtual)**

*Chair & Organizer: Armando Silva Afonso*

- 15.00-15.20 4.1 Identification of Homogeneous Regions Based on Climatic Indices: Application to the Douro Hydrographic Region (RH3), Portugal  
*Carla Larissa Fonseca da Silva, Raquel dos Santos Sarmento, Luis Melick Mendez Rodriguez, Maria Manuela Portela, José Pedro Matos*
- 15.20-15.40 4.2 Metal recovery from acid mine drainage by using microbial fuel cells  
*Francisco Jesus Fernandez-Morales*
- 15.40-16.00 4.3 Integrating nature-based solutions into urban planning: a methodology for quantifying intervention priorities.  
*M. Isabel Rodriguez-Rojas, Begoña Moreno, Germán Martínez, Alejandro Muñoz-Ubiña*

16.00-16.30 **Coffee Break – Entrance Hall**

16.30-17.50 **Session 5 – Technical Session on Research projects for sustainability – Room 1.5 & Room ONE (virtual)**

*Chair: Jorge Semião*

16.30-16.50 5.1 WFEO Committee on Water: Engineering, Water and Food Nexus  
*Armando Silva Afonso*

16.50-17.10 5.2 CEL Rural: Empowering rural areas through Energy Community pilots  
*Pablo Álvarez Rodríguez*

17.10-17.30 5.3 AGERAR-Plus: Renewable Energy Storage and Management for Empowering Prosumers in Smart Grids  
*Ascensión Zafra Cabeza*

17.30-17.50 5.4 Ecosystem to boost circularity and agro-robotics through digital twins  
*Victor Muñoz-Martinez*

18.00-18.15 **Bus trip from University of Algarve to Faro's Museum**

18.30-21.00 **Welcome Reception – Includes a visit to Faro's Museum**

## Thursday, July 3, 2025

9.00-9.50 **Keynote Talk 2 – Room 1.5 & Room ONE (virtual)**

Numerical Simulation of Solid Oxide Fuel Cells

*Pedro Coelho – University of Lisbon, Portugal*

09.50-15.30 **Session 6 - Poster Session Day 2– Entrance Hall & Room 1.4 & Room TWO (virtual)**

*Chair: Rui Cruz*

09.50-09.55 6.1 Unlocking the Potential of Decentralized Solar PV in Residential Buildings: A Data-Driven Approach to Energy Certification  
*Raul Lana Miguel, António Mortal*

09.55-10.00 6.2 Fuels in the air. Sustainable Housing and Safety  
*Juan Antonio Viso Pérez*

10.00-10.05 6.3 Technical-economic feasibility study of hydrogen production via direct gasification of refuse derived fuel  
*Jose Rey, Catarina Nobre, Paulo Brito*

10.05-10.10 6.4 AI-Driven Sustainable Citrus Farming: Hyperspectral Imaging for Nutritional Status Assessment  
*Javier Martín-Moreno, Antonio Peregrín, Fernando Gómez-Bravo, Antonio Domínguez, Eduardo Moreno, Sara Rua Tirado, Manuel Jesús Díaz Márquez, Daniel Camacho Calero, Jorge Semião, Begoña C. Arrue*

10.10-10.15 6.5 AMURA – ZIDAY: a smart solution for early spill detection.  
*Fidel Ruiz Torres*

10.15-10.20 6.6 Integrating Data Assimilation and Machine Learning for Enhancing Wave Forecast Accuracy  
*Carolin Poullain, Juan L. Garzon*

10.20-10.25 6.7 Modelling drought classes time series for groundwater monthly assessment and prediction in Algarve region

*Elsa Moreira, Maria C. Neves*

- 10.25-10.30    6.8    Smart Rooms to Smart Hotels: HVAC Optimization and Indoor Temperature Prediction. A Machine Learning Approach  
*Dawla Merbah, João Raposo, Alexander Campos, Pedro Cardoso, Cristiano Cabrita, Jânio Monteiro*

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9.50-10.30    **Session 7 - Sustainable manufacturing and maintenance processes and technology – Room 1.5 & Room ONE (virtual)**

*Chair: Miguel Suffo*

- 9.50-10.10    7.1    The Importance of Selected Aspects of Sustainable Production of Consumer Chemicals from the Perspective of Consumers  
*Lenka Branska, Michal Patak, Tereza Machova*
- 10.10-10.30    7.2    Sustainable Packaging Redesign for Household Chemicals and Cosmetics Products  
*Michal Patak, Lenka Branska*

10.30-11.00    **Coffee Break – Entrance Hall**

11.00-12.20    **Session 8 - Special Session on Smart Grids and Sustainable Energy Integration: Innovations, Challenges, and Future Directions – Room 1.5 & Room ONE (virtual)**

*Chairs & Organizers: Jânio Monteiro*

- 11.00-11.20    8.1    Research and Development of Pilot Projects of Renewable Energy Communities in Rural areas of Portugal and Spain  
*Jailson de Carvalho, Joni Santos, Jânio Monteiro, André Pacheco, Cristiano Cabrita*
- 11.20-11.40    8.2    Fault Detection in Energy Communities Using Distributed Model Predictive Control  
*Pablo Velarde, Ascensión Zafra-Cabeza, Miguel Ridao, Jânio Monteiro, Joni Santos*
- 11.40-12.00    8.3    Optimizing Solar Energy Production at Gago Coutinho Airport  
*Anselmo Domingos, Luís Oliveira*
- 12.00-12.20    8.3    A Leakage Flux-Based Approach for Winding Fault Diagnosis in Power Transformers  
*Luís M. R. Oliveira, João P. A. Rodrigues, Pierre Bataille, A. J. Marques Cardoso*

12.20-13.00    **Session 9 - Cyber-Physical Systems for Sustainable Agriculture Innovation – Room 1.5 & Room ONE (virtual)**

*Chair: Victor Muñoz*

- 12.20-12.40    9.1    The AgriFeedBot Project: An Agricultural Cyber-Physical System for Autonomous Feeding in Indoor and Outdoor Environments  
*Félix Biscarri-Triviño, Alberto J. Molina-Cantero, Alejandro Gallardo-Soto, Juan Manuel Jaramillo-Pareja, Fernando Gómez-Bravo*
- 12.40-13.00    9.2    Non-Intrusive Hardware System for Sustainable Predictive Maintenance of Industrial HVAC Systems  
*Sergio Brito, Gonçalo Azinheira, Jorge Semião, Nelson Sousa*

13.00-14.30    **Lunch Break**

|             |                                                                                                                                                    |                                                                                                                                                                                                                                                                                                            |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.30-16.30 | <b>Session 10 – Sustainability issues in smart buildings, smart cities, smart districts, smart countryside – Room 1.5 &amp; Room ONE (virtual)</b> |                                                                                                                                                                                                                                                                                                            |
|             | <i>Chair: Jorge Isidoro</i>                                                                                                                        |                                                                                                                                                                                                                                                                                                            |
| 14.30-14.50 | 10.1                                                                                                                                               | Assessing Single-Sided Natural Ventilation Performance with Low-Cost IAQ Sensors: A Case Study in a Subtropical Educational Environment<br><i>Antonio Sanchez Cordero, Sergio Gómez Melgar, Jânio Monteiro, José Manuel Andújar Márquez</i>                                                                |
| 14.50-15.10 | 10.2                                                                                                                                               | Determination of the thermal transmittance (U-value) of building façades with different orientations using aerial thermography<br><i>Marta Videras, Victoria Patricia López-Cabeza, Jorge Filipe Leal Costa Semião, Sergio Gómez Melgar, Jânio Monteiro, José Manuel Andújar Márquez</i>                   |
| 15.10-15.30 | 10.3                                                                                                                                               | Image-Based Detection of Pathologies in Paving Slabs Using Computer Vision<br><i>María Inmaculada Rodríguez-García, María Gema Carrasco García, Adriana Pabón Noguera, Pedro J. S. Cardoso, Javier González-Enrique, Ignacio J. Turias Domínguez</i>                                                       |
| 15.30-15.50 | 10.4                                                                                                                                               | The Role of Digital Twins in Enhancing Outdoor Thermal Comfort: A systematic review.<br><i>Victoria Patricia López Cabeza, Marta Videras-Rodriguez, Sergio Gomez-Melgar</i>                                                                                                                                |
| 15.50-16.10 | 10.5                                                                                                                                               | Integrating Membrane Filtration and Pre-treatment Strategies for Efficient VFA Recovery in a Biorrefinery Framework<br><i>Encarnación Díaz-Domínguez, M. Eugenia Ibáñez-López, Miguel Suffo, and José L. García-Morales</i>                                                                                |
| 16.10-16.40 | <b>Coffee Break – Entrance Hall</b>                                                                                                                |                                                                                                                                                                                                                                                                                                            |
| 16.40-17.40 | <b>Session 11 - Information technology and artificial intelligence applied to sustainability – Room 1.5 &amp; Room ONE (virtual)</b>               |                                                                                                                                                                                                                                                                                                            |
|             | <i>Chair: Fernando Gómez-Bravo</i>                                                                                                                 |                                                                                                                                                                                                                                                                                                            |
| 16.40-17.00 | 11.1                                                                                                                                               | Enhancing Oil Spill Detection: A Hyperspectral Imaging Framework Using PCA and CNNs for Environmental Monitoring<br><i>María Gema Carrasco-García, María Inmaculada Rodríguez-García, Javier González-Enrique, Juan Jesús Ruíz-Aguilar, Ignacio José Turias Domínguez, Paloma Rocía Cubillas-Fernández</i> |
| 17.00-17.20 | 11.2                                                                                                                                               | Citrus Trees Anomaly Detection through Sap: An On-Device Adaptable Approach<br><i>Javier Martín-Moreno, Antonio Peregrín, Jorge Semião, Pedro Cardoso, Andre Miranda Maia</i>                                                                                                                              |
| 17.20-17.40 | 11.3                                                                                                                                               | 2D Sonar Image Reconstruction via Spiral Source-Based Techniques<br><i>Rúben Viegas, Friedrich Zabel, João Gomes, António Silva</i>                                                                                                                                                                        |
| 19.00-20.00 | <b>Bus trip from University of Algarve to Vilamoura's Golf Millenium Clubhouse</b>                                                                 |                                                                                                                                                                                                                                                                                                            |
| 20.00-23.00 | <b>Gala dinner – Vilamoura's Golf Millenium Clubhouse</b>                                                                                          |                                                                                                                                                                                                                                                                                                            |

## Friday, July 4, 2025

|             |                                                                                                                                                               |  |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 09.00-09.50 | <b>Keynote Talk 3 – Room 1.5 &amp; Room ONE (virtual)</b>                                                                                                     |  |
|             | Innovative Strategies for Agro-Industrial Biomass Valorization: Towards Sustainable Food Solutions<br><i>Arantzazu Valdés – University of Alicante, Spain</i> |  |

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|-------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 09.50-16.00 | <b>Session 12 - Poster Session Day 3– Entrance Hall &amp; Room 1.4 &amp; Room TWO (virtual)</b> |                                                                                                                                                                                                                                                                                                                          |
|             | <i>Chair: Nelson Sousa</i>                                                                      |                                                                                                                                                                                                                                                                                                                          |
| 09.50-09.55 | 12.1                                                                                            | Evaluating Thermal Shock Efficacy for Salmonella Inactivation in Carbonara: A HACCP Validation Approach<br><i>José Pestana, Tomás Vargas, Cátia Morgado, Eduardo Tondo, Carlos Brandão</i>                                                                                                                               |
| 09.55-10.00 | 12.2                                                                                            | Evaluation of Hand Hygiene Practices and Associated Risks in a Food Production Environment<br><i>Heitor Oliveira, Cátia Morgado, Carlos Brandão</i>                                                                                                                                                                      |
| 10.00-10.05 | 12.3                                                                                            | Food Safety in Bacalhau à Brás: Thermal Analysis and Risk Mitigation<br><i>Cátia Morgado, José Pestana, Eduardo Tondo, Carlos Brandão</i>                                                                                                                                                                                |
| 10.05-10.10 | 12.4                                                                                            | Rethinking aquaculture feeds: Technological innovations in sustainable protein alternatives and their influence in the amino acid profile of gilthead seabream<br><i>Nuria Jiménez-Redondo, Marcos Rodríguez-Estrada, Francisca Hernández, Elena García-García, Francisco Burló, Esther Sendra, Marina Cano-Lamadrid</i> |
| 10.10-10.15 | 12.5                                                                                            | Evaluation of commercial fish-based “purée baby foods” for further development of technological strategies to reduce the metal(oids) levels.<br><i>Ana Micaela Solivella-Poveda, Marta Rodríguez, Marina Cano-Lamadrid, Esther Sendra</i>                                                                                |
| 10.15-10.20 | 12.6                                                                                            | Enhancing fresh-cut pomegranate arils with fortified ed-ible coatings derived from fruit by-products<br><i>Lorena Martínez Zamora, Noelia Castillejo, Francisco Artés Hernández</i>                                                                                                                                      |
| 10.20-10.25 | 12.7                                                                                            | Potential health benefits and ultrasound bioactive com-pounds extraction of lettuce by-products<br><i>Lorena Martínez Zamora, Rosa Zapata, Francisco Artés Hernández</i>                                                                                                                                                 |
| 10.25-10.30 | 12.8                                                                                            | Antimicrobial Properties of Sodium Alginate Films Loaded with Laurel and Olive Leaves Extracts<br><i>Márcio Moura-Alves, José A. Silva, Alexandra Esteves, Miguel A. Cerqueira, Cristina Saraiva</i>                                                                                                                     |
| 10.30-10.35 | 12.9                                                                                            | Oxidative Stability of Chicken Meat Coated with Sodium Alginate Blended with Plant Extracts<br><i>Márcio Moura-Alves, José A. Silva, Alexandra Esteves, Miguel A. Cerqueira, Cristina Saraiva</i>                                                                                                                        |
| 10.35-10.40 | 12.10                                                                                           | From Fermentation to Sustainability: A Circular Design Perspective<br><i>Eric Haubruge</i>                                                                                                                                                                                                                               |
| 10.40-10.45 | 12.11                                                                                           | Circular Economy Approach in the Sustainable Production of Ceramic Bricks Incorporating Water Treatment Sludge from Algarve<br><i>Elisa Maria de Jesus Da Silva, Juan María Terrones-Saeta, Arturo Pérez-Mejías, Miguel Ángel Caparrós-Espinosa</i>                                                                      |
| 10.45-10.50 | 12.12                                                                                           | Sustainable Polymer Materials: The Impact of Ageing Process on Polyurethane Composites with Waste Biomass Filler<br><i>Maciej Tomaszczak, Dorota Tomczak</i>                                                                                                                                                             |
| 10.50-10.55 | 12.13                                                                                           | The Process of Accelerated Ageing of Wood-Polymer Composites and Its Effect on Materials’ Performance Properties<br><i>Dorota Tomczak, Maciej Tomaszczak</i>                                                                                                                                                             |
| 10.55-11.00 | 12.14                                                                                           | Tracing Microplastics from Agricultural Soils to Water Systems: Toward Sustainability and Circularity<br><i>Abdullah Ismail, Margarida Ribau Teixeira, Luís M. Nunes</i>                                                                                                                                                 |
| 11.00-11.05 | 12.15                                                                                           | Environmental analysis of an automotive industry innovation: thin films in interior car components                                                                                                                                                                                                                       |

*Carla L. Simoes, Armando Ferreira, Jorge Laranjeira, Ricardo Simoes*

- 11.05-11.10    12.16    Advanced coatings and reconditioning processes for more sustainable automotive industry production tools  
*Carla L. Simões, Ricardo Alexandre, Fábio Rodrigues, Jorge Laranjeira, Ricardo Simoes*

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09.50-10.30    **Session 13 (part I)- Sustainable food safety, food processing and packaging solutions – Room 1.5 & Room ONE (virtual)**

*Chair: Eduardo Esteves*

- 09.50-10.10    13.1    Valorisation of Carob in the production of a Mediterranean snack  
*Isabel Ratao, Alexandre Deodato, Íris Carvalho, Luís Mangas, Miguel Costa, Rita Cavaco, Abílio Guerreiro*
- 10.10-10.30    13.2    Algarve wine production sustainability and climate changes  
*Ludovina Galego, Rita Lança, Sara Silva, Eduardo Esteves*

10.30-11.00    **Coffee Break – Entrance Hall**

11.00-11.40    **Session 13 (part II) - Sustainable food safety, food processing and packaging solutions – Room 1.5 & Room ONE (virtual)**

*Chair: Rui Cruz*

- 11.00-11.20    13.3    Sensory attributes Determinants of Consumer Acceptance of Churra Algarvia Sheep Meat “Churritas”  
*Manuel Serra, Jorge Pereira, Carlos Miguel Afonso*
- 11.20-11.40    13.4    Gravading of mackerel (Scomber sp.): physicochemical and microbiological changes during refrigerated storage  
*Eduardo Esteves, Mujeeb Adetokunbo, Mónica Traquino, Jaime Aníbal*

11.40-13.00    **Session 14 - Sustainable optimization, sustainable development and circular economy – Room 1.5 & Room ONE (virtual)**

*Chair: Nuno Ratola*

- 11.40-12.00    14.1    Influence of Urban Water Bodies on the Prevalence of Dengue in the Algarve, South Portugal  
*Jaime Anibal, Cristina Ferradeira, Eduardo Esteves, Gonçalo Prates, Mário Farinhó, Anabela Cordeiro, Manuela Moreira da Silva*
- 12.00-12.20    14.2    Eco-industry in Brazil: Sector Configuration Based on an Alternative Methodological Approach  
*Stela Luiza de Mattos Ansanelli, Gabriel Okuma Medeiros dos Santos, Danielle Cheung Jordão Piglialarmi, Guilherme da Silva, Clauciana Schmidt Bueno de Moraes*
- 12.20-12.40    14.3    Exploring Synergies and Trade-Offs of Livestock in the Environmental Sustainable Development Goals: A Panel Analysis  
*Luana Beatriz Martins Valero Viana, Andreas Pyka, Diogo Ferraz*
- 12.40-13.00    14.4    Reducing CO2 Emissions by Optimizing Gearbox Oil Replacement in Wind Turbines  
*Cláudia Sequeira, Manuela Moreira da Silva, André Pacheco, Vânia Serrão Sousa*

13.00-14.30    **Lunch Break**

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| 14.30-15.30 | <b>Session 15 – Sustainable energy generation and management – Room 1.5 &amp; Room ONE (virtual)</b> |                                                                                                                                                                                                                                                          |
|             | <i>Chair: Nelson Sousa</i>                                                                           |                                                                                                                                                                                                                                                          |
| 14.30-14.50 | 15.1                                                                                                 | Energy Conservation Messages and Their Impact on Occupant-related Energy Use<br><i>Laura Almeida, Matt Stevens, Ali Al-Ashwal</i>                                                                                                                        |
| 14.50-15.10 | 15.2                                                                                                 | Sustainable Solvents for Microalgal Lipid Extraction: Evaluating Efficiency and Biomass Processing Effects<br><i>Rodrigo Borges, Valdemira Afonso, Brígida Rodrigues, Isa Duarte, Raúl Barros, Sara Raposo</i>                                           |
| 15.10-15.30 | 15.3                                                                                                 | ATETool – Simulation-based tool for the conceptualisation of renewable fuel-based Combined Heat and Power (CHP) systems<br><i>Miguel Castro Oliveira, Isaiás L.R. Gomes, Carla F. Martins, Pedro Matos, Raul Bonito, Francisco Machado, Lucas Marcon</i> |
| 15.30-15.50 | <b>Closing session – Room 1.5 &amp; Room ONE (virtual)</b>                                           |                                                                                                                                                                                                                                                          |
| 18:00-20.00 | <b>Conference Party – Restaurant “Tertúlia Algarvia” – Faro downtown</b>                             |                                                                                                                                                                                                                                                          |
| 18:00-00.00 | <b>Faro Rooftop Festival “Açoteia” – Faro downtown</b>                                               |                                                                                                                                                                                                                                                          |