

LEX26

4th Luso-Extremadurenses Congress on Science and Technology

DETAILED PROGRAM



UNIVERSIDADE
DE ÉVORA



Évora
6-8 july 2026

4th Luso-Extremaduran Congress on Science and Technology

University of Évora, 6–8 July 2026

1. Earth System, Environment and Sustainability

- EES - 01 - Water Resources, Hydrology & Aquatic Ecosystems
- EES - 02 - Agriculture, Forestry & Ecosystem Management
- EES - 03 - Land Use, Biodiversity & Conservation Planning
- EES - 04 - Earth Sciences, Geology & Environmental Monitoring
- EES - 05 - Sustainable Agriculture, Irrigation & Environmental Impacts
- EES - 06 - Earth Sciences, Geology & Environmental Monitoring

2. Energy, Materials and Engineering

- EME - 01 - Renewable Energy Systems, Hydrogen & Energy Optimization
- EME - 02 - Water Treatment, Environmental Remediation & Sustainable Materials
- EME - 03 - Advanced Materials, Characterization & Industrial Applications
- EME - 04 - Advanced Topics in Environmental Science and Sustainable Engineering

3. AI, Data Science and Mathematical Modelling

- ADM - 01 - NLP, LLMs, Trustworthy & Applied AI
- ADM - 02 - Optimization, Stochastic Systems & Experimental Modeling
- ADM - 03 - Advanced Topics in Analysis, Geometry, and Mathematical Structures
- ADM - 04 - IoT, Systems Engineering & Deployment Architectures
- ADM - 05 - Earth Systems, Remote Sensing & Complex Natural Phenomena
- ADM - 06 - Complex Systems, AI Ethics & Cellular/Spatial Modeling

4. Health, Life Sciences, Society and Innovation

- HLS - 01 - Life Sciences, Molecular Biology & Biomedicine
- HLS - 02 - Social Sciences, Education & Environmental/Spatial Studies
- HLS - 03 - Food, Spectroscopy, Agriculture & Analytical Methods

6 of July of 2026

Program

09:00-09:30	Registration					
09:30-10:00	Opening Session					
10:00-11:00	Invited Speaker: (Auditorium-CES)	Rui Salgado (Univ. de Évora)	Chair: Mourad Bezzeghoud		Fire–Atmosphere Modeling: Some Findings and Current Challenges Based on Iberian Case Studies	
11:00-11:30	Welcome Drink					
	Amphitheater 131	CES 110	CES 115	CES 119	CES 124	CES 272
11:30-12:00	ADM - 01	HLS - 02	HLS - 01	EME - 01	EES - 01	EES - 02
12:00-12:30	ADM - 01	HLS - 02	HLS - 01	EME - 01	EES - 01	EES - 02
12:30-13:00	ADM - 01	HLS - 02	HLS - 01	EME - 01	EES - 01	EES - 02
13:00-15:30	Lunch					
	Amphitheater 131	CES 110	CES 115	CES 119	CES 124	CES 272
15:30-16:00	ADM - 01	ADM - 02	HLS - 01	EME - 01	EES - 01	EES - 02
16:00-16:30	ADM - 01	ADM - 02	HLS - 01	EME - 01	EES - 01	EES - 02
16:30-17:00	ADM - 01	ADM - 02	HLS - 01	EME - 01	EES - 01	EES - 02
17:00-17:30	ADM - 01	ADM - 02	HLS - 01	EME - 01	EES - 01	EES - 02
17:30-18:00	Coffee-Break + Poster Session					
18:00-18:30	Poster Session					

1. Earth System, Environment and Sustainability

- EES - 01 - Water Resources, Hydrology & Aquatic Ecosystems
- EES - 02 - Agriculture, Forestry & Ecosystem Management

2. Energy, Materials and Engineering

- EME - 01 - Renewable Energy Systems, Hydrogen & Energy Optimization

3. AI, Data Science and Mathematical Modelling

- ADM - 01 - NLP, LLMs, Trustworthy & Applied AI
- ADM - 02 - Optimization, Stochastic Systems & Experimental Modeling

4. Health, Life Sciences, Society and Innovation

- HLS - 01 - Life Sciences, Molecular Biology & Biomedicine
- HLS - 02 - Social Sciences, Education & Environmental/Spatial Studies

Parallel Sessions

ADM - 01 – AI, Data Science and Mathematical Modelling (NLP, LLMs, Trustworthy & Applied AI)

6 July 2026 | 11:30–17:30 | Amphitheater 131 | Chair: **Teresa Gonçalves & Luis Rato**

Time	Talk ID	Title	Speaker
11:00 - 11:30	Welcome Drink		
11:30 - 12:00	ADM - 01 - 01	From Specification to Deployment: A Declarative Approach for IoT Systems	João Cardoso
12:00 - 12:30	ADM - 01 - 02	AiBERTa - An open-weight general purpose small Language Model for the Portuguese Language	Nuno Miquelina
12:30 - 13:00	ADM - 01 - 03	Machine Learning Models for Smishing Detection: From Theoretical Foundation to Experimental Evaluation	Matilde Campelo
13:00 - 15:30	Lunch		
15:30 - 16:00	ADM - 01 - 04	RAG- Based Climate Claim Verification: A Comparative Evaluation of Retrieval Strategies	Heeraja Vechalapu
16:00 - 16:30	ADM - 01 - 05	An Explainable and Actionable AI Framework for University Dropout Prevention	Daniel Santos
16:30 - 17:00	ADM - 01 - 06	Blockchain Hate Logger: Immutable Logging of Detected Hate Speech Using DeHateBERT	Saad Ahmed Jamal
17:00 - 17:30	ADM - 01 - 07	Design and Development of an End-to-End MLOps Infrastructure for a Portuguese Large Language Model	Miguel Silvério
17:30 - 18:30	Coffee-Break + Poster Session		

ADM - 02 – AI, Data Science and Mathematical Modelling (Optimization, Stochastic Systems & Experimental Modeling)

6 July 2026 | 15:30–17:30 | Sala CES 110 | Chair: **Dulce Gomes**

Talk ID	Time	Title	Speaker
13:00 - 15:30	Lunch		
15:30 - 16:00	ADM - 02 - 01	Stochastic growth models and profit optimization in cattle raising	Carlos A. Braumann
16:00 - 16:30	ADM - 02 - 02	Stochastic deterioration modeling and proactive resilience in supply chain management	Lucía Bautista
16:30 - 17:00	ADM - 02 - 03	Grouping of Factor Levels in Experimental Designs: An Exact Randomisation Test	Célia Nunes
17:00 - 17:30	ADM - 02 - 04	SenForFire: A Wildfire Monitoring and Early Warning Platform Based on Wireless Sensor Networks and Environmental Data Integration	João Cardoso
17:30 - 18:30	Coffee-Break + Poster Session		

HLS - 01 – Health, Life Sciences, Society and Innovation (Life Sciences, Molecular Biology & Biomedicine)

6 July 2026 | 11:30–17:30 | Sala CES 115 | Chair: **Ana Teresa Caldeira & Demetrio P. Civantos**

Time	Talk ID	Title	Speaker
11:00 - 11:30	Welcome Drink		
11:30 - 12:00	HLS - 01 - 01	Cardiac safety of phenolic compounds: insights from Santolina chamaecyparissus aqueous extract supplementation in a rat model of mammary carcinogenesis	Ana I. Faustino-Rocha
12:00 - 12:30	HLS - 01 - 02	Aryl hydrocarbon receptor is involved in DNA damage repair after liver injury	Beatriz Marín-Díaz
12:30 - 13:00	HLS - 01 - 03	Synthesis and biological evaluation of a novel Pt(II) complex with primary amine ligand against human cancer cell models	S. Estirado
13:00 - 15:30	Lunch		
15:30 - 16:00	HLS - 01 - 04	Unraveling new functions of the Ca ²⁺ sensor STIM1 in cell signaling	Irene Sanchez-Lopez
16:00 - 16:30	HLS - 01 - 05	Synthesis of new organic compounds with potential biological activity via multicomponent reactions - Ugi-4CR	Raquel Eustáquio
16:30 - 17:00	HLS - 01 - 06	Truffle aroma : A Genomic and Chemical Approach	Celeste Santos-Silva
17:00 - 17:30	HLS - 01 - 07	Impact of Biostimulant Application on Olive Tree Physiology	M.I. Gafanhoto
17:30 - 18:30	Coffee-Break + Poster Session		

HLS - 02 – Health, Life Sciences, Society and Innovation (Social Sciences, Education & Environmental/Spatial Studies)

6 July 2026 | 11:30–13:00 | Sala CES 110 | Chair: **André Carmo**

Time	Talk ID	Title	Speaker
11:00 - 11:30	Welcome Drink		
11:30 - 12:00	HLS - 02 - 01	Hooves Across Disciplines: The Horse as a Nexus for Multidisciplinary Research from Protohistory in Southwestern Iberia	María Martín Cuervo
12:00 - 12:30	HLS - 02 - 02	Public open spaces in the city of Évora: opportunities and difficulties associated with the offer for the practice of physical activity - uses and perceptions	Cátia Catronga
12:30 - 13:00	HLS - 02 - 03	Geography Teaching in Initial Teacher Education: Student Perceptions and the Role of Active Methodologies	María Fernanda Giles-Pérez
13:00 - 15:30	Lunch		

EME - 01 – Energy, Materials and Engineering (Renewable Energy Systems, Hydrogen & Energy Optimization)

6 July 2026 | 11:30–17:30 | Sala CES 119 | Chair: **Mouhaydine Tlemçani & Oumaima Mesbahi**

Time	Talk ID	Title	Speaker
11:00 - 11:30	Welcome Drink		
11:30 - 12:00	EME - 01 - 01	Preliminary Numerical Simulations of a Single-Medium Molten-Salt Thermocline Tank	Júnior Mané
12:00 - 12:30	EME - 01 - 02	A Data-Driven Framework for Estimating Energy Flexibility in Renewable Energy Integrated Microgrids	Md Suruj Ali
12:30 - 13:00	EME - 01 - 03	Feasibility of Repurposing Trans-Mediterranean Natural Gas Pipelines for Green Hydrogen Transport: A Techno – Economic Assessment of the Morocco – Europe Corridor	Aniekan Daniel Isanga
13:00 - 15:30	Lunch		
15:30 - 16:00	EME - 01 - 04	Techno-economic analysis for the futuristic Portuguese hydrogen production from different renewable resources and technologies: A case study of Sines city, Portugal	Mohammed Attiaoui
16:00 - 16:30	EME - 01 - 05	Modeling and performance analysis of a solar HVAC system with an absorption chiller	Maria Fernandes
16:30 - 17:00	EME - 01 - 06	Optimization Techniques for Enhancing Wind Energy System Performance	Oumaima Mesbahi
17:00 - 17:30	EME - 01 - 07	Review of different types of Solar Cooling system for Photovoltaic Panel	Taiwo Olatowale Olarewaju
17:30 - 18:30	Coffee-Break + Poster Session		

EES - 01 – Earth System, Environment and Sustainability (Water Resources, Hydrology & Aquatic Ecosystems)

6 July 2026 | 11:30–17:30 | Sala CES 124 | Chair: **Souhila Chabane & José Gómez**

Time	Talk ID	Title	Speaker
11:00 - 11:30	Welcome Drink		
11:30 - 12:00	EES - 01 - 01	Decoding 25 years of water quality patterns across the Guadiana River Basin: a transnational look on landscape and hydrological drivers	A. Alexandre
12:00 - 12:30	EES - 01 - 02	From empirical water quality evidence to process-based prediction: a near-global effort using the OpenWQ system	D. Costa
12:30 - 13:00	EES - 01 - 03	Characterization of Toutalga basin to explore the slow hydrology concept for water retention	Miguel Potes
13:00 - 15:30	Lunch		
15:30 - 16:00	EES - 01 - 04	Climate Resilience by Design: A Framework for Scalable Restoration of Temporary Rivers in Mediterranean Agroecosystems	Gabriela Gomes
16:00 - 16:30	EES - 01 - 05	Migration patterns of Atlantic salmon (<i>Salmo salar</i> L.) smolts in the southern limit of the species global distribution	Natalia Zegarra
16:30 - 17:00	EES - 01 - 06	A trophic framework for guiding protection and restoration prioritisation	Pamela González-del-Piego
17:00 - 17:30	EES - 01 - 07	Sewage sludge as a raw material for adsorbents in water treatment: a sustainable approach	Marta Adame-Pereira
17:30 - 18:30	Coffee-Break + Poster Session		

EES - 02 – Earth System, Environment and Sustainability (Agriculture, Forestry & Ecosystem Management)

6 July 2026 | 11:30–17:30 | Sala CES 272 | Chair: **Sofia Capelos & Jacinto Velarde**

Time	Talk ID	Title	Speaker
11:00 - 11:30	Welcome Drink		
11:30 - 12:00	EES - 02 - 01	Intensive monitoring plots of oak species as tool for development of structural functional growth models	Nuno de Almeida Ribeiro
12:00 - 12:30	EES - 02 - 02	A Viral Vector Platform for Antimicrobial Peptide Delivery in Olive Trees: a Sustainable Strategy Against Bacterial and Fungal Pathogens.	M. Basaloco
12:30 - 13:00	EES - 02 - 03	Assessing NDWI as a proxy for vegetative growth and biomass parameters in olive orchards under contrasting water regimes	Welida Tomazoni Keller
13:00 - 15:30	Lunch		
15:30 - 16:00	EES - 02 - 04	Temporal Dynamics of Growth and Reproductive Investment in the Endemic Relict <i>Juniperus navicularis</i> (Cupressaceae)	Diogo Moreira-Sá
16:00 - 16:30	EES - 02 - 05	Crop-Specific Responses to PGPB-Based Seed Biostimulants: Effects on Seed Germination and Plant Development	Lénia Rodrigues
16:30 - 17:00	EES - 02 - 06	Phytoremediation Potential of <i>Dittrichia viscosa</i>	Francisco Luis Espinosa-Vellarino
17:00 - 17:30	EES - 02 - 07	Sustainable Irrigation Management in Rice: Effects on Grain Quality	David Peña
17:30 - 18:30	Coffee-Break + Poster Session		

Poster Session

Poster Session 01 – Biodiversity, Agroecosystems and Environmental Sustainability

6 July 2026 | 17:30–18:30 | In the small cloisters (Next to the amphitheater 131-CES)

Poster ID	Title	Presenting author
P - 01 -01	HEMPVALUE Project: Hemp as a Driver of Innovation and Development in EUROACE	Ana Isabel Cordeiro
P - 01 -02	Portuguese Autochthonous Olive Germplasm: A Strategic Resource for Resilient Cultivation under Biotic Stress	Catarina Manuelito
P - 01 -03	High-precision equipment for long-term monitoring of permanent forest plots	Ana Poeiras
P - 01 -04	Characterization of ecodormancy release and early reproductive development in olive cultivars	Catarina Manuelito
P - 01 -05	Antiparasitic Contaminants Assessment in Wastewater: Applicability of Earthworm Bioassays	Elsa Rodríguez Somoza
P - 01 -06	Biomarkers in Ecotoxicology: oxidative damage and antioxidant response in liver and kidney of <i>Hemorrhhois hippocrepis</i>	Ángel Portillo-Moreno
P - 01 -07	Landscape structure effects on <i>Drosophila suzukii</i> population on cherry in Northern Extremadura	Enric Meseguer Cervera
P - 01 -08	Effects of landscape composition on the abundance and diversity of arthropods in natural and agricultural habitats	Laura Demetrio
P - 01 -09	Functional Diversity of Arthropods under Eco-scheme Management in Cherry Agroecosystems	Laura Mateos Garriga
P - 01 -10	Remote sensing applied to wetland management: quantification of the impact of <i>Nymphaea mexicana</i> for the management of the SPA Azud de Badajoz	Jorge López Cordero
P - 01 -11	Hidden microbiomes of the Selvagens caves reveal subsurface-specific microbial diversity	Pedro Nolasco-Jiménez
P - 01 -12	Isolation and evaluation of endophytic fungi against <i>Fusarium avenaceum</i> in <i>Lolium perenne</i> grown as hydroponic forage	Carlos García-Latorre
P - 01 -13	Do photovoltaic installations influence the biodiversity of epigeic arthropods?	Gregorio García
P - 01 -14	Degradation of microalgae in surface waters of reservoirs by ozone	Jesús Beltrán-Heredia
P - 01 -15	Seasonal evaluation of natural vegetation recovery following the Baiona wildfire using Sentinel-2A spectral indices	Priscilla Assumpção
P - 01 -16	Chemical characterization and ecotoxicological evaluation of <i>Lippia alba</i> essential oil: A baseline for sustainable botanical insecticides.	Rosana Cavalcante
P - 01 -17	Organic Fertilization Strategies for the Improvement of Post-Harvest Quality Parameters in Melon Fruit	Noemí Ortiz-Liéban
P - 01 -18	Profile of urban allergens through the analysis of airborne eDNA – A Pilot Study	Rita Teixeira
P - 01 -19	A fast molecular method to field diagnose anthracnose and moniliosis in almond plantations	André Albuquerque
P - 01 -20	Presence of microplastics in terrestrial ecosystems and their apex predators as bioindicators	David Fernández-Casado
P - 01 -21	Chemical profile and ecosafety assessment of the essential oil from the fruit of <i>Schinus terebinthifolius</i>	Camila Pereira
P - 01 -22	Phytochemical Diversity and Antioxidant Potential of <i>Lavandula</i> Species from Alentejo	Sílvia Macedo Arantes
P - 01 -23	Sensor Placement Strategy to Maximize Coverage and Early Detection of Forest Fires	Milton Gussule
P - 01 -24	Internet of Things (IoT) and Artificial Intelligence (AI) for sustainable cheese ripening management in traditional cheese production	Carlos Almeida

7 of July of 2026

Program

08:30-09:00	Registration					
09:00-10:00	Invited Speaker: (Auditorium-CES)	Ashwin Vaidya (Montclair SU)	Chair: Fernando Carapau		Self Organization in Complex Learning Environments	
10:00-10:30	Coffee-Break					
	Amphitheater 131	CES 110	CES 115	CES 119	CES 124	CES 272
10:30-11:00	ADM - 05	ADM - 04	ADM - 03	EME - 02	EES - 03	EES - 04
11:00-11:30	ADM - 05	ADM - 04	ADM - 03	EME - 02	EES - 03	EES - 04
11:30-12:00	ADM - 05	ADM - 04	ADM - 03	EME - 02	EES - 03	EES - 04
12:00-14:30	Lunch					
14:30-15:30	Invited Speaker: (Auditorium-CES)	M. Victoria Gil (Univ. Extremadura)	Chair: José C. Fernandez		Sustainable Strategies to Modulate Food Allergenicity: From Polyphenols to Nano-Biointerfaces	
	Amphitheater 131	CES 110	CES 115	CES 119	CES 124	CES 272
15:30-16:00	ADM - 05	ADM - 04	ADM - 03	EME - 02	EES - 03	EES - 04
16:00-16:30	ADM - 05	ADM - 04	ADM - 03	EME - 02	EES - 03	EES - 04
16:30-17:00	ADM - 05	ADM - 04	ADM - 03	EME - 02	EES - 03	EES - 04
17:00-17:30	ADM - 05	ADM - 04	ADM - 03	EME - 02	EES - 03	EES - 04
17:30-18:00	Coffee-Break + Poster Session					
18:00-18:30	Poster Session					
19:30-20:00	Musical Moment					
20:00	Conference Dinner					

1. Earth System, Environment and Sustainability

- EES - 03 - Land Use, Biodiversity & Conservation Planning
- EES - 04 - Earth Sciences, Geology & Environmental Monitoring

2. Energy, Materials and Engineering

- EME - 02 - Water Treatment, Environmental Remediation & Sustainable Materials

3. AI, Data Science and Mathematical Modelling

- ADM - 03 - Advanced Topics in Analysis, Geometry, and Mathematical Structures
- ADM - 04 - IoT, Systems Engineering & Deployment Architectures
- ADM - 05 - Earth Systems, Remote Sensing & Complex Natural Phenomena

Parallel Sessions

ADM - 03 – AI, Data Science and Mathematical Modelling (Advanced Topics in Analysis, Geometry, and Mathematical Structures)

7 July 2026 | 10:30–17:30 | Sala CES 115 | Chair: **João Dias & Javier Cabello Sánchez**

Time	Talk ID	Title	Speaker
10:00 - 10:30	Coffee-Break		
10:30 - 11:00	ADM - 03 - 01	A proof of the Riemann-Roch theorem as a formal consequence of duality	J. Navarro
11:00 - 11:30	ADM - 03 - 02	Upper bounds for the length of reductions in the atomic polymorphic calculus	Bruno Dinis
11:30 - 12:00	ADM - 03 - 03	Uniqueness of the torsion–curvature pair	Raúl Martínez-Bohórquez
12:00 - 14:30	Lunch		
14:30 - 15:30	Invited Speaker		
15:30 - 16:00	ADM - 03 - 04	Ulam type Stabilities for a Higher-Order Riemann-Liouville Fractional Boundary Value Problem	A. M. Simões
16:00 - 16:30	ADM - 03 - 05	Symmetry and antisymmetry in : Bilinear Morghulis	Ricardo García
16:30 - 17:00	ADM - 03 - 06	Existence of scalar minimizers for nonconvex single Integrals with relaxed lagrangian at zero velocity having no singleton local minimum points	Clara Carlota
17:00 - 17:30	ADM - 03 - 07	Canard cascades in forced singular perturbations	Imme van den Berg
17:30 - 18:30	Coffee-Break + Poster Session		

ADM - 04 – AI, Data Science and Mathematical Modelling (IoT, Systems Engineering & Deployment Architectures)

7 July 2026 | 10:30–17:30 | Sala CES 110 | Chair: **Victor Nogueiras & José Saías**

Time	Talk ID	Title	Speaker
10:00 - 10:30	Coffee-Break		
10:30 - 11:00	ADM - 04 - 01	From Specification to Deployment: An Interpreter for IoT	André Moleirinho
11:00 - 11:30	ADM - 04 - 02	ICD-10 Classification with Transformer Models in the Portuguese Language: Hierarchical, Semantic, and Clinical Evaluation	Pedro Ferreira
11:30 - 12:00	ADM - 04 - 03	Driver Fatigue Detection using Computer Vision and Deep Learning	Rui Ruivo
12:00 - 14:30	Lunch		
14:30 - 15:30	Invited Speaker		
15:30 - 16:00	ADM - 04 - 04	Discrete Dynamical Systems Analysis with Python	Leonardo Andrade
16:00 - 16:30	ADM - 04 - 05	MHDISMv4-CT-NEI: A Julia-based Constrained-Transport MHD Code with Block-Structured AMR for Large-Scale Turbulent Plasma Simulations	Miguel A. de Avillez
16:30 - 17:00	ADM - 04 - 06	A Tiling and Aggregation Strategy for Defect Classification in Limestone Imagery	Marco Tereso
17:00 - 17:30	ADM - 04 - 07	Automatic Differentiation for Cost Function Optimization in Maintenance Problems	Alberto Arias
17:30 - 18:30	Coffee-Break + Poster Session		

ADM - 05 – AI, Data Science and Mathematical Modelling (Earth Systems, Remote Sensing & Complex Natural Phenomena)

7 July 2026 | 10:30–17:30 | Amphitheater 131 | Chair: **Carlos Ramos & Hugo Silva**

Time	Talk ID	Title	Speaker
10:00 - 10:30	Coffee-Break		
10:30 - 11:00	ADM - 05 - 01	Bayesian Additive Regression Trees (BART) Applied to Rare Species Distribution Modelling: <i>Juniperus navicularis</i> as a Case Study	Luís Portugal-Ferreira
11:00 - 11:30	ADM - 05 - 02	Multi-Source Approach for Subsurface Archaeological Detection and 3D Reconstruction Using Non-Destructive Testing, Remote Sensing, and Artificial Intelligence	Urmila Hasnat
11:30 - 12:00	ADM - 05 - 03	Cellular automata for urban traffic simulation – Évora case study	José Ramos
12:00 - 14:30	Lunch		
14:30 - 15:30	Invited Speaker		
15:30 - 16:00	ADM - 05 - 04	Modeling similar fracture patterns using Cellular Automata	Nada El Bouziani
16:00 - 16:30	ADM - 05 - 05	Mapping the invisible: A new method to find hidden earthquake sources	Russell Alpizar-Jara
16:30 - 17:00	ADM - 05 - 06	The Intersection of Ethical Concepts and Machine Intelligence: A Literature Review	Saad Ahmed Jamal
17:00 - 17:30	ADM - 05 - 07	A Multi-Paradigm Explainable AI Pipeline for Diabetic Retinopathy Grading	Jorge Lourenço
17:30 - 18:30	Coffee-Break + Poster Session		

EME - 02 – Energy, Materials and Engineering (Water Treatment, Environmental Remediation & Sustainable Materials)

7 July 2026 | 10:30–17:30 | Sala CES 119 | Chair: **Vanda Salgueiro & José Cabezas Fernandez**

Time	Talk ID	Title	Speaker
10:00 - 10:30	Coffee-Break		
10:30 - 11:00	EME - 02 - 01	Development of g-C ₃ N ₄ -based photocatalytic membranes for the removal of emerging contaminants in municipal wastewater effluents	Adrián Bocho-Roas
11:00 - 11:30	EME - 02 - 02	Magnetic biochar from Amazonian biomass wastes as an efficient adsorbent material	Douglas Luiz Mazur
11:30 - 12:00	EME - 02 - 03	Magnetic ionic exchange resins (MIEX®): A feasible strategy to reduce DBPs formation in drinking water	Juan C. Aldana
12:00 - 14:30	Lunch		
14:30 - 15:30	Invited Speaker		
15:30 - 16:00	EME - 02 - 04	Citalopram degradation in water by ozonization: kinetics and transformation by-products	Lucía González-Molina
16:00 - 16:30	EME - 02 - 05	Application of Microbubble-Assisted Ozonation to Enhance the Treatment of Wastewater from the Olive Oil Industry	Miguel A. Jiménez-López
16:30 - 17:00	EME - 02 - 06	Extracting High Purity Nano-silica from Oil Shale: Valorizing a Neglected Natural Resource	Anas krime
17:00 - 17:30	EME - 02 - 07	Review of thermal performance studies on solar hot box cookers with different coating materials	Raja Tayyab Afraz
17:30 - 18:30	Coffee-Break + Poster Session		

EES - 03 – Earth System, Environment and Sustainability (Land Use, Biodiversity & Conservation Planning)

7 July 2026 | 10:30–17:30 | Sala CES 124 | Chair: José Martin & Carlos Pinto Gomes

Time	Talk ID	Title	Speaker
10:00 - 10:30	Coffee-Break		
10:30 - 11:00	EES - 03 - 01	Characterization of Land Use in Natura 2000 Protected Areas in Extremadura (Spain)	José Manuel Naranjo Gómez
11:00 - 11:30	EES - 03 - 02	Evolutionary Analysis of Land Use Dynamics in Natura 2000 Areas of Extremadura (Spain)	Jesús Valle Furtado
11:30 - 12:00	EES - 03 - 03	Habitat Mapping under the Habitats Directive: Cartographic Refinement of habitats associated with the dehesa (Extremadura)	Renato Ornelas
12:00 - 14:30	Lunch		
14:30 - 15:30	Invited Speaker		
15:30 - 16:00	EES - 03 - 04	Planning and Management of the Natura 2000 Network in Extremadura	Francisco Luís Espinosa-Vellarino
16:00 - 16:30	EES - 03 - 05	Spatio-temporal dynamics of <i>Gentiana boryi</i> : Modeling potential distribution from the Last Glacial Maximum to the present	Jorge López Cordero
16:30 - 17:00	EES - 03 - 06	Allotment gardens as urban ecosystems: perceptions, services and environmental benefits in Évora	Rute Sousa Matos
17:00 - 17:30	EES - 03 - 07	Review of Solar Drying in the Food Industry and Advanced Solar Drying Techniques for Sustainable Food Preservation	Muhammad Haseeb
17:30 - 18:30	Coffee-Break + Poster Session		

EES - 04 – Earth System, Environment and Sustainability (Earth Sciences, Geology & Environmental Monitoring)

7 July 2026 | 10:30–17:30 | Sala CES 272 | Chair: Célia Nunes & Francisco Borreguero

Time	Talk ID	Title	Speaker
10:00 - 10:30	Coffee-Break		
10:30 - 11:00	EES - 04 - 01	Earth / Moon Gravitational System – Motion of Elastic Fluids Including Geological Bodies: the contribution of Laplace	José Carrilho Lopes
11:00 - 11:30	EES - 04 - 02	Mineralogical and Biosignature Characterization of the Cabeço de Vide Serpentinization System: An Analog for Mars exploration	Rafael Rebelo
11:30 - 12:00	EES - 04 - 03	From Surface to Depth: Imaging the Earth's Interior Using Active and Passive Seismic Tomography applied to the Arraiolos and Lousal case studies (Alentejo, Portugal)	Ines Hamak
12:00 - 14:30	Lunch		
14:30 - 15:30	Invited Speaker		
15:30 - 16:00	EES - 04 - 04	Geology without borders: a review of the carbonate record in the Iberian Massif hinterland	Noel Moreira
16:00 - 16:30	EES - 04 - 05	Environmental Assessment of PM ₁₀ -Bound Trace Metals and Human Health Risks in the Évora	Mariana Marques
16:30 - 17:00	EES - 04 - 06	A Comprehensive Assessment of Environmental Risk and Trophic Transfer of Lead in the Vicinity of the Abandoned “Las Musas” Mine (Azuaga, Spain): From soils to food safety	Gala Fernández J.A.
17:00 - 17:30	EES - 04 - 07	Modelling atmospheric dust impacts on direct normal irradiance under contrasting dust regimes	Afroz Jouzdani
17:30 - 18:30	Coffee-Break + Poster Session		

Poster Session

Poster Session 02 – Engineering, Computing, Mathematics, Physics and Heritage

7 July 2026 | 17:30–18:30 | In the small cloisters (Next to the amphitheater 131-CES)

Poster ID	Title	Presenting Author
P - 02 - 01	Symbolic Dynamics for Time Series and Complex Motion	Carlos Correia Ramos
P - 02 - 02	Microbiome profiling of a traditional dry-fermented sausage using different pork raw materials	Sara Conceição
P - 02 - 03	Evaluation of Solar Cycle 25 Amplitude Prediction Capability through Early Growth	Sarah González Abadito
P - 02 - 04	How New Space Technologies Can Support the Development of Emerging Regions: The Potential of Alentejo	Paula Cristiane Pinto Mesquita Pardal
P - 02 - 05	Evolutionary Dynamics and Systematic Singular Mutations in Cellular Automata Families	Laura Sousa
P - 02 - 06	Exploring the efficiency of CuO 3D-Structures Fabricated by Direct Ink Writing for the Photocatalytic Degradation of Rhodamine B	Ana Martínez-Udaondo
P - 02 - 07	Bioactive metabolites from bacteria and yeasts as eco-friendly tools for cultural heritage protection	Patrícia Gatinho
P - 02 - 08	A Full-Cycle Deep Learning Pipeline for Breast Cancer Detection and Molecular Subtype Classification using MRI	E. N. Fonseca
P - 02 - 09	Stairway to Gold: The stepped thermal evolution of Casas Novas deposit (Montemor-o-Novo, Portugal)	Diogo São Pedro
P - 02 - 10	Wormian Bones in Southern Portugal: Evidence from Identified and Archaeological Skeletal Collections	Ana Carolina Santos
P - 02 - 11	Hybrid AI Framework for Software Requirements Validation	António Soares Martins
P - 02 - 12	Explicit Representations for a Class of Two-Dimensional Nonlinear Difference Systems	Ana Catarina Carapito
P - 02 - 13	Electrical Impedance Spectroscopy through Deep Learning	Fernando M. Janeiro
P - 02 - 14	Machine Learning Approaches for Wildfire Prediction in Portugal	Hassin M. Ashfaque
P - 02 - 15	Sustainable Adsorbents from Biomass for the Removal of Crystal Violet	Isabel Pestana da Paixão Cansado
P - 02 - 16	Open-Source LoRaWAN Soil Monitoring and Analytics for Precision Agriculture in the EUROACE Region	Deepali Nehere
P - 02 - 17	Clustering Dissimilarity as a Diagnostic for Structural Changes in Multivariate Time Series: An Application to Tuberculosis Incidence and Mortality Stratified by Sex in Brazil (2012–2024)	Dulce Gomes
P - 02 - 18	Blind predictor transformations in linear and quantile models: a Monte Carlo comparison study	Dulce Pereira
P - 02 - 19	Canary Upwelling Dynamics and Drought Variability in Cape Verde: The Saharan Aerosol Blocking Mechanism via CHIRPS and AERONET	João Spencer
P - 02 - 20	Mobility of Fluorinated Surfactants in Fluorocarbon Media for Liquid Ventilation: A Combined Experimental and Molecular Dynamics Study	Margarida S. T. A. Boucinha
P - 02 - 21	An overview of Determinants and Permanents of Matrices: recent developments and different perspectives	Ilda Inácio
P - 02 - 22	Characterization of Photovoltaic Solar Panels using internal parameters of electrical equivalent model	Pedro Rebocho
P - 02 - 23	Dynamic modeling of porous volumetric receivers in concentrated solar thermal systems based on reduced order models	António Andrade
P - 02 - 24	Multisensor electronic classification of defects in packaged Manzanilla table olives	Ramiro Sánchez
P - 02 - 25	Electronic olfaction for preliminary detection of cala defect in Iberian dry-cured ham	Ramiro Sánchez

8 of July of 2026

Program

08:00-08:30	Registration					
08:30-09:30	Invited Speaker: (Auditorium-CES)	Julián Mora Aliseda (Univ. Extremadura)	Chair: Fernando Álvarez	Dysfunctions between Territorial Dynamics and Environmental Regulations		
	Amphitheater 131	CES 115	CES 119	CES 124	CES 272	CES 110
09:30-10:00	ADM - 06	HLS - 03	EME - 03	EES - 05	EES - 06	EME - 04
10:00-10:30	ADM - 06	HLS - 03	EME - 03	EES - 05	EES - 06	EME - 04
10:30-11:00	Coffee-Break + Poster Session					
11:00-11:30	Poster Session					
	Amphitheater 131	CES 115	CES 119	CES 124	CES 272	CES 110
11:30-12:00	ADM - 06	HLS - 03	EME - 03	EES - 05	EES - 06	EME - 04
12:00-12:30	ADM - 06	HLS - 03	EME - 03	EES - 05	EES - 06	EME - 04
12:30-13:00	Closing + Alentejo of Honor					

1. Earth System, Environment and Sustainability

- EES - 05 - Sustainable Agriculture, Irrigation & Environmental Impacts
- EES - 06 - Earth Sciences, Geology & Environmental Monitoring

2. Energy, Materials and Engineering

- EME - 03 - Advanced Materials, Characterization & Industrial Applications
- EME - 04 - Advanced Topics in Environmental Science and Sustainable Engineering

3. AI, Data Science and Mathematical Modelling

- ADM - 06 - Complex Systems, AI Ethics & Cellular/Spatial Modeling

4. Health, Life Sciences, Society and Innovation

- HLS - 03 - Food, Spectroscopy, Agriculture & Analytical Methods

Parallel Sessions

ADM - 06 – AI, Data Science and Mathematical Modelling (Complex Systems, AI Ethics & Cellular/Spatial Modeling)

8 July 2026 | 9:30–12:30 | Amphitheater 131 | Chair: **Russel Alpizar-Jara**

Time	Talk ID	Title	Speaker
8:30 - 9:30	Invited Speaker		
9:30 - 10:00	ADM - 06 - 01	Geographical origin discrimination of saffron using portable NIR spectroscopy and chemometric methods	María Isabel Martín-Pérez
10:00 - 10:30	ADM - 06 - 02	Perturbation-Resolved Third-Order Fluorescence Fingerprints for Chemical Authentication	Mirta Raquel Alcaraz
10:30 - 11:30	Coffee-Break + Poster Session		
11:30 - 12:00	ADM - 06 - 03	Semantic Archival Digitization: Multi-Modal Large Language Models and CIDOC-CRM for Historical Handwritten Text Recognition	Lígia Ferreira
12:00 - 12:30	ADM - 06 - 04	Modeling the Vibration of Steel Tongue Drums	Bogdan G Nita
12:30 - 13:00	Closing + Alentejo of Honor		

HLS-03 – Health, Life Sciences, Society and Innovation (Food, Spectroscopy, Agriculture & Analytical Methods)

8 July 2026 | 9:30–12:30 | Sala CES 115 | Chair: **Jorge Teixeira**

Time	Talk ID	Title	Speaker
8:30 - 9:30	Invited Speaker		
9:30 - 10:00	HLS - 03 - 01	Advanced spectroscopic tools for the non-invasive monitoring and authentication of PDO soft cheeses from Extremadura	Elísabet Martín Tornero
10:00 - 10:30	HLS - 03 - 02	Active and Mindful – A Mind-Body Programme for People with Multiple Sclerosis: a Feasibility Study	Catarina Martins
10:30 - 11:30	Coffee-Break + Poster Session		
11:30 - 12:00	HLS - 03 - 03	Statistical modeling of the mental health and well-being of immigrant workers in Portugal	Luís M. Grilo
12:00 - 12:30	HLS - 03 - 04	Genetic algorithm applied to basic Forex trading rules	John Sousa
12:30 - 13:00	Closing + Alentejo of Honor		

EME - 03 – Energy, Materials and Engineering (Advanced Materials, Characterization & Industrial Applications)

8 July 2026 | 9:30–12:30 | Sala CES 119 | Chair: **Fernando M. Janeiro**

Time	Talk ID	Title	Speaker
8:30 - 9:30	Invited Speaker		
9:30 - 10:00	EME - 03 - 01	Influence of Processing Conditions on Porous B4C Supports for Ceramic Membranes Filtration Applications	Juan R. Madrigal
10:00 - 10:30	EME - 03 - 02	Thermochromic Cobalt(II) complexes and their applications	Carlos Bernardo Silva Pinto
10:30 - 11:30	Coffee-Break + Poster Session		
11:30 - 12:00	EME - 03 - 03	Integrated Image Processing, Non-Destructive Testing, Geomechanical Analysis, and Digital Twin Modelling for Algorithmic Morphogenesis of Ornamental Marble: A Case Study from Portugal	Souhila Chabane
12:00 - 12:30	EME - 03 - 04	Novel Experimental Device for Non-Destructive Internal Characterisation of Ornamental Stone Blocks Using Electrical Resistivity Tomography	António Manuel Carvalho Jardim
12:30 - 13:00	Closing + Alentejo of Honor		

EME - 04 – Energy, Materials and Engineering (Advanced Topics in Environmental Science and Sustainable Engineering)

8 July 2026 | 9:30–12:30 | Sala CES 110 | Chair: **Md Tofael Ahmed**

Time	Talk ID	Title	Speaker
8:30 - 9:30	Invited Speaker		
9:30 - 9:50	EME - 04 - 01	Atmospheric dust particles: Physical-chemical properties and the relevance to human health	Noor Ul Ain
9:50 - 10:10	EME - 04 - 02	Modeling and Analysis of a Solar-Driven Absorption Chiller with Nanofluids Using GNU Octave: energy, economic and environmental study	Matteo Priori
10:10 - 10:39	EME - 04 - 03	Bridging the Simulation-to-Reality: LLM-Guided Deep Reinforcement Learning for Adaptive Multi-UAV Path Planning	Rui Graça
10:30 - 11:30	Coffee-Break + Poster Session		
11:30 - 11:50	EME - 04 - 04	Sensor Placement Strategy to Maximize Coverage and Early Detection of Forest Fires	Milton Gussule
11:50 - 12:10	EME - 04 - 05	Internet of Things (IoT) and Artificial Intelligence (AI) for sustainable cheese ripening management in traditional cheese production	Carlos Almeida
12:10 - 12:30	EME - 04 - 06	Modeling and Simulation of GaSb/GaAs Quantum Dot Solar Cells in SILVACO TCAD	Md Ek ramul Haque
12:30 - 13:00	Closing + Alentejo of Honor		

EES - 05 –Earth System, Environment and Sustainability (Sustainable Agriculture, Irrigation & Environmental Impacts)

8 July 2026 | 9:30–12:30 | Sala CES 124 | Chair: **Marta Laranjo & Jesús Alonso**

Time	Talk ID	Title	Speaker
8:30 - 9:30	Invited Speaker		
9:30 - 10:00	EES - 05 - 01	Influence of fertilization strategies and rice crop irrigation management on ammonia emissions	Damián Fernández-Rodríguez
10:00 - 10:30	EES - 05 - 02	Alternate Wetting and Drying Irrigation and Biochar in Rice Fields: Implications for Bispyribac-Sodium Water Pollution	Luis Vicente
10:30 - 11:30	Coffee-Break + Poster Session		

11:30 - 12:00	EES - 05 - 03	Evaluating the impact of alternate wetting and drying irrigation on rice productivity and soil health in Mediterranean regions	Manuel Pérez
12:00 - 12:30	EES - 05 - 04	Compostable Bags: How Well Do They Actually Degrade with Organic Waste?	Priscilla Assumpção
12:30 - 13:00	Closing + Alentejo of Honor		

EES - 06 –Earth System, Environment and Sustainability (Earth Sciences, Geology & Environmental Monitoring)

8 July 2026 | 9:30–12:30 | Sala CES 272 | Chair: **Miguel Potes & Alejandro Aparicio**

Time	Talk ID	Title	Speaker
8:30 - 9:30	Invited Speaker		
9:30 - 10:00	EES - 06 - 01	H2tALENT - Alentejo Green Hydrogen Valley delivering integrated full-chain sustainable hydrogen ecosystem with technical, economic, social and environmental benefits and superior upscaling/replicability	Hugo Silva
10:00 - 10:30	EES - 06 - 02	Solar proton events and its impact on the total ozone column in the Northern Hemisphere	Gonzalo Agúndez Hisado
10:30 - 11:30	Coffee-Break + Poster Session		
11:30 - 12:00	EES - 06 - 03	Recent studies in space climate by the Space & Earth Sciences (SpES) group of the University of Extremadura	Víctor Manuel Sánchez Carrasco
12:00 - 12:30	EES - 06 - 04	Vertical profiling of the atmosphere using ground-based remote sensing and in-situ instrumentation	Vanda Salgueiro
12:30 - 13:00	Closing + Alentejo of Honor		

Poster Session

Poster Session 03 – Chemistry, Biotechnology, Health and Life Sciences

8 July 2026 | 10:30–11:30 | In the small cloisters (Next to the amphitheater 131-CES)

Poster ID	Title	Presenting Author
P - 03 - 01	Synthesis of new organic compounds with potential biological activity via multicomponent reactions – Ugi-4CR	Raquel Eustáquio
P - 03 - 02	Dynamic behavior of enamino-xanthenes derived from primary aliphatic amines	Juan Manuel Garrido
P - 03 - 03	Enamino-xanthene fluorophores from amino acids, peptides and biogenic amines	Pedro Cintas
P - 03 - 04	Adduct structure and regioselectivity in the reaction of 2-(aryl)amino-1,3-thiazines with aryl isocyanates	Juan C. Palacios
P - 03 - 05	One Health Education: Gaps and Opportunities for University Scientific Training	Javier Cubero
P - 03 - 06	Enamino-xanthene fluorophores of aminoalcohols and aminosugars	Ilham Charaf
P - 03 - 07	Second-order chromatographic approach with dual spectral detection for allergen profiling in infant cosmetic products	Laura Antivero Luengo
P - 03 - 08	Chemical Quality Assessment of Olive Oil: Determination of Acidity and Peroxide Index	Ana Batista Margarida Fernandes Margarida Matela
P - 03 - 09	Toward a Third-Order Advantage for Food Authentication: Saffron Origin Assessment as a Proof of Concept	Elena Gago Prieto
P - 03 - 10	Determination and quantification of simvastatin in medicinal products	M.I. Rodríguez-Cáceres
P - 03 - 11	Response Surface Modelling of Mespilodaphne quixos Essential Oil Against Candida albicans	José Blanco-Salas
P - 03 - 12	Detection of adulteration of essential oils by using excitation emission matrix combined with chemometric analysis	Luis Varillas Cid
P - 03 - 13	Active and Mindful – A Mind-Body Programme for People with Multiple Sclerosis: a Feasibility Study	Catarina Martins
P - 03 - 14	Photodynamic therapy combined with electrochemotherapy in the treatment of feline palpebral squamous cell carcinoma	Vera Lúcia Martins
P - 03 - 15	Spectrofluorimetric and liquid chromatographic determination of tryptophan	Nielene Mora-Diez
P - 03 - 16	Optimization of urea-modified activated carbons derived from coconut shell for methylene blue removal from water	Pedro Francisco Geraldo
P - 03 - 17	Shelf-life and microbiological stability of acorn-based bread enriched with oregano essential oil	Guilhermina Pias
P - 03 - 18	Microbiota Modulation as an Approach to Prevent the Use of Antimicrobials Associated with Canine Atopic Dermatitis	Tânia Lagoa
P - 03 - 19	Microbiological quality of bovine colostrum fed to calves on dairy farms: influence of hygiene practices and heat treatment	Flávio G. Silva
P - 03 - 20	Teaching Through Air: An Educational Project on Airborne Viruses in University Indoor Environments for Biochemistry and Biomedical and Health Sciences Students	Ana Galveias
P - 03 - 21	All-water biopolymer nanocrystal–lysozyme hybrids as green nano-biointerfaces to mitigate egg allergenicity	M. Victoria Gil
P - 03 - 22	Voltammetric study of a compound of biological interest: Melatonin	E. González-Carrasco
P - 03 - 23	Spectroscopic characterization of carbamazepine: a comprehensive analysis	Mónica Palomino-Vasco
P - 03 - 24	Stimuli-Responsive Drug Delivery Systems for the Co-Delivery of Flavonoids and 5-FU Targeting Breast Cancer	Elisabete P. Carreiro
P - 03 - 25	Natural Product–Based Drug Delivery Platforms for Donepezil Therapy in Alzheimer’s Disease	Ana R Costa
P - 03 - 26	Cinchonine-Based Molecularly Imprinted Polymers for Targeted Erlotinib Delivery	Alexandra Marchã Penha