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**fEs 2025**

**FIRE IN THE EARTH SYSTEM**

**HUMANS AND NATURE**

**Algés, Portugal, May 30th – June 8th, 2025**

Célia Gouveia, Yannis Daliakopoulos and Artemi Cerdà

**Av. Alfredo Magalhães Ramalho, 6 1495-165 Algés**

Organisers:

**Célia Gouveia.**

**Instituto Dom Luiz. Faculdade de Ciências. Universidade de Lisboa.**

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**www.firecongress.eu**

**Field Excursions**

**fEs2025**

**IV FIRE IN THE EARTH SYSTEM INTERNATIONAL CONGRESS**

**Conference Tour. Célia Gouveia**

**Instituto Dom Luiz. Faculdade de Ciências. Universidade de Lisboa**

**celia.gouveia@ipma.pt**

**Pre- and Post-conference Tours. Artemi Cerdà**

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**Pre-conference excursions**

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| Date | Topic |
| 29/05/2025 | **29/05/2025. Travel day to Albufeira. Accommodation**  22:00 departure from Lisbon Airport to Albufeira (accommodation hotel).  Accommodation at Hotel Da Aldeia. Dr. Francisco As Carneiro APT 511 nº 1 8200-280. Algarve. Arrive to the hotel on your own. From Lisbon, you can reach the hotel of Albufeira (257 Km: 2:27 by car) or by bus (bus Station Lisboa Sete Rios to Terminal Rodoviária in Albufeira, 2:34 h) or by Train from Lisbon to Terminal Rodoviária in Albufeira, 3h), or to fly to Faro (1 h from Lisbon) and bus. The organizers will have private cars and will help to pick you up. Contact Artemi Cerdà via WhatsApp at +34 696320315 to help. The organization covers one meal, accommodation, and breakfast. |
| 30/05/2025 | **30/05/2025. Ria Formosa Natural Park. Artemi Cerdà**  The sedimentary coast of the south of Portugal  Visit the coastal land of the Natural Park of Ria Formosa with a walk along the Ludo trail. Visit to the city of Faro. The fate of the sedimentary coast in Portugal. The environmental impact of tourism growth in Portugal.  Transport and accommodation by the organization.  Accommodation at Hotel Da Aldeia. Dr. Francisco As Carneiro APT 511 nº 1 8200-280. Algarve. |
| 31/05/2025 | **Seven hanging valleys and the coast of Albufeira. Artemi Cerdà**  The cliffs of the south of Portugal. Visit the coastal land of Albufeira and walk along the Seven Hanging Valleys Route to connect with nature and marvel at the magnificence of the Algarve coastline. The impact of urbanization on the coastal land. Protection and Restoration of urban and rural landscapes.  Transport and accommodation by the organization.  Accommodation at Hotel Da Aldeia. Dr. Francisco As Carneiro APT 511 nº 1 8200-280. Algarve. |
| 01/06/2025 | **1/06/2025. Road trip from Faro to Lisbon. San Vicente Cape. Artemi Cerdà**  The Saint Vincent Cape is iconic. The road from Albufeira to Cabo de São Vicente and Lisbon will show us the taste of the coastal land of Portugal. Environmental concerns in a millennia-old landscape today are affected by land abandonment, urbanization, infrastructure development, and farming.  Transport and accommodation by the organization. Return to Lisbon at 20:00  Accommodation at Hotel Da Aldeia. Dr. Francisco As Carneiro APT 511 nº 1 8200-280. Algarve |

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| **Monday, July 2nd 2025** | | | | | | |
| **10:00**  **13:00** | | | **City walks in Lisbon.**  **A city for the world.** | | | |
| **14.00**  **16.00** | | | **Registration Instituto Português do Mar e da Atmosfera.**  **Av. Alfredo Magalhaes Ramalho 6, 1495-165. Algés** | | | |
| **16:00**  **16:20** | | | **Opening by Célia Gouveia**  **Instituto Português do Mar e da Atmosfera.** | | | |
| **16:20**  **17:00** | | | **Opening Conference.**  **Andrew C. Scott. Burning planet. The story of fire through time.** | | | |
| **17:00**  **18:00** | | | **Scientific session. Soil erosion and forest fires. The fate of sediments, water, nutrients, and soils in landscapes affected by fires**  **Chairperson: Ioannis Daliakopoulos and Artemi Cerdà** | | | |
|  | | | |  |  |  | | --- | --- | --- | | Artemi | Cerdà | A literature review of the impact of forest fires effects on watershed water resources | | Ana | Pérez | Burning versus chipped pruned branches in olive plantations in Eastern Iberian Peninsula | | Munesh | Kumar | Impact of fire on soil nutrients and understorey vegetation in Chir pine dominated forest in Garhwal Himalaya, India | | Halil Ibrahim | Yildiz | Hydrological Impact of Wildfire: Bohemian Switzerland National Park | | Yan | Yu | Small fires dominate the recent increase in dust emissions from burned landscapes | | Miriam | Marzen | Experimental study of post-fire wind-drift and dust emission of ash, pyrogenic carbon and unburnt litter in European broadleaf and coniferous forest environments | | | | |
| **18:00**  **18:40** | | | **Keynote conference. Christiaan F. Pool. Head of Forestry Department. Nelson Mandela university.**  **The herbivores and fire. A collaborative adventure.** | | | |
| **18:40.** | | | **Poster session** | | | |
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| **Tuesday June 3rd 2025** | | | | | | |
| **9:00** | | **Registration** | | | | |
| **9.30**  **10:10** | | **Conference Keynote. José Miguel Cardoso Pereira. Forest Research Centre. School of Agriculture. University of Lisbon.**  **Thirty years of fire cartography in Portugal** | | | | |
| **10:10**  **10:40** | | **Coffee/tea break** | | | | |
| **10:40**  **12:00** | | **Scientific session. Modelling fire in the Earth System**  **Chairpersons: S.P. Harrison, O. Hass, O. Perkins & M. Kasoar**   |  |  |  | | --- | --- | --- | | Othusitse | Lekoko | Role of fire regimes in Botswana’s Miombo woodlands: opportunities for enhanced carbon sequestration and ecosystem co-benefits | | Candice | Charlton | Predicting Summer Wildfire Potential in Jamaica: Models and Projections | | Luciano | Telesca | Investigation of the time dynamics of forest fire sequences in Basilicata region (southern Italy) | | Tristan | OMara | Improving Canopy Fuel Estimations for Fire Behavior Modeling in Arizona Using Google Earth Engine and Random Forest Regression. | | Xiao | ZHANG | Analysis of driving factors and their spatiotemporal heterogenetic influence on forest fire occurrence at different temporal scales | | Ana | Bastos | Simulating fire in a terrestrial biosphere model with coupled carbon, nitrogen and phosphorus cycles | | Matthew | Forrest | Integrating Human Dimensions into Fire Models: Insights from Empirical Studies and Modelling Approaches | | Johanna | San Pedro | Modeling Future Wildfire Risks in South America with FLAM | | | | | |
| **12:00**  **12:40** | | **Conference Keynote.**  **Ine Vandecasteele. Climate Risk and Resilience Unit. European Environment Agency. Nature-based solutions for fire-resilient European forests: European view on climate resilience** | | | | |
| **12:40**  **14:00** | | **Lunch break** | | | | |
| **14:00**  **15:00** | | **Scientific session. Climate and Wildfires: Modeling, Indicators, and Future Projections**  **Chairpersons: Marco Turco, Miguel Ángel Torres Vázquez & Gabriele Vissio**   |  |  |  | | --- | --- | --- | | Andreia | Ribeiro | Increasing overlap of Australia – North America fire weather seasons | | Eric | Stoch | SHRINKING WINDOWS: THE IMPACT OF CHANGING WEATHER PATTERNS ON FIREBREAK PREPARATION IN GRASSLAND ECOSYSTEMS | | Outi | Kinnunen | Peatland wildfires in Finland | | Yan | Boulanger | Harvest-induced changes in forest landscapes does not fully compensate for climate-induced increase in landscape flammability in eastern Canada | | | | | |
| **15:00**  **16:00**  **17:0** | | **Scientific session. Wildfire Educating and training: Addressing the elephant in the room – who/what did we forget?**  **Chairpersons: Tiaan Pool & Navashni Govender**   |  |  |  |  | | --- | --- | --- | --- | | Izak | Smit | Fire: friend or foe? The role of scientists in balancing media coverage of fires in national parks | | | Eric | Stoch | FIGHTING FIRE WITH FIRE: THE STOCH KALAHARI FORMATION IN PRACTICE: A collaboration between the North West Umbrella Fire Protection Association and Stenden University (South Africa) | | | Eric | Stoch | IGNITING RESILIENCE: Youth, Women, and People with Disabilities at the Forefront of Fire-Affected Rangeland Restoration in the North West Province, South Africa | | | Eric | Stoch | REVERSING DESERT ENCROACHMENT IN THE NORTH WEST PROVINCE OF SOUTH AFRICA | | | Eric | Stoch | INDIGENOUS KNOWLEDGE SYSTEMS: Mapping Traditional Fire Management Practices of South African First Nations | | | Eric | Stoch | BRIDGING THE ENFORCEMENT GAP: LEPO TRAINING AS A CATALYST FOR ENVIRONMENTAL COMPLIANCE IN SOUTH AFRICA |  | | | | | |
| **17:00**  **17:30** | | **Coffee-tea break** | | | | |
| **17:30**  **18:00** | | **Poster session.**  **Chairperson: Artemi Cerdà**  **5 minutes by participant.**   |  |  |  |  | | --- | --- | --- | --- | | Jing | Teng | Study on the Thermodynamic Characteristics of Wood Pyrolysis Gas Combustion Based on OpenFOAM Simulation | | | xx | xx | xxx | | | | | |
| **18:00**  **18:40** | | **Conference Keynote. Carlos DaCamara. Department of Geographic Engineering, Geophysics and Energy. University of Lisbon.**  **An improved early warning system of meteorological fire danger over Europe: rationale and analysis of results** | | | | |
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| **Wednesday June 4th 2025** | | | | | | |
| **8:45**  **9:00** | | **Registration** | | | | |
| **9:00**  **10:40** | | **Keynote conference. Fabio Miguel Martins da Silva. Fire Analysis and Use Group. National coordinator.**  **Analysing Extreme Wildfire Events.** | | | | |
| **10.30**  **11.00** | | **Scientific session: Challenges and Solutions in the Wildland-Urban Interface: A Growing Threat of Wildfires.**  **Chairpersons: Mario Elia, Sandra Oliveira and Avi Bar-Massada**   |  |  |  | | --- | --- | --- | | Cappelluti | Onofrio | [Pyro-Socio-Ecological Zones: An Integrated Approach for Fire Risk Management in Wildland-Urban Interface Areas\"; Cappelluti <onofrio.cappelluti@uniba.it>"](mailto:onofrio.cappelluti@uniba.it) | | Avi | Bar-Massada | Mapping the Wildland-Urban Interface: concepts, approaches, and implications for wildfire risk assessment | | Eva | Stegmeijer | Mapping wildfire risk for museums and built monuments in the Netherlands | | Jonathan | Boucher | Mitigating Wildland Fire Risk Through A Fuel Break Placement Optimization Model | | | | | |
| **11:00**  **11:30** | | **Cofree-Tea Break** | | | |
| **11.30**  **12.40** | | **Scientific session: Miscelaneous**  **Chairperson: Célia Gouveia**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Okan | Ürker | A comparative case study from Pacific Northwest of US and Türkiye to create the holistic management for the large fires | | | | Tristan | OMara | Beyond Places and Assets: Reframing Valuation in Quantitative Wildfire Risk Assessments to Capture Stakeholder Perceptions and Value | | | | Chiara | Aquino | Towards Tier 3 Monitoring of Greenhouse Gas Emissions from Forest Fires: An Earth Observation-Based Framework in support of the UN Climate Goals | | | | Pengle | Cheng | From smoke to fire: A forest fire early warning and risk assessment model fusing multimodal data | | | | Artemi | Cerdà | Who is who about forest fires in Iran |  | | | Saskia | Keesstra | Advancing Climate Adaptation Through Forest-Based Nature-Based Solutions: A European Database Approach | | | | Guangyuan | Wang | China’s Forest Fire Prevention and Management System and Practices | | | | Samukelisiwe | Msweli | Flammability of native and invasive alien plants common to the Cape Floristic Region and beyond: Fire risk in the wildland–urban interface | | | | Izak | Smit | The Role of High-Intensity Fires in Managing Woody Encroachment in African Savannas: Short- and Medium-Term Outcomes | | | | Yan | Yu | Convective potential and fuel availability complement near-surface weather in regulating global wildfire activity | | | | Ratovo | Arimanana | Environmental factors regulating the fire effects on soil organic carbon across Malagasy ecosystems | | | | Henintsoa | Andrianarivony | Environmental factors regulating the fire effects on soil organic carbon across Malagasy ecosystems | | | | | | |
| **12.40**  **13:20** | | **Keynote conference. Akli Benali. Centro Estudos Forestais. Institugo Superior de Agronomia. Universidade de Lisboa.**  **Modelling fire behavior at the landscape-level for prevention and suppression applications.** | | | | |
| **13:20**  **14:00** | | **Closure talks by Ana Bastos. Carbon sinks and forest fires** | | | | |
| **14:00**  **14:15** | | **Closure. Célia Gouveia** | | | | |
| **Conference excursion, Thursday, June 5th 2025** | | | | | | |
| **Thursday, June 5th 2025. Conference field trip. The forest fires of Portugal. Célia Gouveia.** | | | | | | |
|  | Mapa  El contenido generado por IA puede ser incorrecto.Itinerary:  Departure 8:00 Return 21:00  **Lisboa (Avenida Almirante Reis) to Albergaria-a- Velha and Sever do Vouga** (2,5 hours trip and 1,5 h field observation): visit to the burned area of last year. ANEPC (national Civil Protection) and/or ICNF (Forestry Institute) will show us the region. **Albergaria a Velha to Praia da Costa Nova** (30 min trip \* visit and lunch (2 horas)): beach area with traditional houses built by fishermen. **Praia da Costa Nova to Aveiro City center** (15 min trip + 45 min – see the river area and traditional boats and tasting egg pastry):  **Aveiro to farol da Nazaré** : (1,5h trip and view of the famous big waves of Nazaré and maybe a cold drink/beer (30 min)). (We willcross over a region that burned in 2017). **Nazaré to Lisboa** (1,5h) | | | | | |

**Post-conference excursions**

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| Date | Topic |
| 6/06/2025 | **Friday, June 6th, 2025. Olive production. A diverse landscape with contrasted production systems. José Muñoz-Rojas. University of Évora**  Under the guidance of José Múñoz-Rojas from the University of Évora we will learn about the diverse landscape of the Alentejo Region. Different agricultural production systems will be shown to understand the management and richness of those landscapes.  Transport by the organization. Departure with cars (by the organization) from Lisbon to Évora. Accommodation Ibis Hotel (Rua de Viana 18 7005-410 Évora, Portugal) and departure for the excursions.  Transport and accommodation by the organization.  **Vista de una playa  El contenido generado por IA puede ser incorrecto.** |
| 7/06/2025 | **Saturday, June 7th 2025. The Motado agro-silvo-pastoral system. A unique landscape. Teresa Pinto, Helena Guimaraes, Maria Isabel Ferraz de Oliveira and José Muñoz-Rojas. University of Évora**  The montado agro-silvo-pastoral ecosystem is found as a key heritage for sustainable management and use of the land. Under the guidance of Helena Guimaraes, Teresa Pinto, Maria Isabel Ferraz, and José Muñoz Rojas we will discover the management and the impact of a diverse ecosystem in arid lands.  Accommodation Ibis Hotel (Rua de Viana 18 7005-410 Évora, Portugal). Transport and accommodation by the organization.  Vista de una montaña  El contenido generado por IA puede ser incorrecto.Una montaña verde  El contenido generado por IA puede ser incorrecto. |
| 8/06/2025 | **Sunday, June 8th 2025. *Sustained management of the Mediterranean forest* Sustainability. Mauro Raposo. University of Évora.**  Mauro Raposo will guide us to understand the complex management of the Mediterranean forest and their sustainability to supply goods and services and also to fight against Desertification and forest fires.  Accommodation Ibis Hotel (Rua de Viana 18 7005-410 Évora, Portugal). Transport and accommodation by the organization. |
| 9/06/2025 | **Monday, June 9th 2025.** Transport to the airports by the participants (contact the organizers). Lisbon is at 1:20 h by train or bus. If you are travelling to other airports (Madrid, Faro….) ask the organizers how to reach the airports. Contact Artemi Cerdà +34 696320315 via WhatsApp if you have any doubts. |
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