

# 8™ INTERNATIONAL WILDLAND FIRE CONFERENCE

### **GOVERNANCE PRINCIPLES:**

Towards an International Framework

May 16-19<sup>th</sup> | 2023 Porto - Portugal

**PROGRAM** 2023

# INDEX

WELCOME MESSAGE		02
ORG	ANIZATION	04
	Committees	05
	About the ILC	08
	Institutional Partners	08
	Conference in Numbers	09
VENU	VENUE	
	General Information	11
LAND	DSCAPE FIRE GOVERNANCE FRAMEWORK	12
PROGRAM		17
	Main Themes	18
	Program Overview	21
	Detailed Program	
	Monday, May 15	30
	Tuesday, May 16	30
	Wednesday, May 17	39
	Thursday, May 18	56
	Friday, May 19	77
	E-Poster Display	78
	Technical Visits	101
	Social Program	104
	Cultural Program	105
SPON	SPONSORS & EXHIBITORS	
	Conference Sponsors	108
	Exhibitors' List	109
	Conference Floor Plan	112
ΝΟΤΕ	NOTES	



### WELCOME MESSAGE

WELCOME MESSAGE

### Welcome to the 8<sup>th</sup> International Wildland Fire Conference

Responding to the severe and globally widespread wildland fires seasons of the 1980's, representatives of government entities and private institutions of all continents organized, in Boston, USA, the 1<sup>st</sup> International Wildland Fire Conference - "Meeting Global Wildland Fire Challenges".

Near the turn of the century, the 2<sup>nd</sup> conference was hosted in Vancouver, Canada, dedicated to "Wildland Fire and Sustainable Development", attended participants from 38 countries. Since then, every 4 years, a growing community gets together on a different continent to learn from each other and share knowledge and expertize under the scope of integrated fire management.

Prior conferences helped organizations and professionals from more than 70 nations to develop a common fire lexicon, doctrines, training manuals, techniques, and operational standards. We excelled on preventing, detecting, and extinguishing wildland fires, mastering a portfolio of technological solutions.

Through time, the political and physical systems that we are part of, tackled mostly the consequences (suppressing fire) instead of addressing the root causes (human activity and how it uses the land). The reinforcement of suppression, without investing in fuel management, is a quick fix, that escalates the problem to a higher level. This firefighting trap or Fire Paradox, in a global warmer and drier environment, is exposing different biotas and communities to severe fires, wildfires, bushfires, forest, vegetation, landscape and rural fires as they are named from north to south, west to east.

In the last decade, extreme fire events destroyed lives, buildings and natural habitats, cornering and puzzling politicians, institutional leaderships, and professionals. In 2017, wildfires tragically challenged Portuguese society. Since then, all our efforts converged into integrated fire management this is no longer a niche or a subject for a few wildland firefighters or landscape planners. You can follow our successes and opportunities ahead at www.agif.pt

It is all about reaching out to other communities of practice, economic sectors, local and indigenous people. As fire management becomes a complex socio-ecological issue, it demands robust institutions, transparent and accountable procedures, and permanent communication with key stakeholders. It also demands a balanced budget between fuel treatment and suppression, in a set of cohesive policies. This means dismantling a culture of silos, promoting inter-departmental dialogue, avoiding unintended consequences from cross cutting public policies (agriculture, forestry, energy, development, environment, fiscal and others. In Portugal, we are also aiming at engaging different audiences, at different geographies and levels of authority and have their commitment, prevailing in time.

Following-up the recommendations of the 7<sup>th</sup> International Wildland Fire Conference, which was hosted by Brazil in 2019 and addressed the theme "Facing Fire in a Changing World: Reducing Vulnerability of People and Landscapes by Integrated Fire Management", we are now challenged to put words into action.

Better wildland fire governance is needed to protect biodiversity, foster carbon sequestration and healthy forests and assure they are providing goods and services that do not vanish in wildfire smoke.

As Chairman and on behalf of the Organizing Committee of the 8<sup>th</sup> International Wildland Fire Conference we invite you to come to Portugal with your knowledge, insights, and thoughts. We welcome you to contribute with your institutional or professional case study, your scientific work or your operational success or failure in tackling complexity and uncertainty when governing or managing wildfire risk. More than 1200 participants, arriving from more than 80 countries are expected to be at Porto.

We worked hard to welcome you as best as we have imagined. At Porto, we wish you to have a lifetime influencing professional experience, through the opportunity to meet with thousands of people coming from all over the world. We all share similar problems and are deeply committed to work on the solutions.

We will be honoured to host you at Porto, to listen to your relevant contribution in every thematic sessions and in oral, poster or workshop, discussion and participating in the Landscape Fire Governance Framework.

We believe that your piece of the puzzle will matter to help your nation and all nations to be better prepared to deal with the challenges ahead of us and to build fire-resilient landscape and societies.

TIAGO MARTINS DE OLIVEIRA Chair of 8<sup>th</sup> IWFC Organizing Committe and Chairman of AGIF Board of Directors





### LOCAL ORGANIZER OF THE 8<sup>th</sup> IWFC



ORGANIZATIO



### INTERNATIONAL LIAISON COMMITTEE FOR THE 8<sup>th</sup> IWFC



#### UNDER THE HIGH PATRONAGE OF THE PRESIDENT OF THE PORTUGUESE REPUBLIC



### HONOR COMMITTEE

#### Marcelo Rebelo de Sousa

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- João Bugalho, Sivicultural Engineer Professor Invited ISA, PT
- Ricardo Vélez, PhD in Forestry Engineering, Spanish Society of Forestry Sciences (SECF), PT





### LOCAL ORGANIZER COMMITTE

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- Mário Monteiro, AGIF, PT
- Pedro Santos Paulo, AGIF, PT

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- João Verde, PT
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- Mário Monteiro, AGIF, PT
- Peter Moore, NRFC Ltd, AU
- Catherine Gamper, OECD, FR

### SCIENTIFIC COMMITTEE

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- Ana Isabel Miranda, University of Aveiro, PT
- Ana Sá, ForestWISE, PT
- Andrew Matthews, National Aerial Firefighting Centre of Australia, AU
- Akli Benali, University of Lisbon, PT
- Alan Ager, FS Research Forester (Retired), USA
- Alen Slijepcevic, Fire Risk, AU
- Alex Held, European Forest Institute EFI, FI
- Carlos da Câmara, University of Lisbon, PT
- Chelene Hanes, Natural Resources Canada, CA
- Christopher Justice, University of Maryland, USA
- Eduardo Simões, DINÂMIA'CET-ISCTE, PT
- Fantina Tedim, University of Porto, PT
- Francisco Moreira, University of Lisbon and University of Porto, PT

- Francisco Seijo, School of Global and Public Affairs, ES
- Jan Jacob Keizer, University of Aveiro, PT
- Jesus San Miguel, European Commission Joint Research Centre, BE
- Joana Vaz Sousa, Centre for Social Studies, University of Coimbra, PT
- João Silva, University of Lisbon, PT
- Joaquim Sande Silva, Polytechnic Institute of Coimbra and Centre for Functional Ecology, PT
- José Manuel Oliveira Mendes, University
   of Coimbra, PT
- Lara Steil, FAO /UN, IT
- Michael Coughlan, University of Oregon, USA
- Miguel Bugalho, University of Lisbon, PT
- Natasha Ribeiro, Eduardo Mondlane
   University, MZ
- Nuno Guiomar, University of Évora, PT
- Owen Price, University of Wollongong, AU
- Paulo Fernandes, University of Trás-os--Montes and Alto Douro and ForestWise Colab, PT
- Peter Moore, NRFC Ltd, AU
- Pia-Johanna Schweizer, Institute for Advanced Sustainability Studies e.V., DE
- Rodrigo Falleiro, IBAMA, BR
- Sandra Whight, The National Council for Fire and Emergency Services, AU
- Sally Archibald, University of the Witwataersrand, ZA
- Yannick Le Page, AGIF, PT



\* All names presented by alphabetical order









### **ABOUT THE ILC**

With the 1<sup>st</sup> International Wildland Fire Conference (IWFC) held in Boston, Massachusetts, U.S.A., in 1989, a series of conferences was initiated aimed at promoting exchange of expertize and international cooperation in wildland fire management. These conferences have gathered thousands of participants around the world and are overseen by The International Liaison Committee (ILC), serving as an advisory and liaison body to the hosts of the conferences. The ILC recognizes that landscape fire management is an international issue, thus working closely with conference hosts and seeking new opportunities for sharing experiences in this area of knowledge. The host of the 9<sup>th</sup> Wildland Fire Conference will be announced in Porto, May 2023.

#### PREVIOUS EDITIONS OF THE CONFERENCE

- IWFC 7 2019 (Campo Grande, Brazil)
- IWFC 6 2015 (Pyeongchang, South Korea)
- IWFC 5 2011 (Sun City, South Africa)
- IWFC 4 2007 (Sevilla, Spain)
- IWFC 3 2003 (Sydney, Australia)
- IWFC 2 1997 (Vancouver, Canada)
- IWFC 1 1989 (Boston, U.S.A.)

### **INSTITUTIONAL PARTNERS**

EFI

Meet the organizations that have joined the Wildland Fire 2023 to conduct joint sessions and support the conference.





















### **MORE THAN**

These numbers are the result of the tireless mobility of participants from all over the world. Thanks to the fundamental support of sponsors and exhibitors, the sharing of knowledge by speakers, the support of local partnerships and The High Patronage of the President of the Portuguese Republic o Presidente da República - the Conference will most definitely be a memorable moment to remember and live by in the future.







# **VENUE** ALFÂNDEGA DO PORTO CONGRESS CENTER



### CONFERENCE VENUE

#### Alfândega do Porto Congress Center

Located in the historic center of Porto on the banks of the Douro River, the Alfândega do Porto Congress Center is a historic building, restored by the architect Souto Moura. The Alfândega Congress Centre has been awarded the prize as Best Meetings & Conference Centre at the Europe Business Destinations Travel Award 2014, 2015 & 2017.

Address: Rua Nova da Alfândega, Edifício da Alfândega - 4050-430 Porto Tel.: +351 223 403 000/24 | +351 223 403 099 E-mail: geral@ccalfandegaporto.com www.ccalfandegaporto.com

**CONFERENCE DATES** 16<sup>th</sup> to 19<sup>th</sup> of May 2023

 REGISTRATION AND DATA CENTRE 

 OPENING HOURS

 Monday, 15 May: 9:00 AM to 7:00 PM

 Tuesday, 16 May: 8:00 AM to 6:00 PM

 Wednesday, 17 May: 8:00 AM to 6:00 PM

 Thursday, 18 May: 8:00 AM to 6:00 PM

 Friday, 19 May: 8:00 AM to 1:00 PM

CONTACTS +351 916 217 451 - info@wildfire2023.pt

#### CONFERENCE BADGES

Conference badges are compulsory for admission & access to the scientific program sessions and the exhibition area.

**CLOAKROOM** Luggage and checkroom facilities are available on site free of charge.

**INTERNET AVAILABILITY** Wireless Internet access is available free of charge in the conference venue.

Name - WILDFIRE 2023 Password - PORTUGAL

#### LANGUAGE

The official Conference language is English.

SOCIAL MEDIA Twitter - @8thlwfc Instagram - @8th\_iwfc LinkedIn and Facebook - 8th IWFC International Wildland Fire Conference

OFFICIAL HASHTAGS #WildlandFirePorto2023 #8thIWFC2023 #GovernancePrinciples #InternationalFramework #ManagingWildfireRisk

CONFERENCE APP The official app - **Wildfire2023** Available for Android and iOS

#### **REGION - USEFUL INFORMATION**

#### TASTE PORTO

Be part of a tasty adventure full of good food, good stories, and great wines. Get to know some restaurants in the region <u>www.visitporto.travel</u>

TELEPHONE NUMBERS National Emergency Number - 112

#### **Police Tourism Station**

Praça de Pedro Nunes 16, 4050-466 Porto +351 222 092 006

OTHER IMPORTANT CONTACTS Tourism Office Sé (Medieval Tower)

<u>Address:</u> Calçada Dom Pedro Pitões 4050-467 <u>Tel.:</u> +351 935 557 024 / +351 223 326 751 <u>Opening hours:</u> 9:00 AM to 6:00 AM

#### **Porto Welcome Center**

<u>Address:</u> Praça Almeida Garret, 27 4000-069 <u>Tel.:</u> +351 927 411 817 <u>Opening hours:</u> 9:00 AM to 7:00 AM

**Tourism Office - Francisco Sá Carneiro Airport** Address: Vila Nova da Telha 4470-558 Opening hours: 9:00 AM to 6:00 AM







# LANDSCAPE FIRE GOVERNANCE FRAMEWORK

LANDSCAPE FIRE GOVERNANCE FRAMEWORK

### ADJUSTING STRATEGIES, POLICIES, AND MANAGEMENT, TO GLOBAL CHANGE

With over 300 million hectares burned annually, Landscape Fires are assuming increasingly extreme characteristics and causing more severe impacts on populations and ecosystems. They are a local problem with global consequences. Fires are a synthesis of the context, and as such, they arise from socio-economic dynamics mediated by public policies and economic incentives that determine land use and occupation, as well as our use of fire, and social dynamics. The diversity of causes, their systemic nature, and a growing number of stakeholders with different visions and solutions require that the simpler dichotomy of prevention and response gives way to a more robust framework capable of addressing complexity and uncertainty. To better prepare societies to achieve sustainable development goals and ensure lower losses to fire, the technical and scientific community at the 8<sup>th</sup> International Wildland Fire Conference in Porto, proposes a fire governance model (Landscape Fire Governance Framework) that brings governments, businesses, academia, and members of civil society together in balanced and technically supported solutions. This framework presents the guidelines for the development of this model.

### SUMMARY

I. Unplanned and uncontrolled landscape fires are increasing, correlated with social, economic, and ecological changes. This creates both direct and indirect socio-economic impacts, such as loss of lives, property and livelihood, health, and safety issues, and negatively impacts sustainable development goals, as more than 300 million hectares are annually affected.

**II.** The Landscape Fire Governance Framework ("framework") is a legally non-binding, voluntary, set of guiding principles, goals, and governance proposals, for adjusting strategies, policies, and landscape fire management at a global level, answering to global challenges. The framework is aimed at policy makers and decision makers.

**III.** Under the framework, integrated fire management is considered critical for sustainable landscape management, developing governance models that address risk and involve different stakeholders, bringing together the diversity of scientific and cultural knowledge, values, and political options. International guiding principles are proposed, as an orientation towards the management of the increasing risk of wildfires.

**IV.** The framework does not intend to supress or ignore national or local options and heritages, but rather to offer a view into a shared goal of a significant loss reduction from wildfires, adding expertize and the latest research and scientific knowledge, enhancing risk governance, and having a clear scope of action for all stakeholders.

**V.** Action is needed strengthening governance models, as responding to such a complex challenge requires the best coordination possible among all stakeholders. Similarly, valuing rural areas will help people getting a return from the land, which in turn allows them to better care and manage their land, reducing exposure and vulnerability to wildfires. Action is also needed changing behaviours, avoiding







LANDSCAPE FIRE GOVERNANCE FRAMEWORK

actions that result in unplanned and uncontrolled fires. Should these fail, response is needed, and to that end, training and qualification programs offer the best-qualified responders, suppressing fire, protecting people and their livelihoods.

**VI.** The proposed governance model calls for fire risk assessment and determining how communities and cultures perceive risk and accept fire impacts. That perception drives risk management and helps communicating clearly. Stakeholder engagement is crucial for governance, and having stakeholders involved in decision-making helps with monitoring and aiming at continuous improvement, measuring progress and planning for shorter periods under a context of uncertainty.

VII. The framework governance model recognizes that fires have a broader value chain than just prevention, suppression, and recovery, and as such proposes a value chain where all accountable actors have a role to play. This calls for integrated actions and good communication between all stakeholders, as they must understand what the challenges are and what deliberations are asked for.

VIII. To better achieve integration of stakeholders and clear communication, overarching governance bodies are useful politically and technically empowered tools, facilitating domestic coordination as well as international cooperation.

**IX.** International cooperation benefits from qualification and training programs, based on widely accepted standards, fostering effectiveness and efficiency of cross border cooperation, but also creating a good platform for the exchange of information on best practices at all stages of the wildfire value chain.

**X.** Moving forward, based on this framework, countries are invited to promote integrated landscape fire management by bridging existing gaps through governance options that foster cross-agency and cross-sectoral dialogue, and to join efforts to strengthen networks and thematic resource centres for domestic and international sharing of best practices and innovation. Under the United Nations, this framework could also be the base for further, binding agreements.

**XI.** An international mechanism, under the United Nations, is sought, to promote the implementation of a global integrated fire management program, and to facilitate financing of integrated fire management actions, worldwide.

XII. Integrated fire management requires moving from management alone to solid governance models and stakeholder engagement with clearly set roles at all value chain stages, training and qualification programs, and strengthened international cooperation.

Cross-border long-term commitments, bringing together the best expertise. International gualification and training programmes fostering effectiveness and efficiency of cross-border cooperation. Platforms aiming to share scientific developments and fire knowledge assuring the cross-sectoral approach for the wildfire risk management. Governance bodies Facilitating bodies, overarching in scope and politically empowered, working with all stakeholders Systemic and Public Stakeholder **Risk Assessment Risk Evaluation Risk Management** Engagement Communication Continuously manage Clear communication of across the whole what the challenges are Involve regulatory bodies, value chain and what deliberations are industry experts, scientists, Assessing environmental, Wildfire risk tolerance is researchers and asked for and what their Plan social, and economic variable, depending on communities in a transexpected outcomes should -disciplinary model. Revive implications of wildfires, how it is perceived. be. Speaking clearly to the including asset value Prepare traditional uses of fire general public, so that they Acceptance levels call to better support planning, under safer conditions and understand hazards and for community-driven policy negotiation and solutions, keeping risk as foster benign land-use what to do to better protect Prevent decision-making. low as reasonably possible. practices. themselves and others. Pre-Suppress Suppress Work post-fire Adaptive Management Monitor, measure progress, adapt as needed A summarized diagram view of a landscape fire governance continuum





# PROGRAM



Download your mobile app on the App Store or Play Store, searching for **Wildfire2023**.

• Read the QR Code, using the camera of your smartphone or tablet.



### CONFERENCE WEBSITE www.wildfire2023.pt





We hope that you will enjoy the program of the 8<sup>th</sup> International Wildland Fire Conference. We have structured the program in a way to cover the main themes of integrated fire management, and especially how governance can be done in this important challenge for our countries.

To achieve this, you will find plenary sessions that aim to offer an overview of the main topics, leading you to the presentation of the international "Landscape Fire Governance Framework". Additionally, you will have access to oral communications and e-poster presentations to share the scientific perspective on the 11 sub-themes that we have identified, linked to the framework.

As for more practical components, you will be able to participate in workshops, and there will also be technical visits to observe on-the-ground territory management models and practices. Finally, do not forget about the social and cultural events, a perfect moment for networking among the conference participants and sharing best practices in this field of knowledge.







### **Integrated Fire Management**

#### PLANNING AND PREPARATION

Defining interventions and resources needed at the community and government levels, as well as ensuring that citizens and organizations are prepared to act under best safety practices.

#### PREVENTION AND PRE-SUPPRESSION

Reducing exposure and vulnerability to fire and maintaining a state of preparedness for immediate intervention.

### SUPPRESSION AND RELIEF

Suppressing fire and providing relief to those affected by fire.

### POST-FIRE INTERVENTION

Dealing with the restoration and rehabilitation actions required in the aftermath of a fire.

**QUALIFICATION** Training and certification on all integrated fire management expertize areas.

### TECHNICAL INNOVATION

Innovation on software applications and technological equipments and solutions, and operational communications systems.



### **Fire Risk Governance**

### **RISK HANDLING**

Dealing with risk perception, assessment, management and translational research, encompassing traditional and indigenous knowledge.

### STAKEHOLDER ENGAGEMENT

Inclusive risk-related decision-making and conflict resolution, regarding multi-level policy design, sustainability, and funding.

### ADAPTIVE MANAGEMENT

Process Monitoring and Planning Evaluation for continuous improvement and lessons learnt and analysis of physical and social impacts due to changes in fire governance.

### COMMUNICATION

Risk Communication – exchanging or sharing risk-related data, information and knowledge between and among different groups such as scientists, regulators, industry and general public; Public report of system performance.

### INTERNATIONAL COOPERATION

Cross-border cooperation on training, best-practices, and standards.







# THE WORLD IS FACING THE GREAT WILDFIRES OF THE XXI CENTURY

# **ARE YOU READY?**

# Innovative Solutions for Wildland Firefighting





**And State** 



vfttools





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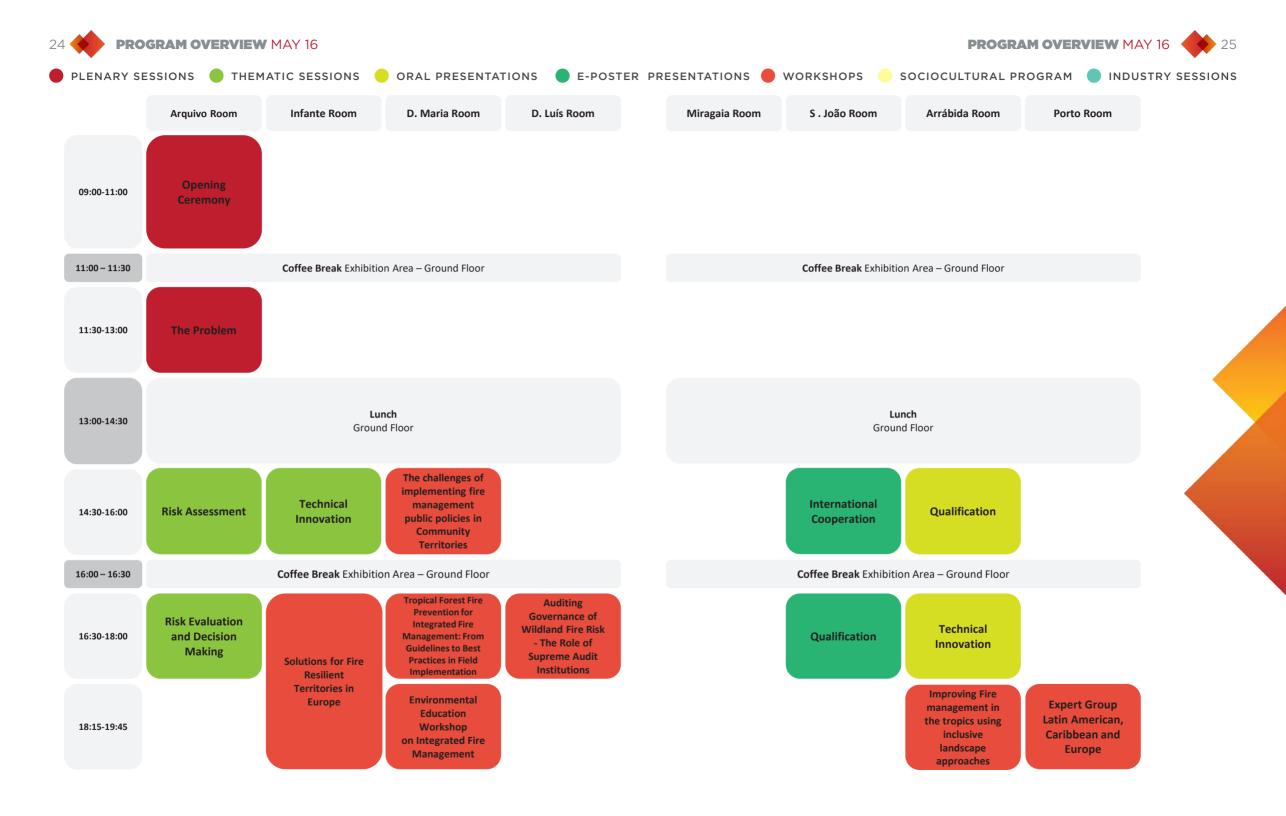








www.vallfirest.com







### PROGRAM OVERVIEW MAY 17







### PROGRAM OVERVIEW MAY 18 429







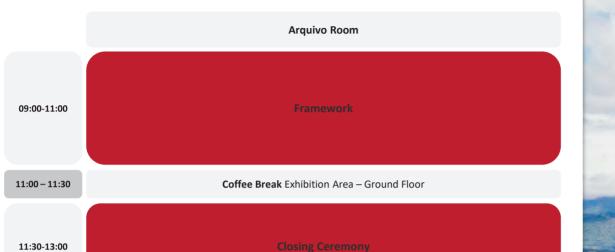


ENARY SESSIONS 🛑 THEMATIC SESSIONS POSTER PRESENTATIONS WORKSHOPS

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# **NICE FOREST, BUT DID YOU DETECT THE FIRE?**

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### MONDAY, MAY 15

6:00 PM - 8:00 PM | Welcome Cocktail & Exhibition Opening Exhibition Area | Ground Floor

### **TUESDAY, MAY 16**

#### 9:30 AM - 11:00 AM | Opening Ceremony

Arquivo Room | Plenary Session

Rui Moreira | Mayor of Porto
 António Cunha | President of the CCDR North
 Gordon Sachs | Chair of International Liaison Committee (ILC)
 Video Message António Guterres | Secretary General of the United Nations
 Tiago M. Oliveira | Chair of the 8<sup>th</sup> IWFC Organizing Committee
 Video Message Fraz Timmermans | Vice President of European Commission
 Duarte Cordeiro | Portuguese Minister of Environement and Climate Adaptation

11:00 AM - 11:30 AM | Coffee Break

Exhibition Area | Ground Floor

#### 11:30 AM - 1:00 PM | The Problem

#### Arquivo Room | Plenary Session

The session will discuss: How the world got to a point in which landscape fires are a challenge, demanding more international cooperation and governance changes. The current situation and the way ahead. Expected outcomes after an international agreement on what could be done to mitigate landscape fire risk.

Chair: Peter Moore I Director of NRFC Ltd, AU

Keynote Speaker: **Stephen Pyne** I Fire historian and Emeritus Professor, Arizona State University, USA

Panelists: Catherine Gamper I Climate Change Adaption, OECD

Alexandre Quintanilha | Member of Parliament- President of Committee Of Science and Education, PT

1:00 PM - 2:30 PM | Lunch

#### **Ground Floor**

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#### 2:30 PM - 4:00 PM | Risk Assessment

#### Arquivo Room | Thematic Session

The session will discuss: Best ways for identifying hazard, exposed elements and their vulnerability, as building blocks for risk assessment. Including predictive analytics and

projections under different scenarios, studying how different factors might impact landscap fire risk over time.

Chair: Laurent Alfonso | Senior Advisor for Civil Protection at UfM, FR Keynote Speaker: Alan Ager I FS Research Forester (Retired), USA Panelists: Carlos C. da Câmara | IDL / FCUL, PT Cathelijne Stoof | Assistant Professor Wageningen University, NL Francisco Rolo | Mayor of Oliveira do Hospital, PT

#### 2:30 PM - 4:00 PM | Technical Innovation

Infante Room | Thematic Session

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The session will discuss: Innovations that help achieve the goals of landscape management at all value chain steps, such as new platforms for monitoring and assessing risk, early warning, using satellite imagery, supporting operations or data collection. Innovations in the form of new ways of managing fuels, restoring the land or building back better protected from future events.

Chair: José Manuel Mendonça | Chairman of the Board of INESC TEC, PT

Keynote Speaker: **Domingos Viegas** | Professor/Researcher, Univ Coimbra, ADAI, Department of Mechanical Engineering, PT

Joaquin Ramirez Cisneros | Technosylva, USA Panelists: Paulo Madeira | eBUPi, PT Alexander Held | European Forest Institute

 $2:\!30\ \text{PM}$  -  $4:\!00\ \text{PM}$  | The challenges of implementing fire management public policies in Community Territories

#### D. Maria Room | Workshop

The session will discuss: Governments are primarily responsible for implementing public policies to protect against forest fires. Everywhere, laws, programs and projects are created and implemented in public and private areas. However, when these policies reach indigenous, traditional and tribal communities, several cultural aspects can influence the results of these policies, generating synergies or conflicts. Sophisticated and standardized fire management designs have been brought to these communities around the world in recent years. Often their efficiency and support were hampered by a lack of understanding and integration with their target audience.

The purpose of this session is to open space for representatives of indigenous communities, government agencies and organized civil society, with the aim of indicating the best way to avoid conflicts and create synergy in initiatives to protect against forest fires.

Speaker: Rodrigo Falleiro | PrevFogo, IBAMA, Brasília Speaker: Leonardo Gomes | Director, SOS Pantanal

2:30 PM - 4:00 PM | International Cooperation

S. João Room | E-Poster Presentations

Chair: Carolyn Enquist | US Geological Survey





PP01 (IWFC195) - WILDFIRE DISASTER RISK REDUCTION AND LANDSCAPE FIRE MANAGEMENT IN SOUTH ASIA REGION: EXPERIENCES FROM NEPAL Sundar Sharma<sup>1</sup>

<sup>1</sup>Coordinator-UNDRR-South Asia Wildland Fire Network, Nepal

PPO2 (IWFC434) - INTERREGIONAL MUTUAL ASSISTANCE IN EMERGENCIES AND CROSS-BORDER RISKS (ARIEM+ AND INTERLUMES INTERREG POPTEC PROJECTS CONTRIBUTION TO IMPROVE COORDINATION) Angel Manuel Sanchez Martin<sup>1</sup>, **Belinda Guerra Burton<sup>1</sup>**, Teresa Mompín Alvarez

<sup>1</sup>Castilla y León Regional Government, Valladolid, España

#### PP03 (IWFC431) - INTERNATIONAL COOPERATION IN FIRE MANAGEMENT -ADVANCEMENTS SINCE THE 7TH INTERNATIONAL WILDLAND FIRE CONFERENCE 2019

#### Johann Georg Goldammer<sup>1</sup>

<sup>1</sup>Global Fire Monitoring Center (GFMC), Freiburg, Germany

### PP04 (IWFC250) - INCLUSIVE FIRE-SMART LANDSCAPES AS A PROMISING APPROACH FOR EFFECTIVE WILDFIRE PREVENTION AND MANAGEMENT

**Rosalien Jezeer**<sup>1</sup>, Atiek Widayati<sup>2</sup>, Laurenz Romero<sup>4</sup>, Mercy Owusu Ansah<sup>3</sup>, Richard Ssemmanda<sup>5</sup>, John Livingstone<sup>6</sup>, Nick Pasiecznik<sup>1</sup>

<sup>1</sup>Tropenbos International, Ede, the Netherlands, <sup>2</sup>Tropenbos Indonesia, Bogor, Indonesia, <sup>3</sup>Tropenbos Ghana, Kumasi, Ghana, <sup>4</sup>Instituto Boliviana de Investigación Forestal (IBIF), Santa Cruz, Bolivia, <sup>5</sup>Ecological Trends Alliance (ETA), Kampala, Uganda, <sup>6</sup>Penha, Addis Ababa, Ethiopia

#### PP05 (IWFC491) - AN EMERGING FRAMEWORK FOR ADAPTING TO CHANGING FIRE REGIMES: REIMAGINING SCIENCE, MANAGEMENT, AND CULTURE **Acting Director**, **Sw Climate Adaptation Science Center Carolyn Enquist**<sup>1</sup>, Science Advisor Molly Hunter<sup>2</sup>

<sup>1</sup>Southwest Climate Adaptation Science Center, Southwestern US, United States, <sup>2</sup>Joint Fire Science Program, Southwestern US, USA

#### PP06 (IWFC440) - AN INNOVATIVE ASSESSMENT FRAMEWORK TO CONDUCT PEER REVIEWS ON WILDFIRE RISK MANAGEMENT UNDER THE UNION CIVIL PROTECTION MECHANISM (UCPM). Veronica Maria Casartelli<sup>1,2</sup>, Jaroslav Mysiak<sup>1,2</sup>

<sup>1</sup>Euro-Mediterranean Centre On Climate Change, Italy, <sup>2</sup>Cà Foscari University of Venice, Italy

#### PP07 (IWFC127) - HOW TO BREAK THE BARRIER TO SHARE DECISION MAKING SUPPORT AND STRATEGIC EXPERTS ON WILDFIRE SUPPRESSION **Elena Hernández Paredes**<sup>1</sup>, Ángela Iglesias Rodrigo<sup>1</sup>

<sup>1</sup>Ministry For The Ecological Transition And Demographic Challenge, Madrid, Spain

PP08 (IWFC158) - FIRE MANAGEMENT IN ETHIOPIA: PAST, PRESENT, AND FUTURE

**Solomon Zewdie**, John Livingstone, Habtemariam Kassa, Kebede Yimam, Niguse Hagazi, Amsale Shibeshi

#### <sup>1</sup>Consultant, Addis Ababa, Ethiopia

### PP09 (IWFC74) - DEVELOPMENT OF THE INTERNATIONAL POSITION PAPERS BY THE INTERNATIONAL ASSOCIATION OF WILDLAND FIRE

Alen Slijepcevic<sup>1</sup>, Toddi Steelman<sup>2</sup>, Joaquín Ramirez<sup>3</sup>

<sup>1</sup>Country Fire Authority, Melbourne, Australia, <sup>2</sup>Duke University, Durham, United States of America, <sup>3</sup>Technosylva, San Diego, United States of America

#### 2:30 PM - 4:00 PM | Qualification

#### Arrábida Room | Oral Communications

Chair: **Michael Bruce** I Director of Glen Tanar Estate, Founder of South Grampian Wildfire Group

#### OC01 (IWFC28) - CONTEXTUALIZING THE IMPLEMENTATION OF ENVIRONMENTAL EDUCATION IN INTEGRATED FIRE MANAGEMENT BY THE FEDERAL INDIGENOUS BRIGADE OF PREVFOGO/IBAMA/MA

#### Ana Rosa Marques<sup>1</sup>, Francinete Correa Pacheco<sup>1</sup>

<sup>1</sup>Instituto Brasileiro de Meio Ambiente e dos Recursos Naturais Renováveis IBAMA PREVFOGO/MA; Universidade Estadual do Maranhão UEMA, São Luis, Brasil, <sup>2</sup>Instituto Brasileiro de Meio Ambiente e dos Recursos Naturais Renováveis IBAMA/PREVFOGO/MA, São Luís, Brazil

#### OC02 (IWFC133) - THE NOLEEDI PROJECT: EFFECTS OF IFM CONDUCTED BY INDIGENOUS BRIGADES IN WILDFIRE PREVENTION AND BIODIVERSITY CONSERVATION IN A SAVANAH/WETLAND ECOTONE

Danilo Ribeiro<sup>1</sup>, Alexandre Pereira, Gilberto Pires, Rudi Laps, Fábio de Oliveira Roque, Paulo Souza, Geraldo Damasceno, Dr. leda Maria Bortolotto, Erich Fischer, Dr. Letícia Garcia, Bruno Ferreira, Fabio Bolzan, Aline Lopes, Maxwell Oliveira, Cyntia Santos, Áurea Garcia, Rafaela Nicola, Julio Fernandes, Lílian Pereira, Fernanda Santana Shakihama, Allison Ishy, Thiago Teles, Keyciane Pedrosa, Sylvia Torrecilha, Rafaela Fernandes, Ademilson Costa, Mesaque Rocha, Silvio Xavier, Rubens Ferraz <sup>1</sup>Ufms, Campo Grande, Brazil

#### OCO3 (IWFC75)- WANĪ-HÊWA PROJECT: COMBINING INDIGENOUS PEOPLES' UNDERSTANDING OF WILDFIRE WITH EXPERIENCES FROM THE NATIONAL CENTER FOR WILDFIRE PREVENTION AND SUPPRESSION (PREVFOGO) Lawrence Oliveira<sup>1</sup>, **Talita Freitas**<sup>1</sup>, Luiz Motta<sup>1</sup>, Gildimar Xerente<sup>2</sup> 'Prevfogo/Ibama, Brasília, Brazil, <sup>2</sup>Prevfogo/Ibama, Palmas, Brazil

#### OC04 (IWFC265) - WE ARE FEW, BUT WE ARE NOT ALONE - THE IMPORTANCE OF WOMEN PARTICIPATION IN WILDFIRE PREVENTION AND SUPPRESSION BRIGADE

Isis Akemi Morimoto<sup>1</sup>, **Thainan Bornato**<sup>1</sup>, Thaís Fernandes<sup>1</sup>, Ana Rosa Marques<sup>1</sup>, Mariana Momesso<sup>1</sup>

<sup>1</sup>Ibama - Brazilian Institute of the Environment and Renewable Natural Resources, related to The Ministry of the Environment, São Paulo, Brazil







OC05 (IWFC464) - THE TRAINING OF INSTRUCTORS IN WILDLAND FIREFIGHTERS COURSES: A COMPARISON BETWEEN BRAZIL, THE USA AND CHILE.

Elisa Silva<sup>1</sup>, Paula Lima<sup>1</sup> <sup>1</sup>Ibama, Brasília, Brazil

OC06 (IWFC112) - CDF. 20 YEARS OF TRAINING AND AWARENESS CAMPAIGNS: LESSONS LEARNED.

Victor Fernandez Huertas<sup>1</sup>, ENRIQUE REY VAN DEN BERCKEN<sup>1</sup> <sup>1</sup>CDF - Junta De Castilla y León, León, Spain

OC76 (IWFC77) - SPACIAL DISTRIBUITION OF INDIGENOUS FIREFIGHTERS IN RORAIMA BRAZIL: SOCIOECONOMIC AND ENVIRONMENTAL OPPORTUNITIES OF PREVFOGO'S FEDERAL BRIGADES PROGRAM IN INDIGENOUS RESERVES Joaquim Lima<sup>1</sup>, Talita Freitas<sup>2</sup>

<sup>1</sup>National Center for Wildfire Prevention and Suppression (Prevfogo/Ibama), Boa Vista, Brazil, <sup>2</sup>National Center for Wildfire Prevention and Suppression (Prevfogo/Ibama), Brasilia, Brazil

4:00 PM - 4:30 PM | **Coffee Break Exhibition Area** I Ground Floor

4:30 PM - 6:00 PM | **Risk Evaluation and Decision Making** Arquivo Room | Thematic Session

The session will discuss: Risk acceptance at various levels of engagement, and how impacts are perceived and to which extent are they deemed as acceptable. How community-driven solutions can help defining as low as possible levels of acceptable risk. How are decisions negotiated and scientific knowledge incorporated in the decision making process.

Chair: **Abílio Pereira Pacheco** | Forestwise - Collaborative Laboratory for Integrated Forest and Fire Management, PT

Keynote Speakers: **Antoine Bavandi** I Global Head of Public Sector, Parametric & Climate Resilience Solutions Gallagher Re., UK

**Richard de Neufville** I Professor of Engineering Systems at the Massachusetts Institute of Technology, USA

Panelists: Jeremy Russell-Smith | Professor at Darwin University, AU

António Cunha | President of the North Regional Coordination and Development Commission (CCDR-N)

#### 4:30 PM - 7:45 PM | Solutions for Fire Resilient Territories in Europe

#### Infante Room | Workshop

The session will discuss: Innovative technologies and socio-economic solutions for fire-resistant territories in Europe; integrated fire management; technical innovations; stakeholder engagement and risk communication strategies; as well as policy coherence Chair: **Brigite Botequim** I Senior Researcher Colab ForestWISE

#### Pau Brunet | Ctfc

Speakers: Anthony Graziari | CNR, FIRE-RES Adrian Cardil | Senior Researcher, Tecnosylva Carlos Fonseca | Chief Technology Officer, ForestWISE Marta Serra | Researcher, Ctfc Siebe Briers | EFI, FIRE-RES Antoni Trasobares | Director-coordinator FIRE-RES, Center for Forest Science and Technology de Catalunya Mar Viana | IDAEA-CSIC Conceição Colaço | Invited researcher, University of Lisbon Claudia Berchtold | Fraunhofer Institute for Technological Trend Analysis (INT) Sandra Valente | Senior reseacher, Collaborative Laboratory For Integrated Forest & Fire Management Eduard Mauri | European Forest Institute Eduard Plana | Head of Forest Policy and Risk Governance, Ctfc

#### 4:30 PM - 6:00 PM | Tropical Forest Fire Prevention for Integrated Fire Management: From Guidelines to Best Practices in Field Implementation D. Maria Room | Workshop

Forest fires in the tropics have become a major concern due to their severe impact on communities and ecosystems, as well as the economic costs they incur. In 2019 alone, forest fires in Indonesia released around 708 million tonnes of CO2 into the atmosphere. According to a new report by the UN Environment Program (UNEP) and GRID-Arendal, climate change and land-use change are projected to make wildfires more frequent and intense, and global wildfires will increase up to 14 per cent by 2030, 30 per cent by the end of 2050 and 50 per cent by the end of the century, and the regions affected by wildfires will likely increase significantly. As part of its efforts to assist member countries, ITTO has been promoting tropical forest fire guidelines as a policy reference, along with field capacity building projects in the three tropical regions. Recently, ITTO initiated two fire projects in Indonesia and Peru, which were funded under the Japanese Government's emergency assistance program. These projects aim to provide comprehensive training programs for local stakeholders on agriculture waste practices, adoption of technologies to detect and minimize fires, and improved cooperation among local institutions, the private sector and communities on forest and land fire management. The lessons learned from these projects, along with ongoing research outcomes in Ghana, will contribute to the development and implementation of forest fire policies and strategies to limit extreme forest and land fires in the tropics. Keynote Speaker: Johann Georg Goldammer | Director, Global Fire Monitoring Center (GFMC), DE

Speakers: **Lucy Amissah** | CSIR-Forestry Research Institute of Ghana **Elvira Gómez Rivero** | DG, General Directorate of Information and Forest and Wildlife Management, National Forest and Wildlife Service (SERFOR)

Bambang Hero Saharjo | Faculty of Forestry, Bogor Agricultural University (IPB), Indonesia



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#### $4{:}30\ \text{PM}$ - $6{:}00\ \text{PM}$ | Auditing governance of wildland fire risks - the role of Supreme Audit

#### Institutions

#### D. Luís Room | Workshop

The session will discuss: The role of SAIs, about the most common risks, shortcomes and recommendations concerning the governance and management of wildland fires. Chair: Helena Lopes I Member of the Portuguese Court of Auditors Speakers: Maria dos Anjos Capote I Counselor Judge of the Court of Auditors Mário Serrano I Counselor Judge of the Portuguese Supreme Court of Justice Jonathan Dent I Assistant Director in GAO's Natural Resources and Environment Cardell Johnson I Senior Executive in GAO's Natural Resources and Environment Vital do Rêgo Filho | Minister of Federal Court of Auditors Luis Antonio Padua Ortiz De Mendívil Zorrilla | Spanish Court of Auditors Morillas Gómez Javier | Spanish Court of Auditors Nikolaos Milionis I Member of the European Court of Auditors Fausto Carvalho Simões | Angolan Court of Auditors

#### 4:30 PM - 6:00 PM | Qualification

S. João Room | E-Poster Presentations

PP10 (IWFC373) - TRAINING ON THE POTENTIAL OF CERRADO FRUITS AS AN AWARENESS OF INTEGRATED FIRE MANAGEMENT IN JALAPÃO, TOCANTINS, BRAZIL.

#### Ana Rosa Marques, Genifer Oliveira1

<sup>1</sup>Instituto Federal Do Tocantins, Mateiros, Brazil

#### PP12 (IWFC495) - THE EVOLUTION OF GENDER EQUITY IN THE PREVFOGO IBAMA INTEGRATED FIRE MANAGEMENT PROGRAM IN BRAZIL Paula Lima<sup>1</sup>, Elisa Silva<sup>1</sup> 'Prevfogo/Ibama, Brasília, Brazil

#### PP13 (IWFC488) - PHYSIOLOGICAL DEMANDS OF WILDFIRES SUPPRESSION ACCORDING TO WILDLAND FIREFIGHTERS' SEX

Jose A. Rodríguez-Marroyo<sup>1</sup>, Fabio García-Heras<sup>1</sup>, José Gerardo Villa Vicente<sup>1</sup>, Jorge Gutiérrez-Gutiérrez<sup>1</sup>, MD Juan Rodríguez-Medina<sup>1</sup>, Dr Belén Carballo-Leyenda<sup>1</sup> <sup>1</sup>Department of Physical Education and Sports, Institute of Biomedicine (IBIOMED), University of León, León, Spain

#### 4:30 PM - 6:00 PM | Technical Innovation

#### Arrábida Room | Oral Communications

Chair: José Manuel Mendonça | Chairman of the Board of INESC TEC

OC07 (IWFC351) - TERRESTRIAL LASER SCANNING FOR THE ESTIMATION OF TREE VOLUME AND BIOMASS OF CONIFER STEMS TO PROJECT FIRE BEHAVIOR José Antonio Hernández-Moreno<sup>1</sup>, Dr Diego R Pérez-Salicrup<sup>1</sup>, **PhD Alejandro Velazquez<sup>2</sup>**  <sup>1</sup>Instituto de Investigaciones en Ecosistemas y Sustentabilidad, Universidad Nacional Autónoma de México, Morelia, Mexico, <sup>2</sup>Colegio de Postgraduados, Campus Montecillo, Texcoco, México

#### OC08 (IWFC378) - NASA'S WILDLAND FIRE MANAGEMENT PROGRAM

**Ana Prados**<sup>1</sup>, Dan Green<sup>2</sup>, Joanne Hall<sup>3</sup>, Amber Soja<sup>4</sup>, Jessica McCarty<sup>5</sup> <sup>1</sup>University Of Maryland, Baltimore Co., Baltimore, US, <sup>2</sup>NASA, United States, <sup>3</sup>University of Maryland College Park, United States, <sup>4</sup>National Institute of Aerospace, United States, <sup>5</sup>Miami University, United States

## OC09 (IWFC126) - SPARK OPERATIONAL: AUSTRALIA'S NEW NATIONAL BUSHFIRE SIMULATOR

John Bally<sup>1</sup>, Dr James Hilton<sup>2</sup>, Dr Andrew Sullivan<sup>3</sup>, Will Swedosh<sup>2</sup>, **Sandra Whight<sup>1</sup>** <sup>1</sup>AFAC, East Melbourne, Australia, <sup>2</sup>CSIRO Data61, Melbourne, AUSTRALIA, <sup>3</sup>CSIRO, Canberra, Australia

#### OC10 (IWFC125) - IMPLEMENTATION OF WILDFIRE TECHNOLOGY SOLUTION FOR CAL FIRE (CALIFORNIA), LESSONS LEARNED AND PATH FORWARD Philip SeLegue<sup>2</sup>, Joaquín Ramirez<sup>1</sup>

<sup>1</sup>Technosylva Inc, San Diego, United States, <sup>2</sup>California Department of Forestry and Fire Protection (CAL FIRE), Sacramento, United States

# OC11 (IWFC516) - MAPPING BURNED AREAS IN THE BRAZILIAN AMAZON USING DEEP LEARNING AND PLANETSCOPE IMAGERY.

**Leonardo Peres**<sup>1</sup>, Diogo Nunes Gonçalves<sup>1</sup>, José Marcato Junior<sup>2</sup>, Márcio Santos de Araújo<sup>2</sup>, Isabella Favero<sup>2</sup>, Wesley Nunes Gonçalves<sup>2</sup>, Renata Libonati<sup>1</sup> <sup>1</sup>Universidade Federal Do Rio De Janeiro, Brazil, <sup>2</sup>Universidade Federal do Mato Grosso do Sul, Brazil

# OC12 (IWFC226) - HYBRID ENVIRONMENTAL MONITORING FOR EARLY WILDFIRE DETECTION

**Fabrice Saffre**<sup>1</sup>, Hanno Hildmann<sup>2</sup>, Hannu Karvonen<sup>1</sup>, Timo Lind<sup>1</sup>, Mr Jukka Sassi<sup>1</sup> <sup>1</sup>VTT, Espoo, Finland, <sup>2</sup>TNO, Den Haag, The Netherlands

# OC13 (IWFC238) - ESTIMATION OF BYRAM'S FIRE INTENSITY AND RATE OF SPREAD FROMSPACEBORNE REMOTE SENSING DATA

**Gernot Ruecker**<sup>1</sup>, Amara Ouattara<sup>3</sup>, Jean-Luc Kouassi<sup>2</sup>, David Leimbach<sup>1</sup>, Djafarou Tiomoko<sup>4</sup>, Pascal Koame<sup>3</sup>, Roger Kouadio<sup>3</sup>

<sup>1</sup>Zebris Geo-it Gmbh, Germany, <sup>2</sup>Institut National Polytechnique Felix Houphouet-Boigny, Yamoussoukro, Côte d'Ivoire, <sup>3</sup>Office Ivoirien des Parcs et Réserves (OIPR), Abidjan, Côte d'Ivoire, <sup>4</sup>GIZ Gesellschaft für Internationale Zusammenarbeit GmbH, Côte d'Ivoire

#### 6:15 PM - 7:45 PM | Environmental Education Workshop on Integrated Fire Management D. Maria Room | Workshop

#### Speakers: Thainan Bornato | Ibama

**Ricardo Lopes** | Federal Employee, Brazilian Institute of Environment and Renewable Renewable Natural Resources







Ana Rosa Marques | Ibama/ Uema Thaís Michele Fernandes | IBAMA

#### 6:15 PM - 7:45 PM | Improving fire management in the tropics using inclusive landscape approaches Arrábida Room | Workshop

The session will begin with an opening statement from the chair and co-chair, setting the context for the discussion and before each panelist shares their experiences on effective stakeholder engagement in developing and implementing fire prevention and management plans. The floor will then be open for those present to raise questions and introduce their own initiatives, experiences, examples and approaches. The focus of discussions will be on identify common considerations and lessons regarding how to ensure full stakeholder engagement at all levels and throughout of fire prevention and management planning that then can be upscale to a national or regional level. At the end of the event, the English and Spanish versions of 'Towards fire-smart landscapes' will be formally launched. The event is closely connected and complementary to the Tropenbos booth at the conference. Chairs: Humberto Gómez | Tropenbos International Johann Georg Goldammer | Director, Global Fire Monitoring Center (GFMC), DE Speakers: Karen Mendoza | Bolivian Institute of Forest Investigation Solomon Zewdie | Forestry and Climate Change Consultant, ET Boakye Twumasi-Ankra | Tropenbos Ghana Lisa Tanika | Tropenbos Indonesia Richard Ssemmanda | Ecological Trends Alliance Nick Pasiecznik | Tropenbos Indonesia Luís Gomes | Tropenbos Indonesia

#### 6:15 PM - 7:45 PM | Expert Group Latin American, Caribbean and Europe Porto Room | Workshop

In this joint session between the EGFF and the EGFF LAC, we will learn about the activities in both groups, looking into synergies on wildfire management between these two different world regions that share a wealth of knowledge on the use and management of fires. The Expert Group on Forest Fires in Europe (EGFF), established in 1998, aims to bring together national fire managers in the pan-European region to discuss, learn and exchange good practices related to fire management in the countries, while supporting the European Commission in the conception and development of wildfire policies in the European Union. It is currently composed of national experts from 43 countries in Europe, Middle East and North Africa. The EGFF in Latin America and the Caribbean (EGFF LAC) was established in 2021 through the cooperation of the EU with national fire managers in the countries in LAC and international organizations involved in wildfire management such as the UN Food and Agriculture Organization (FAO), the UN Environment Program (UNEP) and the Amazon Cooperation Treaty Organization. It is currently composed of national experts from 10 countries in South America and Mexico. It aims, as its European counterpart, to facilitate the dialogue among fire managers in the region, to promote the exchange of information and good practices and to establish solid links for future cooperation activities to support regional fire policies. Speakers: **Margarita Medina** | ACTO **Pieter Van Lierop** | ACTO **Elena Hernández Paredes** | Ministry For the Ecological Transition and Demographic Challenge, ES **Ciaran Nugent** | Forest Service, IR

### WEDNESDAY, MAY 17

#### 9:00 AM - 11:00 AM | Integrated Fire Management

Arquivo Room | Plenary Session

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The session will discuss: The need for expertize and specialization of forest and civil protection activities in wildfire management. Institutional rearrangements for integrating and articulating intervention of different players. Making sure management guidelines are successfully implemented.

Chair: **José Miguel Cardoso Pereira** | Professor at ISA and Researcher at Center for Forestry Studies, University of Lisbon, PT

Keynote Speakers: **Gary Morgan** | Chairperson, Government of Victoria's Ministerial Advisory Committee on Wildland Fire Risk, AU

José Luís Carneiro | Portuguese Minister of Internal Affairs

Panelists: Marc Castellnou | Fire Chief Catalan, Fire and Rescue Service, SP

Judi Beck | Director General, Canadian Forest Service, CA

**Lara Steil** | Fire Management Officer, Forestry Division Food and Agriculture Organization of the United Nations

11:00 AM - 11:30 AM | **Coffee Break Exhibition Area** I Ground Floor

11:30 AM - 12:15 PM | **Repsol Porto Room** | Industry Session

11:30 AM - 1:00 PM | Communication

Arquivo Room | Thematic Session

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The session will discuss: Best methods to convey clear and precise messages, among relevant organizations, fostering good data-sharing. How to best communicate, in an objective manner, with citizens on matters such as exposure to risk, early warning messages and good practices, taking stock of existing channels of communication.

Chair: Fantina Maria Tedim | University of Porto, PT

Keynote Speaker: **Cathelijne Stoof** | Assistant Professor, Wageningen University , NL **Kai Lintunen** | Leader of the FAO-UNECE Forest Communicators Network (FCN) Panelists: **Sarah McCaffrey** | US Forest Service (Retired)







Nestor Alfonso Santa Maria | OECD

#### 11:30 AM - 1:00 PM | Planning

#### Infante Room | Thematic Session

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The session will discuss: Integrated fire management as a value chain that goes through major stages, from planning to post-fire, demanding a clear attribution of responsibilities and duties. Key aspects enabling planning as a consistent tool for project implementation and monitoring, fostering tighter cooperation between relevant stakeholders at different levels of administration.

Chair: **Chelene Hanes** | Wildland Fire Scientist, Natural Resources Canada Keynote Speaker: **Elena Hernández Paredes** | Ministry For the Ecological Transition and Demographic Challenge, ES

Speaker: **Timo Tolonen** | Finnish Forest Industries Federation

Panelists: Murray Dudfield | New Zealand Institute of Foresters

**Francisco Castro Rego** | Coordinator of the Fire Ecology and Management Research Area, University of Lisbon, PT

#### 11:30 PM - 1:00 PM | Integrated Fire Management in resource poor countries D. Maria Room | Workshop

The session will discuss: How can Integrated Fire Management principles be successfully replicated and brought to scale in resource-poor (Global South /African) countries? Knowledge capture of IFM practices that are transferable and scaleable Africa is the Fire Continent! In a world where the need for IFM application will always outweigh resources available, participants will explore what IFM governance, protocols, principles and practices can successfully accommodate community-based governance and implementation in resource poor African countries – and what Africa can share with the rest of the world about community-driven IFM. The workshop brings together delegates from international organizations and African countries to discuss past training, knowledge and support that has been relevant, transferable and scaleable, providing real examples of what has and has not worked, and why, as well as what we can strive towards in the years ahead. Key speakers will be joined by rapid-fire presentations from African country participants before we move into an open session, writing up lessons learned.

Chair: Val Charlton | Workshop co-ordination LANDWORKS, South Africa

Speakers: **Bill DeGroot** | Fire Danger and Fire Behaviour specialist /Canadian Forest Service (Retired)

Tim Murphy | USFS IP Africa Program

**Natasha Ribeiro** I Professor in the Department of Forest Engineering, Eduardo Mondlane University, Mozambique

#### 11:30 AM - 1:00 PM | Stakeholder Engagement

S. João Room | E-Poster Presentations

PP14 (IWFC283)- WILDFIRE POLICIES ACROSS COUNTRIES: IDENTIFYING

GOALS, INSTRUMENTS, AND IMPLEMENTING ACTORS Gabriela Huidobro<sup>1</sup>, Lukas Giessen<sup>1</sup>, Sarah L. Burns<sup>1,2</sup>

<sup>1</sup>Technical University of Dresden, Dresden, Germany, <sup>2</sup>Universidad Nacional de la Plata, La Plata, Argentina

#### PP15 (IWFC510) - INSTITUTIONAL ARRANGEMENTS LED BY CIVIL SOCIETY ORGANIZATIONS THAT CONTRIBUTE TO FIRE PROTECTION AND FIRE MANAGEMENT IN MEXICO.

**Rossana Landa**<sup>1</sup>, Juan Frausto<sup>1</sup> <sup>1</sup>Fondo Mexicano Para La Conservación De La Naturaleza. Covoacán. Mexico

# PP16 (IWFC42) - ASSESEMENT OF FOREST FIRE VIDEO MONITORING AND SURVEILANCE SYSTEM OPERATORS ATTENTION FROM EEG SIGNAL

**Kristina Zovko**<sup>1</sup>, Ljiljana Šerić<sup>1</sup>, Assesement of forest fire video monitoring and surveilance system operators attention from EEG signal Damir Krstinić<sup>1</sup>, Assesement of forest fire video monitoring and surveilance system operators attention from EEG signal Petar Šolić<sup>1</sup>, Assesement of forest fire video monitoring and surveilance system operators attention from EEG signal Toni Perković<sup>1</sup>

<sup>1</sup>Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University of Split, Split, Croatia

# PP17 (IWFC5) - A COMPREHENSIVE HEALTH & SAFETY PROGRAM FOR WILDLAND FIREFIGHTERS

#### Kerry Kuehl<sup>1</sup>

<sup>1</sup>Oregon Health & Science University, Portland, USA

PP18 (IWFC99) - WHERE ARE THE WOMEN IN BRAZIL'S FIRE MANAGEMENT SCENARIO? WORKING TOWARDS GENDER EQUITY IN FIRE RISK GOVERNANCE **Ana Violato Espada**<sup>1</sup>, Marcelo Siqueira de Oliveira, Camila de Souza Lobo, Lara Steil <sup>1</sup>U.S. Forest Service International Programs Brazil, Alter do Chão/Santarém, Brazil

PP19 (IWFC472) - VOLUNTEER AND COMMUNITY BRIGADES: EXPERIENCES FROM THE 1ST MEETING OF BEST PRACTICES IN VOLUNTEERING IN PROTECTED AREAS IN BRAZIL

**Helaine Saraiva Matos**<sup>1</sup>, Angela Pellin<sup>2</sup>, Jayleen Vera<sup>1</sup>, Suelene Couto<sup>1</sup>, Marcelo Siqueira de Oliveira<sup>1</sup>

<sup>1</sup>U.S. Forest Service International Programs, Brasilia, Brazil, <sup>2</sup>IPÊ - Instituto de Pesquisas Ecológicas, Niterói, Brazil

#### PP20 (IWFC347) - SOCIAL VULNERABILITY AND WILDFIRE OCCURRENCE IN THE CONTERMINOUS US (1984-2018): CONSIDERATIONS FOR RISK MANAGEMENT

**Miranda Mockrin**<sup>1</sup>, Ronald Schumann, Richelle Winkler, Julia Petersen <sup>1</sup>USDA Forest Service, Northern Research Station, Catonsville, United States

PP21 (IWFC523) - (RN21) - PROMOTING NATURAL RESIN TO IMPROVE FOREST RESILIENCE







Joana Vieira, M. Marques<sup>1</sup>, A. Marques<sup>1</sup>, Carlos Fonseca<sup>1,3</sup>, R. Rodrigues<sup>1</sup>

<sup>1</sup>ForestWISE – Collaborative Laboratoy for Integrated Forest & Fire Managment, Quinta de Prados, Campus da UTAD, 5001-801 Vila Real, Portugal, <sup>2</sup>Center for Functional Ecology, Department of Life Sciences, University of Coimbra, Calçada Martim de Freitas, 3000-456 Coimbra, Portugal, <sup>3</sup>CESAM and Department of Biology, Campus de Santiago, University of Aveiro, 3810-193 Aveiro, Portugal

#### PP22 (IWFC284) - PARTICIPATIVE METHODOLOGIES TO DESIGN PUBLIC POLICIES TOWARDS ENERGY TRANSITION: THE CASE OF THERMAL ENERGY WITH FOREST BIOMASS

**Amélia Branco**, Idalina Dias Sardinha, Ricardo Rodrigues<sup>1</sup>, Sandra Faustinho <sup>1</sup>ISEG - Lisbon School of Economics and Management, Portugal

#### PP23 (IWFC32) - KEY GOVERNANCE PRACTICES THAT FACILITATE THE USE OF REMOTE SENSING INFORMATION FOR FIRE MANAGEMENT IN SOUTHERN EUROPE

Ana Prados<sup>1</sup>, Camila Rodriguez<sup>2</sup>, Dan Green<sup>2</sup>

<sup>1</sup>University of Maryland, Baltimore Co., Baltimore, United States, <sup>2</sup>NASA, Washington, United States

# PP24 (IWFC141) - CO-CREATING ADAPTATION PATHWAYS TO WILDLAND FIRE IN CATALONIA

**Kathleen Uyttewaal**<sup>1,2</sup>, Núria Prat Guitart<sup>1</sup>, ER (Lisa) Langer<sup>3</sup>, Fulco Ludwig<sup>2</sup>, Carolien Kroeze<sup>2</sup> <sup>1</sup>Pau Costa Foundation, Barcelona, Spain, <sup>2</sup>Wageningen University & Research, Wageningen, Netherlands, <sup>3</sup>Scion, Christchurch, New Zealand

#### PP25 (IWFC348) - BUILDING BRIDGES FOR PREVENTION AND TIMELY RESPONSE TO FOREST FIRESIN GUARAYOS REGION, BOLIVIA

**Karen Mendoza**<sup>1</sup>, Laurenz Romero<sup>1</sup>, Juan Pablo Baldiviezo<sup>1</sup>, Nataly Ascarrunz<sup>1</sup> <sup>1</sup>Instituto Boliviano De Investigacion Forestal, Santa Cruz de la sierra, Bolivia, Plurinational State of America

PP26 (IWFC493) - INDIGENOUS WOMEN IN THE CONSERVATION OF ANCESTRAL KNOWLEDGE OF FOREST FIRE IN MICHOACÁN, MEXICO.

**Erika Garduño-Mendoza**<sup>1</sup>, Diego Rafael Perez Salicrup <sup>1</sup>lies-unam. Morelia. México

### PP27 (IWFC34) - MAPPING THE ROLES OF MULTIPLE STAKEHOLDERS IN FIRE MANAGEMENT IN GHANA'S FOREST AND TRANSITION LANDSCAPE

**Isaac Nunoo**<sup>1</sup>, Mercy Owusu Ansah, Joseph Asante, Eric Osei, Boakye Twumasi-Ankrah <sup>1</sup>Tropenbos Ghana, Kumasi, Ghana

#### 11:30 AM - 1:00 PM | International Cooperation

#### Arrábida Room | Oral Communications

Chair: Johann Georg Goldammer | Director, Global Fire Monitoring Center (GFMC), DE

OC17 (IWFC479) - REMOTE TRAINING ABOUT WILDFIRES: ONLINE COURSES OF

THE UNITED STATES NATIONAL FOREST FIRE COORDINATION GROUP (NWCG) APPLIED IN BRAZIL

Helaine Saraiva Matos<sup>1</sup>, Jayleen Vera<sup>1</sup>, Marcelo Siqueira de Oliveira<sup>1</sup>, Suelene Couto<sup>1</sup>, Lorena Brewster<sup>1</sup>

<sup>1</sup>U.S. Forest Service International Programs, Brasilia, Brazil

# OC14 (IWFC156)- TOWARDS FIRE-SMART LANDSCAPES - GLOBAL EXPERIENCES AND KEY LESSONS

Nick Pasiecznik<sup>1</sup>, Johann Georg Goldammer, Bibiana Bilbao, Atiek Widayati<sup>1</sup>, Harifidy Rakoto Ratsimba, **Rosalien Jezeer**<sup>1</sup>

<sup>1</sup>Tropenbos International, Ede, The Netherlands

#### OC15 (IWFC252) - LANDSCAPE FIRE MANAGEMENT IN THE WESTERN BALKANS - JOINT EFFORTS FOR REGIONAL LANDSCAPE FIRE RESILIENCE

**<u>Cvetan Nikolovski</u>**<sup>1</sup>, Marija Sterjovska<sup>1</sup>, Nikola Nikolov<sup>2</sup>

<sup>1</sup>Farmahem, Skopje, North Macedonia, <sup>2</sup>Regional Fire Monitoring Centar, Skopje, North Macedonia

#### OC16 (IWFC335) - USAID/US FOREST SERVICE SOUTH AMERICA REGIONAL FIRE PROGRAM SUPPORT FOR STANDARD INTERAGENCY FIRE MANAGEMENT QUALIFICATION SYSTEMS

Isidoro Solis<sup>1</sup>, Naomi Mills<sup>2</sup>, Jayleen Vera<sup>3</sup>, Óscar Rodríguez<sup>4</sup>, Juan Ramón<sup>5</sup>, Franco Pinatte<sup>6</sup>, **Henrique Costa<sup>7</sup>** 

<sup>1</sup>U.S. Forest Service - International Programs, USA, <sup>2</sup>U.S. Forest Service - International Programs, USA, <sup>3</sup>U.S. Forest Service - International Programs, USA, <sup>4</sup>U.S. Forest Service -International Programs, Mexico, <sup>5</sup>U.S. Forest Service - International Programs, Mexico, <sup>6</sup>U.S. Forest Service - International Programs, Perú, <sup>7</sup>U.S. Forest Service - International Programs, Perú

# OC18 (IWFC426) - FIRE MANAGEMENT ASSESSMENT IN BRAZIL: STATUS OF INTEGRATED FIRE MANAGEMENT AND WILDFIRES IN BRAZIL

Marcelo Siqueira de Oliveira<sup>1</sup>, **Henrique Costa**<sup>1</sup>, Isidoro Solis<sup>1</sup>, Jayleen Vera<sup>1</sup>, Rafael Aguado<sup>1</sup>, Forrest Behm<sup>1,2</sup>, Helaine Matos<sup>1</sup>

<sup>1</sup>USFS - Office of International Programs, <sup>2</sup>USFS - Payette National Forest

OC19 (IWFC103) - EGIF INTERNATIONAL EXCHANGE PROGRAM. THREE COUNTRIES AND FIVE ORGANIZATIONS SHARING VISIONS AND EXPERIENCES ON CHILEAN FIRE SCENARIOS Juan Caamaño Azcárate<sup>1</sup>, Jorge Saavedra<sup>1</sup> <sup>1</sup>Pau Costa Foundation, Spain

# OC20 (IWFC48) - CURRENT OPPORTUNITIES AND CHALLENGES FOR WILDFIRE RISK REDUCTION IN WESTERN EUROPE

**Hugo Lambrechts**<sup>1</sup>, Marta Serra, Fulco Ludwig, Carolien Kroeze, Spyridon Paparrizos, Cathelijne Stoof, Eduard Plana <sup>1</sup>Wageningen University and Research, Wageningen, Netherlands







#### 1:00 PM - 2:30 PM | **Lunch**

**Ground Floor** 

#### 2:30 PM - 4:00 PM | International Cooperation

### Arquivo Room | Thematic Session

The session will discuss: International long-term commitment to fields such as standards of operation, training, cross-border cooperation and knowledge sharing. Promoting international mechanisms assuring a cross-sectoral approach to landscape fire management getting participating countries to follow a common set of guiding principles. Sharing good practices from around the world.

Chair: Johann Georg Goldammer | Director, Global Fire Monitoring Center (GFMC), DE Keynote Speakers: Esra Buttanri | OSCE

Julia Haas | Forest Europe Secretariat LUBo

**Gavriil Xanthopoulos** | Hellenic Agricultural Organization "Dimitra", Institute Of Mediterranean Forest Ecosystems

Panelists: **Gary Morgan** | Chairperson, Government of Victoria's Ministerial Advisory Committee on Wildland Fire Risk, AU

**Lara Steil** I Fire Management Officer, Forestry Division Food and Agriculture Organization of the United Nations

#### 2:30 PM - 4:00 PM | Preparation & Prevention

Infante Room | Thematic Session

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The session will discuss: Implementing initiatives that reduce exposure and vulnerability to landscape fires, and also make for best safety practices at the community level. Taking stock of the plural use of resources, considering priorities and current hazard conditions.

Chair: Gordon Sachs | United States Forest Service

Keynote Speakers: **Paulo Fernandes** | Researcher, University of Trás-os-Montes and Alto Douro, PT

Owen Price | University of Wollongong, AU

Panelists: **José Manuel Duarte da Costa** | President of the Portuguese Civil Protection Agency **Humberto Rosa** | Director for Biodiversity, DG Environment, European Commission

7:30 PM | Book Presentation Fire Science: From Chemistry to Landscape Management D. Maria Room | Cultural Session

D. Luís Room | Oral Communications

Chair: Eduardo Simões | Integrated Researcher at DINÂMIA'CET-ISCTE

OC21 (IWFC505) - THE IMPORTANCE OF DATA IN DISASTER MANAGEMENT: A LOOK AT VOST PORTUGAL'S INITIATIVES IN REAL-TIME INFORMATION SHARING AND DISINFORMATION PREVENTION Isabel Silva<sup>1</sup>, **João Ribeiro**<sup>1,2</sup>, Marco Maia<sup>1</sup>, Jorge Gomes<sup>1</sup> <sup>1</sup>VOST PT, Portugal, <sup>2</sup>CEG-IST

#### OC22 (IWFC217) - RISK COMMUNICATION EFFECTIVENESS TO MITIGATE HUMAN-CAUSED RURAL FIRES: THE MENTAL MODEL APPROACH APPLIED IN TWO EUROPEAN UNION PROJECTS

Mayara Souza<sup>1,2</sup>, **Abílio Pereira Pacheco<sup>3,1,2</sup>**, Jorge Grenha Teixeira<sup>1,2</sup>, José M. C. Pereira<sup>4</sup>, Maria Inês Lago<sup>1</sup>

<sup>1</sup>Faculty of Engineering of the University of Porto, Porto, Portugal, <sup>2</sup>INESC TEC, Porto, Portugal, <sup>3</sup>ForestWISE, Collaborative Laboratory for Integrated Forest & Fire Management, Vila Real, Portugal, <sup>4</sup>Forest Research Centre, School of Agriculture, University of Lisbon, Lisbon, Portugal

OC23 (IWFC29) - WHAT CAN WE LEARN FROM COMMUNITY-BASED WILDFIRE INITIATIVES? A CASE FOR MORE SITUATED APPROACHES TOWARDS LIVING WITH WILDFIRE

#### Isabeau Ottolini<sup>1</sup>

<sup>1</sup>Open University of Catalonia, Barcelona, Spain

OC24 (IWFC445) - WILDFIRE RISK COMMUNICATION VIA NEWS MEDIA: BRIDGING THE GAP BETWEEN JOURNALISTS' APPROACHES AND SCIENTIFIC CREDIBILITY

**<u>Stefan Doerr</u><sup>1</sup>**, Dr. Cristina Santin<sup>2</sup>

<sup>1</sup>Swansea University, United Kingdom, <sup>2</sup>Spanish National Research Council - University of Oviedo, Mieres, Spain

# OC25 (IWFC39) - EDUCATING FOR PREPAREDNESS: A REVIEW OF WILDFIRE EDUCATIONAL MATERIAL WORLDWIDE

**Renata Martins Pacheco**<sup>1</sup>, Catarina Sequeira, Iryna Skulska, Conceição Colaço <sup>1</sup>Ceabn/isa

#### OC26 (IWFC449) - REGIONAL EASTERN AFRICA FIRE MONITORING RESOURCE CENTER: THE ROLE OF OPEN ACCESS SPATIAL TOOLS FOR STAKEHOLDER ENGAGEMENT IN FIRE MANAGEMENT

**Harifidy Rakoto Ratsimba**<sup>1</sup>, Gaston Hedwigino Tahintsoa<sup>1</sup>, Dimby Raherinjatovoarison<sup>1</sup>, Haritiana Zacaharie Rakotoarinivo<sup>1</sup>, Rajira Nambinintsoa Ratsimandresy<sup>1</sup>, Johann Georg Goldammer<sup>2</sup>

<sup>1</sup>LLanddev Research Lab, Antananarivo, Madagascar, <sup>2</sup>Global Fire Monitoring Center, Freiburg, Germany

OC27 (IWFC324) - EXAMINING BUSHFIRE PREPAREDNESS AND COMMUNITY RESILIENCE IN THE CHANGING SOCIAL LANDSCAPE OF HALLS GAP, AUSTRALIA Gabrielle Miller<sup>1</sup>, Andrea Rawluk<sup>1</sup>

<sup>1</sup>The University Of Melbourne, Parkville, Australia





<sup>2:30</sup> PM - 4:00 PM | Communication



#### 2:30 PM - 4:00 PM | Technical Innovation

S. João Room | E-Poster Presentations Chair: Carlos Viegas | SIM4SAFETY

# PP28 (IWFC408) - 3D- FINE-SCALE FUEL CLASSIFICATION FROM TERRESTRIAL POINT CLOUDS USING ARTIFICIAL INTELLIGENCE

**Diego Laino**<sup>1</sup>, Carlos Cabo<sup>3,1</sup>, Celestino Ordonez<sup>3</sup>, Stefan Doerr<sup>1</sup>, Cristina Santin<sup>2,1</sup> <sup>1</sup>Centre For Wildfire Research, Swansea University, Swansea, United Kingdom, <sup>2</sup>Research Institute of Biodiversity (IMIB, CSIC - University of Oviedo - Principality of Asturias), Mieres, Spain, <sup>3</sup>Dept. of Mining Exploitation and Prospecting, University of Oviedo, Oviedo, Spain

# PP29 (IWFC176) - THE USE OF RPAS TECHNOLOGIES AS AN INTELLIGENCE AND HUMAN RESOURCE TOOL DURING ACTIVE WILDFIRES.

**George Leblanc**<sup>1</sup>, Gabriela Ifimov<sup>1</sup>, Margaret Kalacska<sup>2</sup>, Juan Pablo Arroyo-Mora<sup>1</sup>, Oliver Lucanus<sup>2</sup>

<sup>1</sup>National Research Council Canada, Ottawa, Canada, <sup>2</sup>Applied Remote Sensing Laboratory, McGill University, Quebec, Canada

#### PP30 (IWFC185) - SEMI-AUTONOMOUS ROBOTIC PLATFORMS FOR FOREST FUEL MANAGEMENT AND FIRE FIGHTING

**Carlos Viegas**<sup>1</sup>, Sérgio Cruz<sup>2</sup>, Maria Araújo<sup>3</sup>, João Ruas<sup>2</sup>, Francisco Cruz<sup>2</sup>, Tiago Gameiro<sup>2</sup>, Tiago Pereira<sup>2</sup>, Daniela Ferreira<sup>3</sup>, Mihail Babcinschi<sup>2</sup>, Jacinto Reis<sup>3</sup>

<sup>1</sup>Bold Robotics Lda., Coimbra, Portugal, <sup>2</sup>University of Coimbra, Coimbra, Portugal, <sup>3</sup>Jacinto Marques de Oliveira Sucrs Lda., 184, R. do Campo Grande 132, 3885-530 Esmoriz, Portugal

# PP31 (IWFC517) - PATCH MOSAIC BURNING IN VENEZUELA - AN EXAMPLE OF TRADITIONAL KNOWLEDGE TRANSFERRED TO GOVERNMENT PRACTICE

**Bibiana Bilbao**<sup>1</sup>, Magister Adriana Millán, General Miguel Matany Luque, Lieutenant Colonel (B) José Biskys Ardila, First Commander Germán Gutiérrez, Carlos Méndez-Vallejo, Roberto Rivera-Lombardi, Lieutenant Colonel (B) Elías León, Dr Rosalba Gómez-Martínez, Lic. Efrain León

<sup>1</sup>Universidad Simón Bolívar, Caracas, Venezuela, Bolivarian Republic of Venezuela

# PP32 (IWFC140) - A SEGMENTATION APPROACH FOR AUTOMATIC MONITORING OF BURNED AREA USING SENTINEL-2 IMAGERY

Sílvia Catarino<sup>1</sup>, João M. N. Silva<sup>1</sup>, **Alana K. Neves**<sup>1</sup>, Manuel L Campagnolo<sup>1</sup>, Valentine Aubard<sup>2</sup>, Duarte Oom<sup>3</sup>, Renata Libonati<sup>1,4</sup>, José Miguel Cardoso Pereira<sup>1</sup>

<sup>1</sup>Forest Research Centre, School of Agriculture, University of Lisbon, Tapada da Ajuda, Lisboa, Portugal, <sup>2</sup>French National Institute for Agriculture, Food, and Environment (INRAE), Aix-en-Provence, France, <sup>3</sup>European Commission, Joint Research Centre, Ispra Site, Ispra, Italy, <sup>4</sup>Department of Meteorology, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

# PP33 (IWFC60) - MANAGING EMERGENCIES WITH A XR VIRTUAL SITUATION ROOM

**Gustavo Medina del Rosario**<sup>1</sup>, Francisco Prieto <sup>1</sup>The Singular Factory Group LLC, Miami, USA

### PP34 (IWFC177) - CO-CREATION OF KNOWLEDGE AND TOOLS TO SUPPORT BETTER DECISION-MAKING IN FIRE SUPPRESSION IN PORTUGAL

**Aki Benali**¹, Fábio Silva², Ana C.L. Sá¹

<sup>1</sup>Instituto Superior De Agronmia, Portugal, <sup>2</sup>Força Especial de Emergência e Proteção Civil, Portugal

#### PP35 (IWFC67) - GLOBAL TO LOCAL: NASA'S FIRE INFORMATION FOR RESOURCE MANAGEMENT SYSTEM (FIRMS) SUPPORTING INTEGRATED FIRE MANAGEMENT

**LANCE Operations Manager Diane Davies**<sup>1</sup>, Jenny Hewson<sup>1</sup>, Veerachai Tanipat<sup>3</sup>, Brad Quayle<sup>2</sup>, Otmar Olsina<sup>1</sup>, Asen Radov<sup>1</sup>, Greg Ederer<sup>1</sup>

<sup>1</sup>NASA GSFC, Greenbelt, USA, <sup>2</sup>USDA Forest Service, Salt Lake City, USA, <sup>3</sup>Kasetsart University, Bangkok, Thailand

# PP36 (IWFC458) - FORECASTING METEOROLOGICAL FIRE DANGER WITH A STATISTICAL MODEL OF FIRE RADIATIVE POWER

**Sílvia A. Nunes**<sup>1</sup>, Carlos C. DaCamara<sup>1</sup>, Ricardo M. Trigo<sup>1</sup>, Isabel F. Trigo<sup>2</sup>, Celia M. Gouveia<sup>2</sup>, Renata Libonati<sup>3</sup>, Liz Belém<sup>3</sup>

<sup>1</sup>IDL, Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal, <sup>2</sup>Instituto Português do Mar e da Atmosfera, Portugal, <sup>3</sup>Departamento de Meteorologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil

#### PP37 (IWFC340) - CLIMATE CHANGE MITIGATION IN AFRICA : MAIN GREENHOUSE GAZ EMITTED ACCORDING TO FIRE SEASONS IN GUINEAN SAVANNA (WEST AFRICA)

**Aya Brigitte N'Dri**<sup>1</sup>, Aka Jean-Noel Kpré<sup>1</sup>, Coulibaly Losseny<sup>1</sup> <sup>1</sup>Laboratory of Ecology and Sustainable Development / Laboratory of Botany and Valorisation of Plant diversity, Faculty of Natural Sciences, Abidjan, Côte d'Ivoire

# PP38 (IWFC286) - ASSESSMENT AND ENHANCEMENT OF OPERATIONAL WILDFIRE MODELING

**Dr. Adrian Cardii**<sup>1</sup>, Joaquín Ramirez<sup>1</sup>, Santiago Monedero<sup>1</sup>, Philip SeLegue<sup>2</sup>, Sergio de-Miguel<sup>3</sup>, Geoff Marshall<sup>2</sup>, Tim Chavez<sup>2</sup>, Scott Purdy<sup>1</sup>, Raul Quilez<sup>1</sup>, Carlos Alberto Silva<sup>4</sup> <sup>1</sup>Technosylva Inc, La Jolla, San Diego, USA, <sup>2</sup>CAL FIRE Sacramento HQ Intel, Sacramento, USA, <sup>3</sup>Department of Crop and Forest Sciences, University of Lleida, Lleida, Spain, <sup>4</sup>Forest Biometrics and Remote Sensing Laboratory (Silva Lab), School of Forest, Fisheries, and Geomatics Sciences, University of Florida, Gainesville, USA

# PP39 (IWFC218) - ARBARIA: ARTIFICIAL INTELLIGENCE FOR WILDLAND FIRE PREDICTION AND ASSESSMENT.

**Celia García Feced**<sup>1</sup>, José Cubo María<sup>1</sup>, Faustino Sánchez García<sup>2</sup> <sup>1</sup>Wildland Fire Management Service - Ministry for the Ecological Transition and the Demographic Challenge, Madrid, Spain, <sup>2</sup>SG Information and Communication Technologies -Ministry of Agriculture, Fisheries and Food, Madrid, Spain

PP40 (IWFC94) - AN OVERVIEW OF THE NASA ADVANCED CAPABILITIES FOR







EMERGENCY RESPONSE OPERATIONS PROJECT

Marcus Johnson<sup>1</sup> <sup>1</sup>NASA Ames Research Center, Moffett Field, United States

PP41 (IWFC183) - A WEB-BASED OPERATIONAL WILDFIRE MONITORING AND DECISION-SUPPORT TOOL - FEB MONITORIZAÇÃO (FM) <u>Alexandre Penha</u><sup>1</sup>, Carlos Mota<sup>1</sup>, Fábio Silva<sup>1</sup> 'ANEPC, Portugal

#### 2:30 PM - 4:00 PM | Stakeholder Engagement

Arrábida Room | Oral Communications Chair: Sarah McCaffrey | US Forest Service (Retired)

# OC28 (IWFC508) - IMPROVING WILDFIRE PREPAREDNESS: LESSONS FROM A SCHOOL RADIO EDUCATIONAL PROGRAM

Jose Azevedo<sup>1</sup>, **Fantina Maria Tedim**<sup>1</sup>, Isabel Reis<sup>1</sup>, Miguel Midões<sup>1</sup>, Filipa Pereira<sup>1</sup>, Ivone Santos<sup>1</sup>, Susana Neves<sup>1</sup>, João Barreiros<sup>1</sup>, Raquel Torres<sup>1</sup> <sup>1</sup>Porto University, Portugal

#### OC29 (IWFC52) - MONCHIQUE'S INNOVATION LABORATORY - A SPACE FOR DIALOGUE AND KNOWLEDGE SHARING TO FOSTER COMMUNITY-BASED DISASTER RISK REDUCTION IN FOREST-PRONE AREAS

Maria Partidário, **Joana Dias**<sup>1</sup>, Guilherme Saad, Ana Soares, Isabel Loupa Ramos, Rute Martins, Margarida Monteiro

<sup>1</sup>Instituto Superior Técnico, Lisbon, Portugal

# OC30 (IWFC13) - WATER UTILITY RISK PERCEPTIONS AND ENGAGEMENT IN WILDFIRE MITIGATION ACTIVITIES IN WATERSHEDS IN THE WESTERN UNITED STATES

Kelly Jones<sup>1</sup>, Julie Padowski<sup>2</sup>, Melinda Morgan<sup>3</sup>

<sup>1</sup>Colorado State University, Fort Collins, United States, <sup>2</sup>Washington State University, Pullman, United States, <sup>3</sup>University of New Mexico, Albuquerque, United States

# OC31 (IWFC175) - ADDRESSING EQUITY AND JUSTICE IN INTEGRATED WILDFIRE RISK MANAGEMENT

**Eduard Plana**<sup>1</sup>, Thomas Schinko<sup>2</sup>, Claudia Berchtold<sup>3</sup>, John Handmer<sup>2</sup>, Teresa Deubelli-Hwang<sup>2</sup>, JoAnne Linnerooth-Bayer<sup>2</sup>, Eva Preinfalk<sup>2</sup>, Anna Scolobig<sup>2</sup>, Marta Serra<sup>1</sup>

<sup>1</sup>Forest Science And Technology Centre Of Catalonia, Spain, <sup>2</sup>International Institute for Applied Systems Analysis (IIASA), Austria, <sup>3</sup>Fraunhofer Institute for Technological Trend Analysis INT, Germany

OC32 (IWFC481) - CLIMATE-ADAPTED FIRE RISK MANAGEMENT: AN INTEGRATED PORTFOLIO APPROACH FOR THE SOUTHWESTERN USA Acting Director, Sw Climate Adaptation Science Center Carolyn Enquist<sup>1</sup>

<sup>1</sup>US Geological Survey, Southwestern US, United States

OC33 (IWFC344) - A PARTICIPATORY METHODOLOGICAL APPROACH FOR POLICY DESIGN IN THE FOREST SECTOR Sandra Valente<sup>1</sup>, Alexandra Marques<sup>1</sup>, Marta Martins<sup>1</sup>, Carlos Fonseca<sup>1</sup> <sup>1</sup>ForestWISE, Vila Real, Portugal

OC34 (IWFC419) - BUILDING INDIGENOUS FIRE MANAGEMENT IN SOUTH AMERICA. THE EXPERIENCES OF PARUPA INTERNATIONAL NETWORK & CIR (RORAIMA INDIGENOUS COUNCIL), BRAZIL.

#### Vincenzo Lauriola<sup>1</sup>, Sineia Bezerra do Vale<sup>2</sup>

<sup>1</sup>Mcti Ministerio de Ciencia Tecnologia & Inovação, Brasilia, Brazil, <sup>2</sup>CIR Conselho Indigena de Roraima, Boa Vista, Brazil

4:00 PM - 4:30 PM | **Coffee Break Exhibition Area** I Ground Floor

4:30 PM - 6:00 PM | Stakeholder Engagement Arguivo Room | Thematic Session

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The session will discuss: How the complexity of landscape fire management might call for new models of engaging multiple stakeholders, including regulatory bodies, industry experts, scientists, researchers and local communities. Laying ground for more participatory procedures allowing for discussion and negotiation at all jurisdictional levels.

Chair: **Michael Czaja** | American Red Cross Volunteer and Affiliate Appointment, Colorado State University

Keynote Speaker: Sarah McCaffrey | US Forest Service (Retired)

Egbert Schram (remote) | CEO, Hofstede Insights

Panelists: **Natasha Ribeiro** | Professor in the Department of Forest Engineering, Eduardo Mondlane University, Mozambique

**Richard de Neufville** | Professor of Engineering Systems in the Institute for Data, Systems, and Society at the Massachusetts Institute of Technology, USA

4:30 PM - 6:00 PM | Global Wildland Fire Network (GWFN) - Use Cases Infante Room | Workshop

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The Global Wildland Fire Network (GWFN) session will provide an opportunity to brief conference participants on the advancements of the work of in the 14 Regional Wildland Fire Networks and the eight Regional Fire Management Resource Centers. Following the format of the IWFCs since 2003, the regional coordinators/chairs of the GWFN provide a regional statement and a poster (displayed in a separate poster session), which summarize the developments in the regions between the last and the current IWFC.

The session aims at providing a focused, straightforward overview of the GWFN. Additional emphasis is on presenting selected best cases of successful and sustainable Integrated Fire Management (IFM) / governance projects / activities that show successful and sustainable







application of IFM principles.

Chair: Johann Georg Goldammer | Director, Global Fire Monitoring Center (GFMC), DE Oyunsanaa Byambasuren | National Forest Agency of Mongolia

Speakers: **Lucy Amissah** | Forestry Research Institute of Ghana, Council For Scienctific and Industrial Research

Harifidy Rakoto Ratsimba | Head of Regional Eastern Africa Fire Management Resource Center (REAFMRC)

Sundar Sharma | Undrr-south Asia Wildland Fire Network

**Bambang Hero Saharjo** | Faculty of Forestry, Bogor Agricultural University (IPB), Indonesia **Sergiy Zibtsey** | Regional Eastern Europe Fire Monitoring Center

Nikola Nikoloy | Head of Regional Fire Monitoring Center

**Elena Hernández Paredes** | Ministry For The Ecological Transition And Demographic Challenge, ES

**Gavriil Xanthopoulos** | Hellenic Agricultural Organization "Dimitra", Institute of Mediterranean Forest Ecosystems

Harald Vacik | University of Natural Resources and Life Sciences

Mariana Senra de Oliveira | Analista ambiental, Ibama/prevfogo

**Daniel Segura** | Ministerio del Ambiente, Agua y Transición Ecológica del Ecuador **Diego Román** | Coordinator of the National Fire Management Program – SINAC-MINAE

National Commission on Forest Fires (CONIFOR)

**David Nugent** | Director Fire, Environment, Land and Water at Parks Victoria Jerome Perez | US Forest Service

#### 4:30 PM - 6:00 PM | Wildfire Women Group

#### D. Maria Room | Workshop

Objectives: To discuss and strengthen women's role, participation, and inclusion in integrated fire management worldwide. To raise awareness about challenges women face both working with, and as leaders in integrated fire management; To share data, experiences, and to inspire people regarding women's role in wildfires prevention and response; To promote international networks and mentorship between women; To promote country-based gender focused opportunities.

Chair: **Ana Violato Espada** | U.S. Forest Service International Programs Brazil Speaker: **Erika Garduño-Mendoza** | IIES-UNAM

4:30 PM - 6:00 PM | **Insurances: Impact on Public Policies and a nudging instrument D. Luís Room** | Workshop

> The session will discuss: The available insurance models and their applicability. The relationship between public policies and insurances and their impact on risk management funding and mitigation measures.

Chair: **Val Charlton** | Workshop co-ordination LANDWORKS, South Africa Speakers: **Karina Whalley** | Head of Public Sector AXA Climate

Moses Khangale | Stakeholder Programs Manager, Santam Insurance

Panelist: **Antoine Bavandi** | Global Head of Public Sector, Parametric & Climate Resilience Solutions, Gallagher Re

#### 4:30 PM - 6:00 PM | Communication

S. João Room | E-Poster Presentations Chair: Cristina Santin | Swansea University

PP42 (IWFC474) - DROUGHT, FIRE AND LENTIBULARIACEAE: A CASE STUDY IN THE PANTANAL OF MATO GROSSO DO SUL - BRAZIL

Ranielly Garcia-Silva<sup>1</sup>, Wener Hugo Arruda Moreno<sup>2</sup>, **Maria Ana Farinaccio<sup>1</sup>** <sup>1</sup>Universidade Federal De Mato Grosso Do Sul, Corumbá, Brazil, <sup>2</sup>Instituto Homem Pantaneiro, Corumbá, Brazil

PP43 (IWFC354) - THE PANTANAL 2020 FIRE CRISIS: THE IMPACTS OF TRANSPORTED SMOKE ON AIR QUALITY IN THE LARGEST SOUTH AMERICAN MEGACITY.

**Djacinto Monteiro Dos Santos**<sup>1</sup>, Renata Libonati<sup>1,2</sup>, Judith J. Hoelzemann<sup>3</sup>, Aline M. Oliveira<sup>1</sup>, Ediclê S. F. Duarte<sup>4</sup>, Julia A. Rodrigues<sup>1</sup>, Philipp Franke<sup>5,6</sup>, Anne Caroline Lange<sup>5,6</sup>, Elmar Friese<sup>5,6</sup>, Fabio de O. Roque<sup>7,8</sup>, Leonardo F. Peres<sup>1</sup>

<sup>1</sup>Departamento de Meteorologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, <sup>2</sup> Instituto Dom Luiz (IDL), Faculdade de Ciências, Universidade de Lisboa, 1749 O16, Lisboa, Portugal, <sup>3</sup>Department of Atmospheric and Climate Sciences/Graduate Program in Climate Sciences, Federal University of Rio Grande do Norte, DCAC/PPGCC/UFRN, Natal, Brazil, <sup>4</sup>University of Évora - Institute of Earth Sciences, Portugal, <sup>5</sup>Institute for Energy and Climate Research – Troposphere (IEK-8), Forschungszentrum Jülich, Germany, <sup>6</sup>Rhenish Institute for Environmental Research at the University of Cologne, Germany, <sup>7</sup>Universidade Federal de Mato Grosso do Sul, Caixa Postal 549, Campo Grande, Brazil, <sup>8</sup>Center for Tropical Environmental and Sustainability Science (TESS) and College of Science and Engineering, James Cook University, Cairns, QLD 4878, Australia

PP44 (IWFC388) - THE CREATION OF THE FIRE MUSEUM AS AN ENVIRONMENTAL MANAGEMENT INSTRUMENT INTEGRATED WITH THE CAVALCANTE ENVIRONMENTAL VOLUNTEER BRIGADE - BRIVAC Rafael Farias, João Carlos Ribas Ramos, Renato Santos, Marcelo Trindade Santana

<sup>1</sup>BRIVAC - Brigada Voluntária Ambiental de Cavalcante, Cavalcante, Brasil

#### PP45 (IWFC30) - THE INFLUENCE OF WEATHER AND CLIMATE ON THE OCCURRENCES OF FIRE OUTBREAKS IN BRAZIL Marcelo Romao<sup>1</sup>, Luciana Bassi Marinho Pires<sup>1</sup>

<sup>1</sup>World Environmental Conservancy, Atlanta, USA

#### PP46 (IWFC482) - THE DESIGN OF A WEBSIG PLATFORM TO SUPPORT RURAL FIRE RISK MANAGEMENT AT LOCAL LEVEL

Diogo Miguel Pinto<sup>1,2</sup>, André Samora-Arvela<sup>1,2</sup>, Célia Figueiras<sup>1,3</sup>, Cláudia Nunes Magalhães<sup>1</sup>, Marco Dias<sup>4</sup>, Master Margarida Jerónimo<sup>5</sup>, **Fantina Maria Tedim<sup>1,2</sup>** <sup>1</sup> University of Porto, Porto, Portugal, <sup>2</sup>Centre of Studies in Geography and Spatial Planning,







Porto, Portugal, <sup>3</sup>Barcelos City Council, Barcelos, Portugal, <sup>4</sup>Góis City Council, Góis, Portugal, <sup>5</sup>Seia City Council, Seia, Portugal

PP47 (IWFC2) - BURN SEVERITY CHARACTERIZATION IN WILDLAND-URBAN INTERFACE (WUI) ALONG A CLIMATIC GRADIENT IN THE SPANISH IBERIAN PENINSULA

**David Beltrán Marcos**<sup>1</sup>, Susana Suárez-Seoane<sup>2</sup>, José Manuel Fernández-Guisuraga<sup>1</sup>, Víctor Fernández-García<sup>3</sup>, Leonor Calvo Galván<sup>1</sup>

<sup>1</sup>Area of Ecology, Biodiversity and Environmental Management Department, Faculty of Biological and Environmental Sciences, University of León, León, Spain, <sup>2</sup>Research Unit of Biodiversity (UMIB; UO-CSIC-PA), Department of Organisms and Systems Biology (BOS; Ecology Unit), University of Oviedo, Oviedo, Spain, <sup>3</sup>Institute of Geography and Sustainability, Faculty of Geosciences and Environment, University of Lausanne, Laussane, Switzerland

# PP48 (IWFC332) - IS SOCIETY INTERESTED IN WILDFIRES? A GOOGLE TRENDS ANALYSIS

#### Cristina Santin<sup>1,3</sup>, Aristides Moustakas<sup>2</sup>, **<u>Stefan Doerr<sup>3</sup></u>**

<sup>1</sup>Research Institute of Biodiversity. Spanish National Research Council, Mieres, Spain, <sup>2</sup>Data Analytics Consultant, Crete, Greece, <sup>3</sup>Centre for Wildfire Research, Swansea University, Swansea, United Kingdom

#### PP49 (IWFC295) - IDENTIFICATION OF LIGHTING IGNITED WILDFIRES IN BRAZIL AND PORTUGAL, BASED ON SATELLITE DATA AND CATALOG INFORMATION.

**<u>Mr Lucas Menezes</u><sup>1</sup>**, Renata Libonati<sup>1</sup>, Ana Russo<sup>2</sup>, Aline M. de Oliveira<sup>1</sup>, Filippe Lemos Maia Santos<sup>1</sup>, Rodrigo Augusto Ferreira de Souza<sup>3</sup>, Ricardo M. Trigo<sup>2</sup>, Celia M. Gouveia<sup>6</sup>, José Miguel Cardoso Pereira<sup>5</sup>, Ricardo Deus<sup>6</sup>, Alexandre M. Ramos<sup>1</sup>, Aki Benali<sup>5</sup>

<sup>1</sup>Departamento de Meteorologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, <sup>2</sup>Universidade de Lisboa, Faculdade de Ciências, Instituto Dom Luiz (IDL), Portugal, <sup>3</sup>Universidade do Estado do Amazonas, Escola Superior de Tecnologia, Manaus, Brazil, <sup>4</sup>Universidade Federal de Mato Grosso do Sul, Campo Grande, Brazil, <sup>5</sup>Forest Research Centre, School of Agriculture, University of Lisbon, Portugal, <sup>6</sup>Instituto Português do Mar e da Atmosfera, Portugal

# PP50 (IWFC201) - FIRST EDUCATION AND AWARENESS IDEOLOGY ON WILDFIRES IN SPAIN

#### Víctor M. García<sup>1</sup>

<sup>1</sup>TRAGSA, Madrid, Spain

# PP51 (IWFC422) - FIRE SCIENCE IN THE PANTANAL WETLAND: BEFORE AND AFTER 2020 MEGA-FIRE

**Alexandre de Matos Martins Pereira**<sup>1,2</sup>, Maxwell Oliveira<sup>1</sup>, Francielli Bao<sup>1</sup>, Evaldo Benedito de Souza<sup>3</sup>, Arnildo Pott<sup>1</sup>, Anahi Cerzosimo de Souza Escobar<sup>1</sup>, Suelen Sandin de Carvalho<sup>4</sup>. Geraldo Alves Damasceno Junior<sup>1</sup>

<sup>1</sup>Universidade Federal De Mato Grosso Do Sul, Campo Grande, Brazil, <sup>2</sup>Instituo Brasileiro de Meio Ambiente, Campo Grande, Brazil, <sup>3</sup>Universidade Estadual De Mato Grosso Do Sul, Cassilândia, Brazil, <sup>4</sup>Museu Paraense Emílio Goeldi, Belém, Brazil

### PP52 (IWFC57) - ANALYSIS OF FIRES IN THE STATE OF ALASKA AND THEIR RELATIONSHIP TO CLIMATE CHANGE

Kimberly Gabriely Silva Teixeira<sup>1</sup>, **Marcelo Romao**<sup>1</sup>, Luciana Bassi Marinho Pires<sup>1</sup> <sup>1</sup>World Environmental Conservancy, Atlanta, USA

### PP135 (IWFC151) - SMOKE RESPECTS NO BOUNDARIES

#### Air Resource Specialist Peter Lahm<sup>1</sup>

<sup>1</sup>USDA Forest Service, Washington, United States

#### 4:30 PM - 6:00 PM | Prevention & Pre-Supression

Arrábida Room | Oral Communications

Chair: Owen Price | University of Wollongong

#### OC35 (IWFC243) - SIMULATION OF PYROCUMULUS DURING A MEGAFIRE EVENT IN PORTUGAL USING A COUPLED ATMOSPHERE-FIRE SPREAD MODELING FRAMEWORK

**<u>Ricardo Vaz</u>**<sup>1</sup>, Rui Silva<sup>1</sup>, Susana Cardoso Pereira<sup>1</sup>, Ana Carvalho<sup>1</sup>, David Carvalho<sup>1</sup>, Alfredo Rocha<sup>1</sup>

<sup>1</sup>University Of Aveiro, Aveiro, Portugal

# OC36 (IWFC325) - CAN PRESCRIBED BURNS REDUCE AREAS BURNED BY WILDFIRES AND ASSOCIATED GREENHOUSE GAS EMISSIONS?

**Dr Livia Moura**<sup>1</sup>,Caio Sena<sup>2</sup>,Julia Rodrigues<sup>2</sup>, Leonardo Peres<sup>2</sup>, Renata Libonati<sup>2</sup>, Julia Boock<sup>3</sup>, Osvaldo Gajardo<sup>3</sup>, Daniel Silva<sup>3</sup>, Isabel Schmidt<sup>4</sup>

<sup>1</sup>Institute Society, Population And Nature, Brasília, Brazil, <sup>2</sup>Laboratório de Aplicações de Satélites Ambientais (LASA/UFRJ), Rio de Janeiro, Brazil, <sup>3</sup>World Wide Fund for Nature (WWF/Brasil), Cuiabá e Brasília, Brazil, <sup>4</sup>Department of Ecology, University of Brasilia (UnB), Brasília, Brazil

#### OC37 (IWFC33) - WILDFIRE OCCURRENCE IN FOREST AND TRANSITIONS LANDSCAPES OF GHANA: FARMERS' PERCEPTIONS AND ADAPTATION STRATEGIES

**Isaac Nunoo**<sup>1</sup>, Mercy Owusu Ansah, Joseph Asante, Eric Osei, Boakye Twumasi-Ankrah <sup>1</sup>Tropenbos Ghana, Kumasi, Ghana

#### OC38 (IWFC314) - LANDSCAPE FIRE AND SMOKE EXPOSURE: CURRENT KNOWLEDGE OF THE PRESCRIBED BURNING TRADE-OFF Owen Price<sup>1</sup>, Michael Storey <sup>1</sup>University of Wollongong, Wollongong, Australia

### OC39 (IWFC450) - FIREBREAK EFFECTIVENESS PREDICTION MODELS DEVELOPED FROM REAL WILDFIRES IN SOUTHERN SPAIN

<u>Macarena Ortega Pardo</u><sup>1</sup>, Francisco Rodríguez y Silva<sup>1</sup>, Juan Ramón Molina<sup>1</sup> <sup>1</sup>University Of Cordoba, Cordoba, Spain







# OC40 (IWFC165) - A 2023 UPDATE OF THE POSITION PAPER ON "WILDFIRE PREVENTION IN THE MEDITERRANEAN"

**Eduard Mauri**<sup>1</sup>, Elena Hernández Paredes<sup>2</sup>, Irene Núñez Blanco<sup>3</sup>, Celia García Feced<sup>2</sup> <sup>1</sup>European Forest Institute, Mediterranean Facility (EFIMED), Barcelona, Spain, <sup>2</sup>Spanish Ministry for the Ecological Transition and Demographic Challenge (MITECO), Madrid, Spain, <sup>3</sup>Grupo Tragsa, Madrid, Spain

#### OC41 (IWFC302) - BUILDING A WILDLAND FIRE PREVENTION AND MITIGATION MODEL IN CANADA TO GROW WHOLE-OF-SOCIETY AWARENESS AND ENGAGEMENT.

Magda Zachara, **Ray Ault**<sup>1</sup> <sup>1</sup>CIFFC, Winnipeg, Canada

#### 4:30 PM - 7:45 PM | Incentivizing savanna management: challenges and opportunities Porto Room | Workshop

The session will discuss: The profile of international undertakings focusing on the status of current incentivized savanna and rainforests fire management activities and associated challenges and opportunities. The difficulties of fighting fires in tropical forests and plan actions to protect these ecosystems.

Chair: Jeremy Russell-Smith | International Savanna Fire Management Initiative

#### 6:15 PM - 6:45 PM | IAWF Award

#### **Arquivo Room**

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6:15 PM - 7:45 PM | Social Participation and Local Fire Governance through International Networks Infante Room | Workshop

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The session will discuss: The participatory roles of various players required for local governance of fire and landscape management using a community-based model of the International Model Forest Network that integrates practitioners, scientists and policy-makers. Collaborative examples from Latin America and the Mediterranean regions are presented. Chair: **Chelene Hanes** | Wildland Fire Scientist, Natural Resources Canada Speakers: **Bill DeGroot** | Fire Danger and Fire Behaviour specialist Canadian Forest Service (Retired) **Judi Beck** | Director General, Canadian Forest Service

Natasha Jurko | Natural Resources Canada - Canadian Forest Service

**Pierre-Jonathan Teasdale** | Director of Trade and International Affairs Division within the Canadian Forest Service (CFS), Natural Resources Canada

**Toni Ventre** | Forest Engineer, Director of the Forestry Sector of the Valdarno and Valdisieve Union of Municipalities

Natalia Ruiz-Guevara | Co-Chair of the Latin American Model Forest Network

### 6:15 PM - 7:45 PM | **Post-fire Assessment and Management Workshop**

D. Maria Room | Workshop

The presenters will describe methods to evaluate post-wildfire risk to public safety, communities, infrastructure, and natural resources, and discuss approaches to mitigate post-fire risks, with examples from North America and Europe.

Chair: **Scott Dehnisch** I US Agency For International Development/Bureau For Humanitarian Assistance

Speakers: Dave Callery | Deputy National Post-Fire Program Leader

**Cara Sponaugel** | National Post-fire Program Leader for the United States Forest Service **Corina Cerovski-Darriau** | USGS-USAID Landslides Hazards Advisor and Landslide Disaster Assistance Team

#### 6:15 PM - 7:45 PM | Training and education needs to guide future integrated fire management D. Luís Room | Workshop

Amidst increasing calls for integrated fire management there is a growing realization of the need for people that are well trained to make this change. Integrated fire management involves making connections between people, disciplines, countries, academia and practice, an inter- and transdisciplinary type of working that is different from the monodisciplinary education that is provided at most schools and universities around the world. In this interactive workshop, we aim to bring people together from a wide variety of backgrounds, regions and disciplines to discuss and synthesize the diversity of skills, knowledges and language needed from our future experts in integrated fire management. To create a diverse overview of the needs of future employers, we specifically welcome participants who work in emergency services, governments, land management agencies, NGOs and companies from all levels of seniority (junior, medior and senior). The results of this needs assessment will be used to guide current and future education needs in integrated fire management Chairs: **Cathelijne Stoof** | Assistant Professor Wageningen University, NL **Julissa Galarza** | Wageningen University

Speakers: **Conceição Colaço** | Invited researcher University of Lisbon **Eduard Plana** | Head of Forest Policy and Risk Governance Ctfc

#### 6:15 PM - 7:45 PM | Aerial Resources Management Arrábida Room | Workshop

The efectiveness of aerial resources; the key aspects for an aerial resource sytem to be designed considering the best effectivness end efficiency (costs); best practices in aerial resources management.Investment and Finance, approaching questions such as "own fleets vs contracts" and "is aerial fireghting still a good investment on 6<sup>th</sup> generation wildfires". The outcome improvement with Global Cooperation and Collaboration arrangements. Speakers: **Yolanda Saldana** | US Forest Service

**Richard Alder** | Principal Consultant at Avtract Solutions **Claire Kowalewski** | DG ECHO, European Commission







### **THURSDAY, MAY 18**

#### 9:00 AM - 11:00 AM | Fire Risk Governance

#### Arquivo Room | Plenary Session

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The session will discuss: How country leaderships can develop measures in face of a systemic risk that integrate current knowledge in all aspects of landscape fire and community needs, while developing legal provisions, finance and support programs that drive not only the building of institutional structures but also active participation of civil society. Chair: **Peter Moore** | Director of NRFC Ltd, AU

Keynote Speakers: **Elisa Ferreira** I European Commission Cohesion and Reforms **Ortwin Renn** (remote) I International Institute for Advanced Sustainability Studies, (Retired) Panelist: **Toddi Steelman** I Stanback Dean, Nicholas School of the Environment Duke University, USA

11:00 AM - 11:30 AM | **Coffee Break** 

Exhibition Area I Ground Floor

11:30 AM - 12:15 PM | Waterax

Porto Room | Industry Session

# 11:30 AM - 1:00 PM | OECD Flagship Report Lauch: Adapting to a changing climate in the management of extreme wildfires

Arquivo Room | Thematic Session

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Recent extreme wildfire events have caused unprecedented damages and impacts on communities, economies, and the environment. Climate change is a key driver behind the growing occurrence of extreme wildfires. Under projected warming, wildfire frequency and severity are estimated to increase, calling for a fundamental shift in wildfire management to focus on climate change adaptation and wildfire risk prevention. In the past years the OECD has worked to bring together an assessment of wildfire risks in the context of climate change to shed light on the potentially irreversible impacts extreme wildfires may trigger. It worked together with countries to assess how wildfire management policies and practices have responded to the changes in wildfire risk patterns. The OECD report summarises the main findings of this work. It presents recommendations that aim at informing countries' policy progress towards building climate resilience to extreme wildfires.

In this session the OECD will launch its flagship report, entitled Taming Wildfires in the Context of Climate Change. Key findings will be presented and discussed in a high-level policy panel.

Keynote Speaker: **Jo Tyndall** | OECD Environment Director **Ana Abrunhosa** | Minister of Territorial Cohesion, Portugal **Christos Stylianides** (video) | Minister for Climate Crisis and Civil Protection, Greece **Walid Oueslati** | Acting Head of the OECD Climate, Biodiversity and Water Division Panelists: **Catherine Gamper** | Climate Change Adaption, OECD

**Julienne Morisette** | Director, Wildland Fire Research, Northern Forestry Centre, Canadian Forest Service

**Florian Rudolf-Miklau** | Head of Forestry and Sustainability Division, Federal Ministry of Agriculture, Forestry, Regions and Water Management, Austria

Stefan Doerr | Professor of Wildland Fire Science, Swansea University

#### 11:30 AM - 1:00 PM | Pre-suppression & Suppression

Infante Room | Thematic Session

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The session will discuss: Crossing qualification and training programs with suppression needs, deploying the most qualified and up-to-date personnel, depending on the specific needs of the operation. Using risk assessments to guide decisions and implementing standard command and control systems. Suppressing fire with the best techniques available, integrating knowledge from prevention agencies.

#### Chair: Patricio Sanhueza I ILC

Keynote Speaker: **Marc Castellnou** | Fire chief Catalan Fire and Rescue Service, SP Panelists: **Gordon Sachs** | United States Forest Service **Alen Slijepcevic** | Country Fire Authority, AU **Luís Lopes** | City Council of Leiria, PT

#### 11:30 AM - 1:00 PM | Adaptive Management

#### D. Luís Room | Oral Communications

Chair: **Toddi Steelman** I Stanback Dean, Nicholas School of the Environment Duke University, USA

OC43 (IWFC5169) - IDENTIFYING TRAFFIC STRATEGIES FOR WILDFIRE EVACUATIONS USING PAST BEHAVIOUR OF EVACUEES Stephen Wong

tephen wong

<sup>1</sup>University Of Alberta, Edmonton, Canada

OC44 (IWFC199) - WE ARE FIRE: INDIGENOUS FIRE PRACTICES IN THE SASKATCHEWAN RIVER DELTA

Renee Carriere, Solomon Carriere, Natasha Caverley, <u>Amy Cardinal Christianson</u><sup>1</sup> <sup>1</sup>Parks Canada, Canada

OC45 (IWFC365) - COLLECTIVE ACTION IN PRESCRIBED BURNING: A SOCIAL NETWORK ANALYSIS OF TWO US STATES Aaron Russell<sup>1</sup>, Research PI Omkar Joshi <sup>1</sup>Oklahoma State University, Stillwater, United States

OC46 (IWFC255) - SCENARIOS FOR SUSTAINING COMMUNITY-BASED WILDLAND FIRE MANAGEMENT STRUCTURES IN THE TRANSITION AND SAVANNAH ZONES OF GHANA







**Joana Akua Serwaa Ameyaw**<sup>1</sup>, Lucy Amissah<sup>2</sup>, Shalom Addo-Danso<sup>2</sup>, Mike Sefa Boachie<sup>1</sup>, Francis Siibu Nimbaje<sup>1</sup>, Akosua Acheampomaa Sefah<sup>1</sup>

<sup>1</sup>Faculty of Renewable Natural Resources, Kwame Nkrumah University Of Science And Technology, Kumasi, Ghana, <sup>2</sup>Forestry Research Institute of Ghana, Council for Scientific and Industrial Research, Kumasi, Ghana

#### OC47 (IWFC357) - INDIGENOUS FIRE USE CAN FACILITATE CLIMATE ADAPTATION: CONTEMPORARY EXAMPLES

**Peter Fule**<sup>1</sup>, Amanda Stan<sup>1</sup>, Melvin Hunter, Jr.<sup>2</sup>, Citlali Cortés Montaño<sup>3</sup> <sup>1</sup>Northern Arizona University, Flagstaff, United States, <sup>2</sup>Hualapai Tribe, Peach Springs, United States, <sup>3</sup>KfW Bank, Mexico City, Mexico

#### OC48 (IWFC96) - SOCIAL NETWORK ANALYSIS (SNA) AND ADAPTIVE CO MANAGEMENT TO FOREST FIRES: A CASE STUDY OF SERRA DE MONCHIQUE, PORTUGAL

**Guilherme Saad**<sup>1</sup>, Maria do Rosário Partidário <sup>1</sup>Instituto Superior Técnico - IST, Lisbon, Portugal

#### 11:30 AM - 1:00PM | Risk Handling

Miragaia Room | E-Poster Presentations

Chair: Marketa Podebradska | Global Change Research Institute CAS

PP53 (IWFC301) - DEVELOPMENT AND USE OF AN INTEGRATED MODELLING APPROACH TO SIMULATE DYNAMIC WILDFIRE RISK PROFILES AND SUPPORT RISK REDUCTION STRATEGIES

**Hedwig van Delden**<sup>1,2</sup>, Roel Vanhout<sup>1</sup>, Amelie Jeanneau<sup>2</sup>, Holger R. Maier<sup>2</sup>, Aaron Zecchin<sup>2</sup> <sup>1</sup>Research Institute for Knowledge Systems, Maastricht, Netherlands, <sup>2</sup>The University of Adelaide, Adelaide, Australia

#### PP54 (IWFC222) - CONTAMINATION OF FIREFIGHTERS' SKIN DURING FIREFIGHTING ACTIVITIES AND ASSOCIATED HEALTH RISKS

**Gabriel Sousa**<sup>1,5</sup>, Miss Joana Teixeira<sup>1</sup>, Cristina Delerue-Matos<sup>1</sup>, Bruno Sarmento<sup>3</sup>, Simone Morais<sup>1</sup>, Xianyu Wang<sup>4</sup>, Francisca Rodrigues<sup>1</sup>, Marta Oliveira

<sup>1</sup>REQUIMTE-LAQV, Instituto Superior de Engenharia, Instituto Politécnico do Porto, R. Dr. António Bernardino de Almeida 431, 4200-072 Porto, Portugal, Porto, Portugal, <sup>2</sup>CESPU Instituto de Investigação e Formação Avançada em Ciências e Tecnologias da Saúde, Instituto Universitário de Ciências da Saúde, Gandra, Portugal, Gandra, Portugal, <sup>3</sup>Instituto de Investigação e Inovação em Saúde, Universidade do Porto, Porto, Portugal, Porto, Portugal, <sup>4</sup>QAEHS-Queensland Alliance for Environmental Health Sciences, The University of Queensland, Brisbane, Australia, Brisbane, Australia, <sup>5</sup>Faculdade de Ciências da Universidade do Porto, Porto, Portugal

PP55 (IWFC220) - IS CZECH REPUBLIC MORE LIKELY TO EXPERIENCE CONDITIONS SUITABLE FOR LARGE WILDFIRE OCCURRENCE IN THE FUTURE? <u>Marketa Podebradska</u><sup>1</sup>, Miroslav Trnka, Bc. Jan Balek <sup>1</sup>Global Change Research Institute CAS, Brno, Czech Republic PP56 (IWFC179) - WILDFIRE DECISION SUPPORT SYSTEMS FOR THE MANAGEMENT AND RESILIENCE OF REN'S POWER AND GAS INFRASTRUCTURE João Gaspar<sup>1</sup>, **João Ruivo Paulo**<sup>2</sup>, Rui Roda<sup>3</sup>

<sup>1</sup>REN - Rede Elétrica Nacional, SA, Lisboa, Portugal, <sup>2</sup>Univ Coimbra, ADAI, Department of Mechanical Engineering, Coimbra, Portugal, <sup>3</sup>Whereness, Lda, Lisboa, Portugal

#### PP57 (IWFC262) - VEGETATION FEEDBACKS MEDIATE THE VULNERABILITY OF WESTERN US CONIFER FORESTS TO FIRE-DRIVEN TRANSFORMATION **Tyler Hoecker**<sup>1</sup>

<sup>1</sup>University Of Montana, United States

# PP58 (IWFC216) - USING FLAMMAP TO ASSESS WILDFIRE BEHAVIOR IN THE BOHEMIAN SWITZERLAND NATIONAL PARK

**Lucie Kudláčková**<sup>1</sup>, Marketa Podebradska, Monika Bláhová, Miroslav Trnka, Zdeněk Žalud <sup>1</sup>Global Change Research Institute Cas, Brno, Czech Republic

### PP60 (IWFC337) - POLICY COHERENCE ANALYSIS TOWARDS INTEGRATED WILDFIRE RISK MANAGEMENT IN THE EU

**Eduard Plana**<sup>1</sup>, Marta Serra<sup>1</sup>, Annick Smeenk<sup>2</sup>, Eduard Mauri<sup>3</sup>, Inazio Martinez<sup>3</sup> <sup>1</sup>Forest Science And Technology Centre Of Catalonia, Spain, <sup>2</sup>Wageningen University & Research, Netherlands, <sup>3</sup>European Forest Institute, Finland

# PP61 (IWFC400) - LIGHTNING-INDUCED WILDFIRE IN BRAZILIAN CERRADO BIOME

**Vanúcia Schumacher**<sup>1</sup>, Alberto Setzer, Fabiano Morelli <sup>1</sup>National Institute For Space Research (inpe), São José dos Campos, Brazil

#### PP62 (IWFC45) - HOW CAN WE DEFINE A FIRE RESILIENT LANDSCAPE? **Fiona Newman Thacker**<sup>1</sup>, Cathelijne Stoof

<sup>1</sup>Wageningen University And Research, Wageningen, The Netherlands

# PP64 (IWFC322) - FIRE PANEL: A BRAZILIAN WEBGIS APPLICATION FOR FIREFIGHTERS DISPATCH WITH NEAR REAL TIME RESOLUTION

**Henrique Bernini**<sup>1</sup>, Daniela de Faria<sup>1</sup>, Elisama Oliveira<sup>1</sup>, José de Paula Assis<sup>1</sup>, Richard Ribeiro<sup>1</sup>, Tadeu Sanchez<sup>2</sup>, Leonardo Dias<sup>3</sup>, Bruno Cambraia<sup>4</sup>, Marcelo Carvalho<sup>2</sup>

<sup>1</sup>Operations And Management Center Of The Amazon Protection System (censipam), Porto Velho, Brazil, <sup>2</sup>Rondônia state Fire Departament, Porto Velho, Brazil, <sup>3</sup>Roraima state Fire Departament, Boa Vista, Brazil, <sup>4</sup>Chico Mendes Institute of biodiversity Conservation (ICMBio), Porto Velho-RO, Brasil

# PP65 (IWFC146) - CREATING GRIDDED FIRE PROBABILITY MAPS USING NASA DATA

**Emily Gargulinski**<sup>1</sup>, Amber Soja<sup>1</sup>, Elizabeth Wiggins<sup>2</sup>, Noam Rosenthal<sup>3</sup>, Andrew Engler<sup>3</sup> <sup>1</sup>National Institute Of Aerospace, United States, <sup>2</sup>NASA Langley Research Center, United States, <sup>3</sup>Kettle, United States

# PP66 (IWFC190) - COMPOUND DROUGHT-HEATWAVE CONDITIONS: A NEW THREAT FOR THE FIRE-PRONE CERRADO?







Patrícia S. Silva<sup>1</sup>, João L. Geirinhas<sup>1</sup>, Julia Rodrigues<sup>2</sup>, Renata Libonati<sup>2,1</sup>

<sup>1</sup>Universidade de Lisboa, Faculdade de Ciências, Instituto Dom Luiz, Lisboa, Portugal, Lisbon, Portugal, <sup>2</sup>Departamento de Meteorologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, Rio de Janeiro, Brazil

#### PP67 (IWFC253) - COUPLING FUEL MODELS AND FOREST MANAGEMENT FOR ASSESSING FIRE HAZARD IN EUCALYPT PLANTATIONS

**Luis Acevedo Munoz**<sup>1</sup>, André Duarte<sup>1</sup>, Sérgio Maggiolli<sup>2</sup>, Sérgio Fabres<sup>1</sup>, Nuno Borralho<sup>1</sup>, João Melo Bandeira<sup>2</sup>

<sup>1</sup>RAIZ - Forest and Paper Research Institute, Aveiro, Portugal, <sup>2</sup>Navigator Forest Portugal, Sétubal, Portugal

11:30 AM - 1:00 PM | Planning and Preparation

#### S. João Room | E-Poster Presentations

Chair: Andrew Johnson | University of California, Berkeley

PP68 (IWFC425) - WILDFIRE HAZARD MAPPING IN THE MEDITERRANEAN: A HARMONIZED APPROACH.

**Andrea Trucchia**<sup>1</sup>, Mr Giorgio Meschi<sup>1</sup>, Umberto Pernice<sup>2,1</sup>, Paolo Fiorucci<sup>1</sup> <sup>1</sup>Cima Research Foundation, Savona, Italy, <sup>2</sup>University of Rome La Sapienza, Rome, Italy

#### PP69 (IWFC59) - IMPACTS AND SCALE-UP POTENTIALS OF INTEGRATED FIRE MANAGEMENT IN THE BRAZILIAN CERRADO

**Dr Jonas Franke**<sup>1</sup>, Ana Carolina Sena Barradas, Anja Hoffmann, Lara Steil, Rosa Maria Roman Cuesta

<sup>1</sup>Remote Sensing Solutions Gmbh, Munich, Germany

# PP70 (IWFC521) - SCENARIO PLANNING TO SUPPORT THE NATIONAL FUEL MANAGEMENT PLAN IN PORTUGAL

**Alan Ager**<sup>1</sup>, Bruno Aparício<sup>2</sup>, Fermín Alcasena<sup>3</sup>, Michelle Day<sup>1</sup>, Chris Ringo<sup>4</sup>, Cody Evers<sup>5</sup> <sup>1</sup>USDA Forest Service, Rocky Mountain Research Station, Missoula Fire Sciences Laboratory, 5775 US Highway 10W, Missoula, MT, 59808, USA, , United States, <sup>2</sup>Forest Research Centre, School of Agriculture, University of Lisbon, , Portugal, <sup>3</sup>Department of Agricultural and Forest Engineering, Universitat de Lleida, Lleida, 25003, , Spain, <sup>4</sup>Oregon State University, Department of Crop and Soil Science, 109 Crop Science Building, Corvallis, OR, 97331, USA, United States, <sup>5</sup>Portland State University, Department of Environmental Science and Management, 1719 SW 10th Avenue, Portland, OR, 97201, USA, , United States

# PP71 (IWFC279) - CALIFORNIA FUEL BREAKS: ALTERNATIVE METRICS OF SUCCESS

Candidate Andrew Johnson<sup>1</sup>, Brandon Collins<sup>1</sup>

<sup>1</sup>University of California, Berkeley, Berkeley, United States

#### PP72 (IWFC383) - DEVELOPING A HOLISTIC, RISK-WISE STRATEGY FOR EUROPEAN WILDFIRE MANAGEMENT - PRELIMINARY RESULTS OF FIREURISK RESEARCH

Professor Cristina Vega<sup>1</sup>, Professor Emilio Chuvieco<sup>2</sup>, George Eftychidis<sup>3</sup>, Professor Ioannis

Gitas<sup>3</sup>, Matthias Forkel<sup>4</sup>, Sébastien Lahaye<sup>5</sup>, Kirsten Thonicke<sup>6</sup>, Klelia Petrou<sup>7</sup>, Marta Gómez Gimenez<sup>8</sup>, **Professor Domingos Viegas<sup>9</sup>** 

<sup>1</sup>University of Lleida, Lleida, Spain, <sup>2</sup>University of Alcalá, Alcalá de Henares, Madrid, Spain, <sup>3</sup>Aristotelian University of Thessaloniki, Thessaloniki, Greece, <sup>4</sup>Technische Universität Dresden, Dresden, Germany, <sup>5</sup>SAFE Cluster, Aix en Provence, France, <sup>6</sup>Potsdam Institut für Klimafolgenforschung e.V. (PIK), Potsdam, Germany, <sup>7</sup>CERIDES – Center of Excellence of European University Cyprus, Nicosia, Cyprus, <sup>8</sup>GMV Aerospace and Defence S.A.U, Tres Cantos, Madrid, Spain, <sup>9</sup>ADAI, University of Coimbra, Coimbra, Portugal

#### PP73 (IWFC132) - WILDFIRE IMPACT ANALYSIS OF PORTUGAL'S BUILT ENVIRONMENT CONSIDERING CLIMATE CHANGE SCENARIO

**Luana Tesch**<sup>1</sup>, Hélder D. Craveiro<sup>1</sup>, Helena Gervásio<sup>1</sup>, Aldina Santiago<sup>1</sup> <sup>1</sup>University of Coimbra, ISISE, Department of Civil Engineering, Coimbra, Portugal

## PP74 (IWFC116) - THE POSTFIRE ANALYSIS AS A METHODOLOGY FOR PREPAREDNESS IN WILDFIRE MANAGEMENT

**Jose Luís Soriano Sancho**<sup>1</sup>, Miguel Angel Botella Martínez<sup>1</sup>, Agustín Cervera Montero<sup>1</sup>, Daniel Orozco Bagou<sup>1</sup>, Ricardo García Post<sup>2</sup>

<sup>1</sup>Unidad Técnica de Análisis y Prevención de Incendios (VAERSA, Generalitat Valenciana), Spain, <sup>2</sup>Dirección General de Prevención de Incendios Forestales. Generalitat Valenciana, Spain

## PP75 (IWFC38) - VALIDATING A LANDSCAPE FUEL METRIC TO MAP EXPOSURE TO HAZARDOUS FUELS IN PORTUGAL

**Sidra Ijaz Khan**<sup>1</sup>, Conceição Colaço<sup>1</sup>, Francisco Castro Rego<sup>1</sup>, Jen Beverly<sup>2</sup> <sup>1</sup>University of Lisbon , Lisbon, Portugal, <sup>2</sup>University of Alberta, Edmonton, Canada

#### PP76 (IWFC329) - INTEGRATIVE FIRE MANAGEMENT FOR THE WORLD'S LARGEST CONTINUOUS TROPICAL WETLAND IS URGENTLY NEED FOR THE PANTANAL BIODIVERSITY AND HUMAN POPULATION

**Letícia Garcia**<sup>1</sup>, Judit Szabo<sup>2</sup>, Fábio de Oliveira Roque<sup>3</sup>, Alexandre Pereira<sup>4</sup>, Catia Cunha<sup>5</sup>, Geraldo Damasceno-Junior<sup>6</sup>, Ronaldo Morato<sup>7</sup>, Walfrido Tomas<sup>8</sup>, Prof Renata Libonati<sup>9</sup>, Danilo Ribeiro<sup>10</sup>

<sup>1</sup>Laboratório Ecologia da Intervenção (LEI), Instituto de Biociências (INBIO), Universidade Federal de Mato Grosso do Sul (UFMS), Campo Grande, Brazil, <sup>2</sup>College of Engineering, IT and Environment, Charles Darwin University, Darwin, Australia, <sup>3</sup>Instituto de Biociências, Universidade Federal de Mato Grosso do Sul, Campo Grande, Brazil, <sup>4</sup>Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA), Campo Grande, Brazil, <sup>5</sup>Universidade Federal de Mato Grosso (UFMT); (CPP), (INAU), Cuiabá, Brazil, <sup>6</sup>Instituto de Biociências, Universidade Federal de Mato Grosso do Sul, Campo Grande, Brazil, <sup>7</sup>Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) – Centro Nacional de Pesquisa e Conservação de Mamíferos Carnívoros, Atibaia, Brazil, <sup>8</sup>Empresa Brasileira de Pesquisa Agropecuária (Embrapa Pantanal), Corumbá, Brazil, <sup>9</sup>Departamento de Meteorologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, <sup>10</sup>Instituto de Biociências, Universidade Federal de Mato Grosso do Sul, Campo Grande, Brazil

#### PP77 (IWFC486) - LONG-TERM STRENGTHENING OF COMMUNITY-SCALE FIRE MANAGEMENT IN MÉXICO







Juan Frausto<sup>1</sup>, **Rossana Landa** 

<sup>1</sup>Fondo Mexicano Para La Conservación De La Naturaleza, Ciudad de México, México

PP78 (IWFC145) - IMPACTS OF CLIMATE CHANGE AND HUMAN POPULATION GROWTH ON WILDFIRE POTENTIAL IN THE TROPICS:THE TAIN II FOREST RESERVE IN GHANA.

#### Eric Osei-Kwarteng<sup>1</sup>

<sup>1</sup>Resource Management Support Centre(RMSC)-Forestry Commission of Ghana, Kumasi, Ghana

PP79 (IWFC399) - FIRE AS A TOOL IN THE MANAGEMENT OF THE GUAPORÉ BIOLOGICAL RESERVE, A CONSERVATION UNIT IN THE BRAZILIAN AMAZON Wilhan Assunção<sup>1</sup>, Lidiane Silva<sup>1</sup>

<sup>1</sup>Instituto Chico Mendes De Conservação Da Biodiversidade, Ji-Paraná, Brazil

PP80 (IWFC313) - EFFICIENT STRATEGIES TO PREVENT LARGE FOREST FIRES IMPLEMENTED A BRAZILIAN INDIGENOUS LAND Francinete Correa Pacheco<sup>1</sup>, Rodrigo Falleiro 'NEF/IBAMA/MA

PP81 (IWFC285) - EXPLORING WILDFIRE SUSCEPTIBILITY MODELS FOR AGRICULTURAL LAND USE AREAS IN PORTUGAL Juan Guerra-Hernández<sup>1</sup>, Aki Benali<sup>1</sup>, Ana C.L. Sá<sup>1</sup> <sup>1</sup>Instituto Superior de Agronomía, Portugal

PP82 (IWFC407) - A GLOBAL PERSPECTIVE ON THE WILDLAND-URBAN INTERFACE (WUI) WILDFIRE TOPIC

Claudio Ribotta<sup>1</sup>, Lara Steil<sup>2</sup>, Peter Moore<sup>2</sup>

<sup>1</sup>INRAE - French National Research Institute for Agriculture, Food and Environment, Aix-en Provence, France, <sup>2</sup>Forestry Division - Food and Agriculture Organization of the United Nations (FAO), Rome, Italy

PP83 (IWFC303) - 2022 WILDFIRE OPERATION IN BRAZIL'S XERENTE AND FUNIL INDIGENOUS LAND BY PREVFOGO/IBAMA

**<u>Gildimar Xerente</u>**<sup>1</sup>, Danielle Danaga<sup>1</sup>, Adiel Smiwaibu Xerente<sup>1</sup>, Waner Gonçalves Lima<sup>1</sup> <sup>1</sup>*PREVFOGO/IBAMA, Palmas, Brazil* 

#### 11:30 AM - 1:00 PM | Post-Fire Intervention

#### Arrábida Room | Oral Communications

Chair: Jacob Keizer | Researcher, University of Aveiro

OC49 (IWFC381) - EFFECT OF FIRE DISTURBANCE ON SOIL RESPIRATION AND NITROGEN AVAILABILITY IN BOREAL FOREST OF CHINA.

#### Tongxin Hu

<sup>1</sup>Northeast Forestry University, Harbin, China

OC50 (IWFC528)- HOW EUCALYPTUS GLOBULUS AND ACACIA LONGIFOLIA

#### BEHAVE AFTER-FIRE IN PORTUGAL?

<u>**Cristina Mágoas**</u><sup>1</sup>, Andreia Anjos<sup>1,2</sup>, Joana Jesus<sup>1,2</sup>, Cristina Marques<sup>3</sup>, Nuno Borralho<sup>3</sup>, Helena Trindade<sup>2</sup>, Sergio Chozas<sup>2</sup>, Florian Ulm<sup>2</sup>

<sup>1</sup>Universidade de Lisboa, Faculdade de Ciências, Departamento de Biologia Vegetal, Lisboa, Portugal, <sup>2</sup>cE3c – Centre for Ecology, Evolution and Environmental Changes, Faculdade de Ciências, Universidade de Lisboa, 1749-016 Lisboa, Portugal, Lisboa, Portugal, <sup>3</sup>RAIZ – Forest and Paper Research Institute, Eixo, Portugal

# OC51 (IWFC387) - SOCIO-ECONOMIC AND ENVIRONMENTAL IMPLICATIONS OF WILDFIRE ASH. A GLOBAL DATASET OF CHEMICAL CHARACTERISTICS

**Carmen Sánchez-García**<sup>1</sup>, Cristina Santín<sup>1,2</sup>, Jonay Neris<sup>1,3</sup>, Gabriel Sigmund<sup>4</sup>, Xose L. Otero<sup>5</sup>, Joella Manley<sup>1</sup>, Gil González-Rodríguez<sup>6</sup>, Claire Belcher<sup>7</sup>, Artemi Cerdá<sup>8</sup>, Abbey Marcotte<sup>9</sup>, Sheila Murphy<sup>10</sup>, Charles C. Rhoades<sup>11</sup>, Prof. Gary Sheridan<sup>12</sup>, Tercia Strydom<sup>13</sup>, Pete R. Robichaud<sup>11</sup>, Stefan Doerr<sup>1</sup>

<sup>1</sup>Swansea University, Swansea, United Kingdom, <sup>2</sup>UMIB-CSIC, Mieres, Spain, <sup>3</sup>Universidad de La Laguna, La Laguna, Spain, <sup>4</sup>University of Vienna, Vienna, Austria, <sup>5</sup>Universidad de Santiago de Compostela, Santiago de Compostela, Spain, <sup>6</sup>Universidad de Oviedo, Oviedo, Spain, <sup>7</sup>University of Exeter, Exeter, United Kingdom, <sup>8</sup>Universitat de València, Valencia, Spain, <sup>9</sup>Wageningen University, Wageningen, The Netherlands, <sup>10</sup>U.S. Geological Survey, Boulder, USA, <sup>11</sup>U.S. Department of Agriculture Forest Service, , USA, <sup>12</sup>The University of Melbourne, Parkville, Australia, <sup>13</sup>South African National Parks, Skukuza, South Africa

#### OC52 (IWFC213) - POST-FIRE WATER CONTAMINATION RISK ASSESSMENT IN PORTUGAL: FRISCO PROJECT

Luís Dias<sup>1</sup>, Joana Parente<sup>1</sup>, Joao Nunes<sup>1,2</sup>, Aki Benali<sup>3</sup>, Oscar González-Pelayo<sup>5</sup>, Ana C.L. Sá<sup>3</sup>, Dina Jahanianfard<sup>3</sup>, Niels Nitzsche<sup>1</sup>, Joost Schuurman<sup>2</sup>, Jantiene Baartman<sup>2</sup>, Carlos Brito<sup>4</sup> <sup>1</sup>cE3c - Center for Ecology, Evolution and Environmental Changes & CHANGE - Global Change and Sustainability Institute, Faculdade de Ciências da Universidade de Lisboa, Portugal, Lisbon, Portugal, <sup>2</sup>Soil Physics and Land Management Group, Wageningen University & Research, the Netherlands, Wageningen, the Netherlands, <sup>3</sup>Forest Research Centre (CEF), Instituto Superior de Agronomia, University of Lisbon, Portugal, Lisbon, Portugal, <sup>4</sup>AdP Valor, Grupo Águas de Portugal, Portugal, Lisbon, Portugal, <sup>5</sup>Centre of Environmental and Marine Studies (CESAM), University of Aveiro, Portugal, Aveiro, Portugal

### OC53 (IWFC207) - POST-FIRE SOIL EROSION MITIGATION TREATMENTS: A GLOBAL COST-EFFECTIVENESS ANALYSIS

**Antonio Girona-García**<sup>1</sup>, Carolla Cretella<sup>2</sup>, Cristina Fernández<sup>3</sup>, Pete R. Robichaud<sup>4</sup>, Diana Vieira<sup>5</sup>, Jacob Keizer<sup>6</sup>

<sup>1</sup>Biodiversity Research Institute (IMIB), CSIC-UniOvi-PA, Mieres, Spain, <sup>2</sup>School of Life Sciences and Environmental Technology (ALST), Avans University of Applied Sciences, Breda, The Netherlands, <sup>3</sup>Centro de Investigación Forestal-Lourizán, Xunta de Galicia, Pontevedra, Spain, <sup>4</sup>U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Moscow, United States of America, <sup>5</sup>European Commission, Joint Research Centre (JRC), Ispra, Italy, <sup>6</sup>University of Aveiro, Aveiro, Portugal

OC54 (IWFC368) - CHANGES IN SOIL WATER REPELLENCY CAUSED BY FOUR







#### 2021-2022 WESTERN U.S. MEGA FIRES

**Vera Samburova**<sup>1,3</sup>, Shelby Inouye<sup>2</sup>, Palina Bahdanovich<sup>1,3</sup>, Kevin Axelrod<sup>1,3</sup>, Brad Sion<sup>1</sup>, Markus Berli<sup>2</sup>, Hans Moosmüller<sup>1</sup>

<sup>1</sup>Desert Research Institute, Reno, United States, <sup>2</sup>Desert Research Institute, Las Vegas, United States, <sup>3</sup>University of Nevada, Reno, Reno, United States

OC77 (IWFC433) - POST-FIRE RECOVERY IN PORTUGAL: 100 YEARS IN FLASHBACK, 10 YEARS TO MOVE FORWARD João Pinho<sup>1</sup>, António Patrão<sup>1</sup>

<sup>1</sup>Instituto da Conservação da Natureza e das Florestas, Lisbon, Portugal

1:00 PM - 2:30 PM | Lunch Ground Floor

2:30 PM - 3:15 PM | **Pegasus Porto Room** | Industry Session

2:30 PM - 4:00 PM | Forest & Economy - Public Policies Arquivo Room | Thematic Session

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The session will discuss: Public policies that create incentives to develop new or renewed economic activities in rural land, in a sustainable way. Policies to foster governance models that close the gap between multiple jurisdictions, bringing communities closer to the planning process, promoting economic growth which in turn makes rural land more managed and less prone to landscape fires. How to bring together economy and conservation.

Chair: **Pedro Lencart** | Director at Antarr, PT

Keynote Speaker: Jelle Behagel | Wageningen University & Research, AU

Panelists: **Felipe Gonzalez** (remote) | Former President of the Spanish Government; President of the Foundation Felipe Gonzalez

Ismail Belen | Senior Agriculture and Forests Expert, General Directorate of Nature Conservation and National Parks of the Ministry of Agriculture and Forests, Turkey Juan Cabandié | Argentine Minister of Environment

#### 2:30 PM - 4:00 PM | Post-Fire Intervention

Infante Room | Thematic Session

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The session will discuss: Deployment of post-fire initiatives reducing impacts such as loss of top-soil layers, flooding, landslides and land erosion, allowing for land restoration. Recovering communities affected by landscape fires, making them more resilient to future events.

Chair: Jacob Keizer | Researcher, University of Aveiro

Keynote Speaker: **Hugh Safford** I Vibrant Planet, and University Of California Davis

Panelists: **Scott Dehnisch** I US Agency For International Development/Bureau For Humanitarian Assistance **Nuno Banza** | President of the Board of Directors, ICNF

**Stefan Doerr** I Full professor Centre For Wildfire Research, Swansea University

#### 2:30 PM - 4:00 PM | Planning & Preparation

D. Luís Room | Oral Communications

Chair: Lara Steil | Fire Management Officer Forestry Division Food and Agriculture Organization of the United Nations

OC55 (IWFC268) - STATE OF KNOWLEDGE, FUTURE CHALLENGES AND OPTIONS FOR AN INTEGRATED FIRE MANAGEMENT IN THE EUROPEAN ALPS

**Harald Vacik**<sup>1</sup>, Mortimer M. Müller, Marco Conedera, Gianni Boris Pezzatti, Giorgio Vacchiano, Yvon Duche, Rolando Rizzolo, Boštjan Kosicek, Dr. Sébastien Lahaye, Christian Schunk, Michael Sautter, Augusto Cotterchio, Daniele Ryser, Sylvain Dupire, Aron Ghiringhelli, Peter Ondrich, Walter Wuggenig, Vila Vilardel, Trung Hoang, Christian Mayer <sup>1</sup>University of Natural Resources and Life Sciences, Vienna, Austria

OC56 (IWFC01) - THE AUSTRALIAN FIRE DANGER RATING SYSTEM Stuart Matthews<sup>1</sup>, Rob Rogers<sup>1</sup>, Simon Heemtra<sup>2</sup>, <u>Meaghan Jenkins</u>

<sup>1</sup>NSW Rural Fire Service, Sydney Olympic Park, Australia, <sup>2</sup>AFAC, East Melbourne, Australia4

OC57 (IWFC506) - THE EFFECTS OF PRESCRIBED FIRES ON LIZARD DIVERSITY IN GRASSLANDS OF CENTRAL BRAZIL Bruna Gomes<sup>1</sup>, Professor Marcio Martins<sup>1</sup> <sup>1</sup>University of São Paulo, São Paulo, Brazil

OC58 (IWFC225) - COMMUNITY FIRST: GOVERNMENT, FIRE AGENCIES, AND COMMUNITIES, LEARNING, DECIDING AND ADAPTING TOGETHER AS PART OF A BUSHFIRE RISK REDUCTION SYSTEM

#### Stefanie Russell<sup>1</sup>

<sup>1</sup>Country Fire Authority, Melbourne, Australia, <sup>2</sup>Victorian State Government, Melbourne, Australia

OC60 (IWFC31) - PEERING INTO THE FUTURE: IDENTIFICATION OF EMERGING WILDFIRE RISK HOTSPOTS DUE TO CHANGES IN CLIMATE AND POPULATION IN WESTERN AUSTRALIA

**Amelie Jeanneau**<sup>1</sup>, Prof. Hedwig van Delden<sup>1,2</sup>, Holger R. Maier<sup>1</sup>, Aaron Zecchin<sup>1</sup>, Roel Vanhout<sup>2</sup>, Tim McNaught<sup>3</sup>, Mike Wouters<sup>4</sup>

<sup>1</sup>The University Of Adelaide, Adelaide, Australia, <sup>2</sup>Research Institute for Knowledge Systems, Maastricht, the Netherlands, <sup>3</sup>Department of Fire and Emergency Services, Perth, Australia, <sup>4</sup>Department for Environment and Water, Adelaide, Australia

OC61 (IWFC280) - ASSESSING DIRECTIONAL VULNERABILITY TO WILDFIRE -IMPLICATIONS FOR COMMUNITY PROTECTION PLANNING Jen Beverly<sup>1</sup>, Air Forbes<sup>1</sup>





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<sup>1</sup>University of Alberta, Edmonton, Canada

#### 2:30 PM - 4:00 PM | Prevention and Pre-Suppression

Miragaia Room | E-Poster Presentations Chair: Stefano Macrelli | University of Bologna

PP84 (IWFC210) - FIRE PROGRESSION IN NORTHWEST EUROPE : REMOTELY SENSED REGIME AND DRIVERS

**Tomás Quiñones**<sup>1</sup>, Adrian Cardil<sup>1</sup>, Santiago Monedero<sup>1</sup>, Joaquín Ramirez<sup>1</sup>, Sergio de Miguel<sup>2</sup> <sup>1</sup>Tecnosylva, León, Spain, <sup>2</sup>Universitat de Lleida, Lleida, Spain

PP85 (IWFC427) - INSIGHTS FROM THE FIRESMART PROJECT: A SUMMARY FOR POLICYMAKERS

**Adrián Regos**<sup>1</sup>, FirESmart Team Judit Lecina-Diaz, João C. Campos, Silvana Pais, Claudia Car <sup>1</sup>Biopolis/cibio, Portugal

#### PP86 (IWFC256) - WEATHER-BASED INDICATORS OF FIRE RISK PERCEPTION ACROSS PORTUGAL HIGHLIGHT POSITIVE CHANGES AND IMPROVE PREVENTION PLANNING AT REGIONAL TO LOCAL SCALES.

**Yannick Le Page**<sup>1</sup>, Bruno Pereira<sup>1</sup>, Mario Monteiro<sup>1</sup>, Sara Mieiro dos Santos<sup>1</sup>, Tiago M Oliveira<sup>1</sup> <sup>1</sup>Agency for Integrated Rural Fire Management, Lousã, Portugal

#### PP87 (IWFC271) - CONTRIBUTION OF PRESCRIBED FIRE TO WILDFIRE PREVENTION IN THE TROPICAL SAVANNAS OF CAMPOS AMAZÔNICOS NATIONAL PARK, AMAZON REGION, BRAZIL.

**Bruno Cambraia**<sup>1</sup>, Doctor Christian Berlinck<sup>2</sup>, Doctor Daniel Alves<sup>3</sup> <sup>1</sup>ICMBio, Porto Velho, Brazil, <sup>2</sup>ICMBio, Atibaia, Brazil, <sup>3</sup>Universidade Estadual do Paraná, União da Vitória, Brazil

#### PP88 (IWFC321) - THE ROLE OF CIVIL SOCIETY ORGANIZATIONS TO REDUCE WILDFIRES IN BRAZIL: THE EXAMPLE OF PANTANAL BRIGADES PROGRAM Ananda Andrade<sup>1,2</sup>,Leonardo Gomes<sup>1</sup>, João Scremin Dias<sup>1,2</sup>

<sup>1</sup>Sos Pantanal, Campo Grande, Brazil, <sup>2</sup>Universidade de Brasília, Brasília, Brazil

#### PP90 (IWFC494) - SLEEP QUALITY ASSESSMENT OF PROFESSIONAL FIREFIGHTERS FROM NORTHEAST OF PORTUGAL

**Sara Alves**<sup>1,2</sup>, Student Filipa Esteves<sup>3,4,5</sup>, Francisca Silva<sup>6</sup>, Felisbina Queiroga<sup>6</sup>, Solange Costa<sup>7,8,9</sup>, Klara Slezakova<sup>9</sup>, Maria José Alves<sup>11,12</sup>, Maria Carmo Pereira, João Teixeira<sup>5,6,8</sup>, Simone Morais<sup>10</sup>, Josiana Vaz<sup>1,11,12</sup>, Adilia Fernandes<sup>1,13</sup>

<sup>1</sup>Instituto Politécnico de Bragança, Braganca, Portugal, <sup>2</sup>Universidade Católica Portuguesa, Porto, Portugal, <sup>3</sup>National Institute of Health, Environmental Health Department, Porto, Portugal, <sup>4</sup>EPIUnit - Instituto de Saúde Pública da Universidade do Porto, Porto, Portugal, <sup>5</sup>Faculty of Medicine, University of Porto, Department of Public Health and Forensic Sciences, and Medical School, Porto, Portugal, <sup>6</sup>UTAD - Universidade de Trás os Montes e Alto Douro, <sup>7</sup>Faculty of Medicine, University of Porto, Department of Public Health and Forensic Sciences, and Medical School, Porto, Portugal, <sup>8</sup>Laboratório para a Investigação Integrativa e Translacional em Saúde Populacional (ITR), Porto, Portugal, <sup>9</sup>LEPABE, Departamento de Engenharia Química, Faculdade de Engenharia, Porto, Portugal, <sup>10</sup>REQUIMTE LAQV, Instituto Superior de Engenharia, Porto, Portugal, <sup>11</sup>Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Portugal, <sup>12</sup>Laboratório Associado para a Sustentabilidade e Tecnologia em Regiões de Montanha (SuSTEC), Instituto Politécnico de Bragança, Portugal, <sup>13</sup>Unidade de Investigação em Ciências da Saúde: Enfermagem (UICISA: E), Escola Superior de Saúde de Coimbra, Portugal

PP91 (IWFC88) - REDUCING HUMAN-CAUSED WILDFIRE IGNITIONS: USING SOCIAL SCIENCE TO UNDERSTAND RISK MANAGEMENT PREFERENCES IN THE U.S. SOUTHWEST

**Catrin Edgeley**<sup>1</sup>, Alexander Evans<sup>2</sup>, Sarah Devenport<sup>1</sup>, Gabe Kohler<sup>2</sup> <sup>1</sup>Northern Arizona University, Flagstaff,, United States, <sup>2</sup>Forest Stewards Guild, Santa Fe, United States

### PP92 (IWFC300) - OPERATIONAL CLASSIFICATION OF SMOKE PLUMES FOR EARLY WARNING: START OF WILDFIRE OR FALSE ALARM?

<u>Stefano Macrelli</u>

<sup>1</sup>Department of Physics and Astronomy - University of Bologna, Italy

#### PP93 (IWFC288) - NEW CLASSIFICATION METHODS FOR THE FWI SYSTEM Chelene Hanes<sup>1</sup>, Mike Wotton<sup>2</sup>, Natasha Jurko<sup>1</sup>

<sup>1</sup>Great Lakes Forestry Centre, Canadian Forest Service, Natural Resources Canada, Sault Ste. Marie, Canada, <sup>2</sup>University of Toronto / Natural Resources Canada, Toronto, Canada

PP94 (IWFC171) - NATIONAL WILDFIRE PREPAREDNESS PROGRAM: A FORWARD-LOOKING INITIATIVE FOR INTERAGENCY COORDINATION Elena Hernández Paredes<sup>1</sup>, Ángela Iglesias Rodrigo<sup>1</sup>, Ignacio Bustamante López-Chicheri<sup>2</sup> <sup>1</sup>Ministry For The Ecological Transition And Demographic Challenge, Madrid, Spain, <sup>2</sup>TRAGSATEC, Madrid, Spain

#### PP95 (IWFC24) - MEDIUM-TERM RESULTS OF PRESCRIBED BURNING MANAGEMENT IN BRAZILIAN INDIGENOUS LANDS

**Marcelo Trindade Santana**<sup>1</sup>, Rodrigo Falleiro<sup>2</sup>, Charles Pereira Pinto<sup>2</sup>, Pedro Paulo Xerente<sup>2</sup> <sup>1</sup>National Federation of Family Farmers and Rural Family Entrepreneurs, Brasília, Brazil, <sup>2</sup>Brazilian Institute of the Environment and Renewable Natural Resources, Brasília, Brazil

# PP96 (IWFC128) - LINEAR FIREBREAK INFRASTRUCTURES IN THE VALENCIAN COMMUNITY. UPDATING OF THE WIDTH CALCULATION METHODOLOGY.

**Miguel Angel Botella Martínez**<sup>1</sup>, Mª Jesús Barberà Bisbal<sup>1</sup>, Ricardo García Post<sup>2</sup>, Jose Luís Soriano Sancho<sup>1</sup>, Agustín Cervera Montero<sup>1</sup>, Daniel Orozco Bagou<sup>1</sup>, Miguel Estéfano Olaiz<sup>1</sup>, Juan Luis Arribas Cobo<sup>3</sup>, Francisco Navarro Baixauli<sup>3</sup>, Gracia Sapiña Salom<sup>3</sup>

<sup>1</sup>Unidad Tecnica de Análisis y Prevencion de Incendios Forestales (VAERSA, Generalitat Valenciana), Valencia, Spain, <sup>2</sup>Direccion General de Prevencion de Incendios Forestales, Generalitat Valenciana, Valencia, Spain, <sup>3</sup>Departamento de Proyectos (VAERSA, Generalitat







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PP97 (IWFC258) - INTEGRATED FIRE MANAGEMENT (IFM) IMPLEMENTATION AND OUTCOMES IN THE INDIGENOUS LAND OF PARQUE DO ARAGUAIA **Waner Gonçalves Lima**<sup>1</sup>, Danielle Danaga, Gildimar Xerente

<sup>1</sup>Ibama - Instituto Brasileiro Do Meio Ambiente E Dos Recursos Naturais Renováveis, Palmas, Brazil

#### PP98 (IWFC273) - IMPROVING AN INTEGRATED FIRE DANGER ASSESSMENT WITH HIGH RESOLUTION VEGETATION PARAMETERS

**Harald Vacik'**, Mortimer M. Müller, Markus Immitzer, Gergö Dioszegi, Clement Atzberger, Markus Hollaus, Ruxandra-Maria Zotta, Wouter Arnoud Dorigo <sup>1</sup>University of Natural Resources and Life Sciences, Vienna, Austria

#### PP99 (IWFC47) - ANALYSIS AND EVALUATION OF FOREST FIRE VIDEO MONITORING AND SURVEILLANCE EFFECTS- CASE STUDY OF CROATIAN FIRE DETECT AI Ljiljana Šerić<sup>1</sup>, Stipe Pletikosić<sup>1</sup>, Selena Knežić Buhovac<sup>1</sup>

<sup>1</sup>University Of Split, Fesb, Split, Croatia

#### 2:30 PM - 4:00 PM | Adaptive Management

S. João Room | E-Poster Presentations Chair: Shelby Corning | International Institute Of Applied Systems Analysis

PP100 (IWFC230) - "MITIGATION, ADAPTATION OR SUFFERING" IN RELATION TO WILDLAND FIRE

**Fiona Newman Thacker**<sup>1</sup>, Kathleen Uyttewaal<sup>1,2</sup>, Tomás Quinones<sup>3</sup>, Cathelijne Stoof<sup>1</sup>, Rik Leemans<sup>1</sup>, Stacey Frederick<sup>4</sup>

<sup>1</sup>Wageningen University And Research, Wageningen, Netherlands, <sup>2</sup>Pau Costa Foundation, Barcelona, Spain, <sup>3</sup>Tecnosylva, Leon, Spain, <sup>4</sup>American Wildfire Experience, United States

PP101 (IWFC234) - HOW DEMOGRAPHIC CHANGES IMPACT ON WILDFIRE REGIME

**Juan José Fernández**<sup>1</sup>, Rubén Chamorro González<sup>2</sup>, Juan Antonio Muñoz Navarro<sup>2</sup> <sup>1</sup>INFOCAM / Forest Fires Unit, Toledo, Spain, <sup>2</sup>INFOCAM / Analysis and Plannig Unit, Toledo, Spain

# PP102 (IWFC376) - WHAT'S THE POINT? REFLECTING ON GOALS & EVALUATION IN WILDFIRE MANAGEMENT

#### Eric Kennedy<sup>1</sup>

<sup>1</sup>York University, Toronto, Canada

#### PP103 (IWFC484) - FIRE FORESTRY ACCIDENTS IN GALICIA

Fernando Iglesias Rey<sup>1</sup>, Jorge Raposo<sup>2,3</sup>, **<u>Gilberto Vaz</u><sup>2,3</sup>**, Daniela Alves<sup>2</sup>, Alberto Rojo<sup>1</sup> <sup>1</sup>Universidad de Santiago de Compostela, Campus de Lugo, Escuela Politecnica Superior, Lugo, Espanha, <sup>2</sup>Univ Coimbra, ADAI, Department of Mechanical Engineering, Coimbra, Portugal, <sup>3</sup>Coimbra Polytechnic - ISEC, Coimbra, Portugal

PP104 (IWFC159) - EDUCATION FOR COMMUNITIES AND LOCAL ADMINISTRATIONS. INTRODUCING AND UNDERSTANDING A CIRCULAR MODEL ABOUT HOW TO LIVE WITH FIRE. Felipe Alarcon<sup>1</sup>, Herbert Haltenhoff<sup>1</sup> <sup>1</sup>WildfireFT, Santiago, Chile

PP105 (IWFC100) - FIRST INDIGENOUS WOMEN VOLUNTEER WILDLAND FIRE BRIGADE IN BRAZIL: FROM SPECTATORS TO EFFECTIVE AGENTS OF INTEGRATED FIRE MANAGEMENT

**Ana Violato Espada**<sup>1</sup>, Mariana Senra De Oliveira, Pedro Paulo Xerente, Dinalice Xerente, Marcelo Siqueira de Oliveira, Maíz dAssumpção <sup>1</sup>U.S. Forest Service International Programs Brazil, Alter do Chão/Santarém. Brazil

PP107 (IWFC485) - WILDFIRE ADAPTIVE MANAGEMENT TO REDUCE WILDFIRE RISK IN PORTUGAL: BENEFITS, OPPORTUNITIES, CHALLENGES, AND BARRIERS Fantina Maria Tedim<sup>1,2</sup>, Fernando Correia<sup>1,2</sup>, Lucínia Aires<sup>3</sup>, Elisabete Pacheco<sup>3</sup>, Fernando Encarnação<sup>3</sup>, Catarina Coimbra<sup>4</sup>, Miguel Fontes<sup>4</sup>, Master Margarida Jerónimo<sup>5</sup>, Nuno Touret<sup>6</sup>, Nuno Rocha<sup>7</sup>, Joaquim Tavares<sup>7</sup>, Master Sara Tapa<sup>8</sup>, André Samora-Arvela<sup>1,2</sup>, Cláudia Magalhães<sup>2</sup>, Diogo Miguel Pinto<sup>1,2</sup>

<sup>1</sup>Centre of Studies in Geography and Spatial Planning, Porto, Portugal, <sup>2</sup>Faculty of Arts of University of Porto, Porto, Portugal, <sup>3</sup>Municipality of Odemira, Odemira, Portugal, <sup>4</sup>Municipality of Odmira, Guarda, Portugal, <sup>5</sup>Municipality of Seia, Seia, Portugal, <sup>6</sup>Municipality of Ourém, Ourém, Portugal, <sup>7</sup>Municipality of Vouzela, Vouzela, Portugal, <sup>8</sup>Municipality of Ribeira de Pena, Ribeira de Pena, Portugal

PP108 (IWFC170) - TRUST AND COMPASSION IN WILLINGNESS TO SHARE MOBILITY AND SHELTERING RESOURCES IN WILDFIRE EVACUATIONS Stephen Wong, Joan Walker, Susan Shaheen <sup>1</sup>University Of Alberta, Edmonton, Canada

PP110 (IWFC233) - INTEGRATION OF FIRE INCIDENT MONITORING INTO ENHANCED LAW ENFORCEMENT IN MOZAMBIQUE'S CONSERVATION AREAS Leonel Mutemba, Augusto Tembe, **Franziska Steinbruch**<sup>1</sup> <sup>1</sup>Administracao Nacional Das Areas De Conservacao, Mozambique

# PP111 (IWFC345) - FLAMMABLE FUTURES - A STORYLINE OF CLIMATIC AND ADAPTATION IMPACTS ON WILDFIRE EVENTS IN INDONESIA

**Shelby Corning**<sup>1</sup>, Esther Boere<sup>2</sup>, Andrey Krasovskiy<sup>1</sup>, Andrey Lessa-Derci-Augustynczik<sup>2</sup>, Florian Kraxner<sup>1</sup>

<sup>1</sup>Agriculture Forestry and Ecosystem Services (AFE) Group, Biodiversity and Natural Resources (BNR) Program, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria, <sup>2</sup>Integrated Biosphere Futures (IBR) Group, Biodiversity and Natural







Resources (BNR) Program, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria

### 2:30 PM - 4:00 PM | Suppression and Relief

### Arrábida Room | Oral Communications

Chair: Marc Castellnou | Fire Chief Catalan Fire and Rescue Service, SP

OC62 (IWFC525) - 14F TECHNOLOGY FOR MAKING AERIAL FIREFIGHTING MORE EFFECTIVE

#### Agoston Restas<sup>1</sup>

<sup>1</sup>University of Public Service, Institute of Disaster Management. 1101 Budapest, Hungaria krt. 9-11

OC63 (IWFC04) - THE FISC-CERRADO NEAR-REAL TIME WEB-SYSTEM FOR PREDICTING FIRE SPREAD

Professor Britaldo Soares-filho<sup>1</sup>, UBIRAJARA OLIVEIRA<sup>1</sup>

<sup>1</sup>Universidade Federal De Minas Gerais, Belo Horizonte, Brazil

OC64 (IWFC164) - FIRE ANALYSIS CELL - PORTUGUESE METHODOLOGY FOR OPERATIONAL DECISION SUPPORT IN WILDFIRES MANAGEMENT

### Fábio Silva<sup>1</sup>

<sup>1</sup>ANEPC-FEPC, Portugal

OC65 (IWFC306) - WILDLAND FIRE DECISION FACTORS CONSIDERED BY USFS AGENCY ADMINISTRATORS AFTER THE 2009 POLICY UPDATE.

### Stephen Fillmore<sup>1</sup>

<sup>1</sup>US Forest Service, San Diego, United States, <sup>2</sup>University of Idaho, Moscow, ID, United States

OC66 (IWFC189) - ENABLING INTEGRATED WILDFIRE RESPONSE OPERATIONS WITH CREWED AND UNCREWED AIR ASSETS: FLIGHT TEST EXPLORATION Adriana Andreeva-Mori<sup>1</sup>, Kohji Ohga<sup>1</sup>, Keiji Kobayashi<sup>1</sup>, Jeffrey Homola<sup>2</sup>, Marcus Johnson<sup>2</sup>,

Parimal Kopardekar<sup>2</sup>

<sup>1</sup>Japan Aerospace Exploration Agency, Mitaka, Japan, <sup>2</sup>NASA Ames Research Center, Moffett Field, United States of America

OC67 (IWFC524) - AERIAL FIREFIGHTING WITH DRONE SWARM TECHNOLOGY -FUTURE IS HERE

### Agoston Restas<sup>1</sup>

<sup>1</sup>University of Public Service, Institute of Disaster Management.

OC68 (IWFC468) - A CELLULAR AUTOMATA MODEL FOR WIND-DRIVEN FIRES Mariana Oliveira<sup>1</sup>, Bárbara Mota<sup>2</sup>, Joana G. Freire<sup>1</sup>, Sílvia A. Nunes<sup>1</sup>, Carlos C. DaCamara<sup>1</sup> <sup>1</sup>IDL, Faculdade de Ciências, Portugal, <sup>2</sup>Department of Computational Biology, Faculty of Biology and Medicine, University of Lausanne, Switzerland 4:00 PM - 4:30 PM | **Coffee Break Exhibition Area** I Ground Floor

### 4:30 PM - 6:00 PM | Adaptive Management

Arquivo Room | Thematic Session ሪን

The session will discuss: Methods for continuous monitoring and assessment, aiding decision making. Objectives, goals and key performance indicators, making management a continuous cycle of improvement.

Chair: Margarida Tomé | Professor, ISA

Keynote Speakers: **Jesus San Miguel** I European Commission - Joint Research Centre **Toddi Steelman** I Stanback Dean, Nicholas School of the Environment, Duke University, USA Panelist: **Tim Mitchell** | National Wildfire Specialist at Fire and Emergency NZ

4:30 PM - 6:00 PM | Volunteering in Integrated Fire Management Infante Room | Workshop

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The session will discuss: A roundtable session with representatives of several countries that use volunteer forces for prevention and supression efforts, aiming to share the current situation, experiences and lessons learnt, as well as systematise recommendations related to the participation of volunteers in the Integrated Fire Management (IFM) in protected areas. Chair: **Angela Pellin** | Organizer and Facilitator, IPÊ Speaker: **João Paulo Morita** | Representative in the Brazilian strategy, ICMBio **Luciana de Oliveira Rosa Machado** | MMA representative in the Brazilian strategy **André Luis Lima** | GIZ representative in the Brazilian strategy

José Beleza | Presentation of the case of Portugal, LBP

Claire Lötter | Presentation of the case of South Africa, Volunteer Wildfire Services

# 4:30 PM - 6:00 PM | Forest and Peatland Fire Management - best practices and challenges in ASEAN, examples from Indonesia and Malaysia

D. Maria Room | Workshop

In Southeast Asia, forest and peatland fires have caused havoc in the past. Peatland fires in particular have been the main culprits of haze pollution events in the region. With peatland covering 23 Mha, representing approximately 40% of the worlds' known tropical peatlands and roughly 6% of the entire global peatland resource, peatland ecosystems have been at the centre of ASEAN policies as well as at national level in Indonesia and Malaysia which hold the greatest peatland area in the region. It is estimated that ASEAN peatlands store 14% of carbon stored in global peatlands. In this workshop the ASEAN region will be presented and you will be introduced to the challenges the region deals with related to peatland fire. Best practices on fire management will be presented by Indonesia and Malaysia as examples from the region. Future collaboration and partnerships that can support the region transform the challenges into opportunities will be welcome.







Chair: **Bárbara Gonçalves** | Sustainable Use of Peatlands and Haze Mitigation Program, GIZ Speakers: **Israr Albar** | Ministry Of Environment and Forestry **Dato' Nor Hisham Bin Mohammad** | Fire And Rescue Department Of Malaysia

### 4:30 PM - 6:00 PM | Post Fire Intervention

### Miragaia Room | E-Poster Presentations

Chair: Tamires Yule | Researcher, Federal University of Mato Grosso do Sul

### PP112 (IWFC221) - LAND MANAGEMENT OPTIONS IN RECENTLY BURNED AREAS: A MODELLING APPROACH TO EVALUATE THE IMPACTS OF POST-FIRE INTERVENTIONS

**Marta Basso**<sup>1</sup>, Assistant Researcher Dalila Serpa<sup>1</sup>, Researcher Martinho Martins<sup>1</sup>, Doctor Jacob Keizer<sup>1</sup>, Researcher Diana Vieira<sup>2</sup>

<sup>1</sup>Centre for Environmental and Marine Studies (CESAM), Department of Environment and Planning, University of Aveiro, Aveiro, Portugal, <sup>2</sup>European Commission, Joint Research Centre (JRC), Ispra, Italy

### PP113 (IWFC297) - A SIMPLE TOOL TO MAP EROSION HOTSPOTS AFTER WILDFIRES

### Joana Parente<sup>1</sup>, João Pedro Nunes<sup>1,2</sup>, Jantiene Baartman<sup>2</sup>

<sup>1</sup>cE3c - Center for Ecology, Evolution and Environmental Changes & CHANGE - Global Change and Sustainability Institute, Sciences Faculty, University of Lisbon, Portugal, <sup>2</sup>Soil Physics and Land Management group, Wageningen University & Research, Netherlands

## PP114 (IWFC7) - EXPERIMENTAL POST-FIRE RESTORATION OF NOTHOFAGUS PUMILIO AND N. ANTARCTICA FORESTS IN TIERRA DEL FUEGO, ARGENTINA

Matthew Ruggirello<sup>1</sup>, Rosina Soler<sup>1</sup>, Gimena Bustamante<sup>1</sup>, **Peter Fule<sup>2</sup>** 

<sup>1</sup>Centro Austral De Investigaciones Científicas (cadic-conicet), Ushuaia, Argentina, <sup>2</sup>Northern Arizona University, Flagstaff, Unired States of America

### PP115 (IWFC263) - COMBATING FOREST FIRES IN THE PANTANAL THROUGH FIRE PREVENTION AND RESTORATION

**Liz Belém**<sup>1</sup>, student Paula Martins<sup>2</sup>, Judit Szabo<sup>3</sup>, Renata Libonati<sup>1</sup>, Professor Letícia Garcia<sup>2</sup> <sup>1</sup>Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, <sup>2</sup>Universidade Federal de Mato Grosso do Sul, Campo Grande, Brazil, <sup>3</sup>Universidade Federal da Bahia, Salvador, Brazil

### PP116 (IWFC414) - ASSESSING POST-FIRE SOIL EROSION AND ASH TRANSPORT RISK WITH WEPPCLOUD-WATAR-EU AFTER THE EXTREME 2022 FOREST FIRE IN CENTRAL EUROPE

**Jonay Neris**<sup>1,2</sup>, Carmen Sanchez-Garcia<sup>1</sup>, Stefan Doerr<sup>1</sup>, Cristina Santin<sup>1</sup>, Emilia Urbanek<sup>1</sup>, Professor Matthias Forkel<sup>3</sup>, Anette Eltner<sup>3</sup>, Robert Krüger<sup>3</sup>, Kristina Beetz<sup>3</sup>, Christopher Marrs<sup>3</sup>, Pete R. Robichaud<sup>4</sup>, Mariana Dobre<sup>5</sup>, Roger Lew<sup>5</sup>, Anurag Srivastava<sup>5</sup>

<sup>1</sup>Swansea University, Swansea, United Kingdom, <sup>2</sup>Universidad de La Laguna, La Laguna, Spain, <sup>3</sup>Technische Universität Dresden, Dresden, Germany, <sup>4</sup>USDA Forest Service, Rocky Mountain Research Station, Moscow, United States, <sup>5</sup>University of Idaho, Moscow, United States PP117 (IWFC470) - DO PRESCRIBED FIRES AFFECT THE DIVERSITY OF NONVOLANT SMALL VERTEBRATES IN OPEN SAVANNAS OF SOUTHEASTERN BRAZIL?

**Marcio Martins**<sup>1</sup>, Luciana Furtado, Ana Paula Carmignotto, Giovana Felício, João Paulo Vieira Alencar, Juan Díaz-Ricaurte, Filipe Serrano <sup>1</sup>Universidade De São Paulo, São Paulo, Brazil

PP118 (IWFC40) - WILDFIRE IMPACTS ON ECOSYSTEM SERVICES IN PORTUGAL: A TRIANGULATION OF RESEARCH FINDINGS, GOVERNMENTAL REPORTS, AND SPECIALISTS' PERCEPTIONS

Renata Martins Pacheco<sup>1</sup>

<sup>1</sup>Ceabn/isa

## PP119 (IWFC394) - USING REMOTE SENSING TO ASSESS FIRE IMPACTS ON TROPICAL DRY FORESTS IN MADAGASCAR

**Gaston Hedwigino Tahintsoa**<sup>1,2</sup>, Dimby Raherinjatovoarison<sup>1</sup>, Haritiana Zacaharie Rakotoarinivo<sup>1</sup>, Rajira Nambinintsoa Ratsimandresy<sup>1</sup>, Harifidy Rakoto Ratsimba<sup>1,2</sup> <sup>1</sup>Land, Landscape and Development Research Lab (LLandDev ), Ecole Supérieure des Sciences Agronomiques, Département des Eaux et Forêts (ESSA-Forêts), Madagascar, <sup>2</sup>Regional Eastern Africa Fire Management Resource Center (REAFMRC), Madagascar

### PP120 (IWFC56) - USE OF REMOTE SENSING TO EVALUATE EFFECTS OF POSTFIRE EMERGENCY STABILIZATION ON OAK FORESTS RECOVERY

Luis Filipe Lopes<sup>1</sup>, Filipe S. Dias<sup>2:3,5</sup>, Paulo Fernandes<sup>4</sup>, Vanda Acácio<sup>1</sup> <sup>1</sup>Centre for Applied Ecology " Baeta Neves" (CEABN-InBIO), School of Agriculture, University of Lisbon, Lisboa, Portugal, <sup>2</sup>CIBIO/InBio, Centro de Investigação em Biodiversidade e Recursos Genéticos, Laboratório Associado, Instituto Superior de Agronomia, Universidade de Lisboa, Lisboa, Portugal, <sup>3</sup>CIBIO/InBio, Centro de Investigação em Biodiversidade e Recursos Genéticos, Laboratório Associado, Universidade do Porto, Vairão, Portugal, <sup>4</sup>Centro de Investigação e de Tecnologias Agroambientais e Biológicas, Universidade de Trás-os Montes e Alto Douro, Vila Real, Portugal, <sup>5</sup>BIOPOLIS Program in Genomics, Biodiversity and Land Planning, CIBIO, Portugal

### PP121 (IWFC475) - ROOT AND STEM BARK FEATURES OF BANARA ARGUTA BRIQ. (SALICACEAE) FROM BURNED AND UNBURNED AREAS IN THE PANTANAL, BRAZIL

Claudio Ribeiro Barbos Júnior<sup>1</sup>, **Tamires Yule**<sup>1</sup>, Geraldo Alves Damasceno Junior<sup>1</sup>, Rosani do Carmo de Oliveira Arruda<sup>1</sup>, Edna Scremin-Dias<sup>1</sup> <sup>1</sup>Universidade Federal De Mato Grosso Do Sul, Campo Grande, Brazil

## PP123 (IWFC163) - POST-FIRE NATURAL REGENERATION IN ATLANTIC FOREST IN SOUTHEASTERN BRAZIL

Patrícia Dias<sup>1</sup>, Guilherme Mores<sup>2</sup>, Sustanis Kunz<sup>1</sup>

<sup>1</sup>Universidade Federal Do Espírito Santo, Jerônimo Monteiro, Brazil, <sup>2</sup>Universidade Estadual Paulista, Botucatu, Brazil







PP124 (IWFC51) - LOCAL ASSESSMENT OF TECHNICAL FORESTRY AWARENESS ON SOIL EROSION AFTER WILDFIRE - THE CASE STUDY OF CENTRAL PORTUGAL REGION

### Ana Rita Lopes<sup>1</sup>

<sup>1</sup>University Of Aveiro, Aveiro, Portugal

PP125 (IWFC507) - DIRECT MORTALITY OF SMALL VERTEBRATES CAUSED BY PRESCRIBED FIRES IN GRASSLANDS OF CENTRAL BRAZIL

**Bruna Gomes**<sup>1</sup>, Marcio Martins<sup>1</sup> <sup>1</sup>University of São Paulo, Brazil

PP126 (IWFC6) - DETERMINING BURN SEVERITY AND ITS IMPACT ON POST-FIRE REGENERATION IN THE NOTHOFAGUS FORESTS OF TIERRA DEL FUEGO, ARGENTINA

Matthew Ruggirello<sup>1</sup>, Rosina Soler<sup>1</sup>, Gimena Bustamante<sup>1</sup>, **Peter Fule<sup>2</sup>** 

<sup>1</sup>Centro Austral De Investigaciones Científicas (cadic-conicet), <sup>2</sup>Northern Arizona University, Flagstaff, United States

### PP127 (IWFC237) - COMBINED RESTORATION STRATEGIES CAN ESTABLISH FIRE-RESILIENT AND FUNCTIONAL LANDSCAPES

**Aymen Moghli**<sup>1</sup>, Andrea Duane<sup>1</sup>, M.Jaime Baeza<sup>2,3</sup>, Mr Santiago Soliveres<sup>2,3</sup>, Victor,M. Santana<sup>2,4</sup> <sup>1</sup>Forest Science And Technology Centre Of Catalonia, Solsona, Spain, <sup>2</sup>University of Alicante, San vicente de raspeig, Spain, <sup>3</sup>Research Institutes Multidisciplinary Institute for Environmental Studies, San vicente del raspeig, Spain, <sup>4</sup>Mediterranean Center for Environmental Studies, Paterna, Spain

### 4:30 PM - 6:00 PM | Suppression and Relief

### S. João Room | E-Poster Presentations

Chair: **Ángela Iglesias Rodrigo** | Spanish Ministry for the Ecological Transition and Demographic Challenge

PP128 (IWFC342) - CHEMICALLY SPEAKING: WHY USFS, FIRE MANAGEMENT AGENCIES RELY ON PHOSPHATE-BASED FIRE RETARDANTS Jean Luc Kassabian<sup>1</sup>, Edward Goldberg <sup>1</sup>Perimeter Solutions, Clayton, United States

### PP129 (IWFC131) - STORMS AND EXTREME BEHAVIOR IN WILDFIRES. RECENT CASES IN THE VALENCIAN COMMUNITY, SPAIN

Agustín Cervera Montero<sup>1</sup>, Jose Luís Soriano Sancho<sup>1</sup>, Miguel Angel Botella Martínez<sup>1</sup>, SDaniel Orozco Bagou<sup>1</sup>, Ricardo García Post <sup>1</sup>Generalitat Valenciana. Vaersa, Spain

PP130 (IWFC206) - SIXTHSENSE: SMART INTEGRATED EXTREME ENVIRONMENT HEALTH MONITOR WITH SENSORY FEEDBACK FOR ENHANCED SITUATION AWARENESS **Belén Carballo-Leyenda**<sup>1</sup>, Jose A. Rodríguez-Marroyo<sup>1</sup>, Goran Bijelic<sup>2</sup>, Nerea Briz-Iceta<sup>2</sup>, Miloš Kostić<sup>3</sup>, Matija Strbac<sup>3</sup>, Lucas Paletta<sup>7</sup>, Philip Eschenbacher<sup>5</sup>, Rita Paradiso<sup>4</sup>, Givanni Magenes<sup>8</sup>, Čedomir Stefanović<sup>6</sup>, Andreas Morschhauser<sup>9</sup>, Pablo Fanjul<sup>10</sup> <sup>1</sup>VALFIS Research Group, Dept. of Physical Education and SportsUniversity Of León, León, Spain, <sup>2</sup>TECNALIA R&I, Parque Científico y Tecnológico de Gipuzkoa, San Sebastián, Spain, <sup>3</sup>Tecnalia Serbia, Beograd, Serbia, <sup>4</sup>Smartex srl, Polo Tecnologico Navacchio, Pisa, Italy, <sup>5</sup>Senetics Healthcare Group GmbH & Co. KG, Ansbach, Germany, <sup>6</sup>Department of Electronic Systems, Aalborg Universitet, Aalborg, Denmark, <sup>7</sup>Joanneum Research Forschungsgesellschaft mbH, Graz, Austria, <sup>8</sup>Electrical, Computer and Biomedical Engineering Department, University of Pavia, Pavia, Italy, <sup>9</sup>Technische Universität Chemnitz, Chemnitz, Germany, <sup>10</sup>Metrohm DropSens, S.L., Oviedo, Spain

## PP131 (IWFC446) - MODELLING THE COMBAT OF WILDFIRES WITH THE SOFTWARE FLAMMAP

### Ana Matias<sup>2</sup>, Luis Pita, **Antonio Correia**<sup>1</sup>

<sup>1</sup>SUScita, ISEC-IPC, Coimbra, Portugal, <sup>2</sup>Civil Protection, Municipality of Coimbra, Coimbra, Portugal, <sup>3</sup>Forest and Nature Conservation Institute, Coimbra, Portugal

### PP132 (IWFC115) - JUST IN TIME - PROPOSAL FOR LOGISTICS OF QUICK ALLOCATION OF BRIGADISTS FOR FLOREST FIRE FIGHTING **Kleber Silveira De Castro**

<sup>1</sup>Instituto Superior de Ciências da Informação e da Administração (ISCIA), Aveiro, Portugal

# PP133 (IWFC338) - EXTERNAL SUPPORTING BRIGADES IN FIRE SUPPRESSION IN EXTREME AND SIMULTANEOUS WILDLAND FIRES EPISODES

### Ángela Iglesias Rodrigo<sup>1</sup>

<sup>1</sup>Ministry Ecological Transition And Rural Development (miteco, Spain), Madrid, Spain

### PP134 (IWFC241) - A NEW MODEL TO PREDICT WILDLAND FIREFIGHTERS' THERMOPHYSIOLOGICAL STRAIN: THE APPROACH OF THE SIXTHSENSE PROJECT

**Belén Carballo-Leyenda**<sup>1</sup>, Jose A. Rodríguez-Marroyo<sup>1</sup>, Pilar S Collado<sup>2</sup>, David Suárez-Iglesias<sup>1</sup>, José Gerardo Villa-Vicente<sup>1</sup>

<sup>1</sup>University Of León, León, Spain, <sup>2</sup>University Of León, León, Spain

## PP135 (IWFC114) - A MATHEMATICAL TOOL FOR DECISION MAKING IN WILDFIRE SUPPRESSION

### Bibiana Granda<sup>1</sup>, Begoña Vitoriano<sup>1</sup>

<sup>1</sup>Interdisciplinary Mathematics Institute, HUMLOG Research Group, Universidad Complutense De Madrid, Madrid, Spain

### 4:30 PM - 6:00 PM | Risk Handling

### Arrábida Room | Oral Communications

Chair: Alan Ager | FS Research Forester (Retired), USA







OC69 (IWFC205) - THE MODIS FIRE SATELLITE PRODUCTS: A MULTIDECADAL BASELINE FOR GLOBAL FIRE ACTIVITY AND FIRE REGIMES Luigi Boschetti<sup>1</sup>, David Roy, Louis Giglio <sup>1</sup>University of Idaho, Moscow, United States

### OC70 (IWFC274) - INTEGRATION OF RESIDENTIAL STRUCTURES LOSS FUNCTIONS INTO WILDFIRE RISK ASSESSMENT

**Jonathan Boucher**<sup>1</sup>, Ahmad Abo El Ezz<sup>2</sup>, Vittorio Nicoletta<sup>1</sup>, Anne Cotton-Gagnon<sup>1</sup>, Raphaël Chavardes<sup>1</sup>

<sup>1</sup>Canadian Forest Service, Natural Resources Canada, Quebec, Canada, <sup>2</sup>École de Technologie Supérieure, Université du Québec, Montréal, QC, Canada, Montreal, Canada

OC71 (IWFC168) - INCLUSIVE COMMUNITY ENGAGEMENT IN DISASTER PREPAREDNESS AND RESPONSE FOCUSING ON WILDFIRES AND THE GENERATED SMOKE: BEST PRACTICES AND LESSONS LEARNED **Sofia Karma**<sup>1</sup>, Milt Statheropoulos<sup>1</sup> <sup>1</sup>National Technical University of Athens, Athens, Greece

# OC72 (IWFC278) - THE EVOLUTION OF THE ACCIDENT REVIEW PROCESS WITHIN THE USDA FOREST SERVICE

### Joe Harris<sup>1</sup>, Ben Iverson<sup>1</sup>

<sup>1</sup>USDA Forest Service, St. George, United States, <sup>2</sup>California Institute of integral Studies, San Francisco, United States

# OC73 (IWFC106) - TERRITORIAL VULNERABILITY. ASSESSMENT USING AN EXPERT OPINION BASED MULTICRITERIA MODEL.

Eric Maillé<sup>1</sup>

<sup>1</sup>Inrae-recover, Aix-en-Provence, France

## OC74 (IWFC500) - DEFORESTATION AND AGRICULTURE DRIVE AMAZON FIRE ACTIVITY, WHILE DROUGHTS RIDE IN THE SHOTGUN SEAT.

**Renata Libonati**<sup>1,2,3</sup>, José Miguel Cardoso Pereira<sup>2</sup>, Carlos C. DaCamara<sup>3</sup>, Leonardo Peres<sup>1,4</sup>, Prof. Ricardo M. Trigo<sup>1,3</sup>, Duarte Oom<sup>2</sup>, J. A. Rodrigues<sup>1</sup>, F. L. M Santos<sup>1</sup>, Celia M. Gouveia<sup>3,4</sup>, A. Enrich Prast<sup>1,5</sup>, F. Machado Silva<sup>1,6</sup>, J. M. N Silva<sup>2</sup>

<sup>1</sup>Ufrj, Brazil, <sup>2</sup>Centro de Estudos Florestais, Instituto Superior de Agronomia, Universidade de Lisboa, Lisboa, Portugal, <sup>3</sup>Instituto Dom Luiz, Universidade de Lisboa, Lisboa, Portugal, <sup>4</sup>Instituto Português do Mar e da Atmosfera, Lisboa, Portugal, <sup>5</sup>Department of Thematic Studies-Environmental Change, Linköping University, Linkoping, Sweden, <sup>6</sup>Programa de Geociências (Geoquímica Ambiental), Instituto de Química, Universidade Federal Fluminense, Niterói, Brazil

### OC75 (IWFC0) - HOW ARE RESIDENTS' EVACUATION DECISION-MAKING PROCESSES AFFECTED BY CHANGING WILDFIRE BEHAVIOR? INVESTIGATING THE 2020 EAST TROUBLESOME FIRE IN COLORADO, USA

**Catrin Edgeley**<sup>1</sup>, William Cannon<sup>1</sup>, Scott Pearse<sup>2</sup>, Branko Kosovic<sup>2</sup>, Gabriele Pfister<sup>2</sup>, Rajesh Kumar<sup>2</sup>

<sup>1</sup>Northern Arizona University, Flagstaff, United States, <sup>2</sup>National Center for Atmospheric Research, Boulder, United States

6:00 PM | Conversations around Fire with Stephen Pyne, Viritato Soromenho Marques e Carlos Vaz Marques Conference Dinner D. Maria Room | Cultural Session

8:00 PM - 11:00 PM | Conference Dinner Palácio da Bolsa

## FRIDAY, MAY 19

### 9:30 AM - 11:00 AM | Landscape Fire Governance - Framework

Arquivo Room | Plenary Session

### ሪን

The session will discuss: How a set of guiding principles can help achieve improved strategies, policies, and adapt landscape fire management to global change and increasing challenges How a renewed governance model, closing gaps of knowledge and intervention, can work favour of communities, lowering impacts and creating a more resilient territory.

11:00 AM - 11:30 AM | **Coffee Break Exhibition Area** I Ground Floor

### 11:30 AM - 1:00 PM | Closing Ceremony

Arquivo Room | Plenary Session

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Wraping up the conference and laying ground for the years ahead. The next steps towards integrated fire management.







E-POSTER DISPLAY

During the 8<sup>th</sup> IWFC, all E-Posters selected by the jury will be on display. E-Poster presentation sessions will take place in the S. João and Miragaia rooms, according to each theme. The remaining selected E-Posters will be available for consultation throughout the conference and can be viewed on LCD screens also located in the S. João and Miragaia rooms.

All selected E-Posters will also be available on the conference mobile application.

## **STAKEHOLDER ENGAGEMENT**

PO01 (IWFC429) - USING STAKEHOLDER-DERIVED FOREST MANAGEMENT PREFERENCE MAPS TO MODEL THE EFFECT OF FOREST MANAGEMENT STRATEGIES ON MITIGATING FOREST FIRE.

**Bushra Sanira Asif**<sup>1,2</sup>, Umberto Pernice<sup>2</sup>, Dr Paolo Fiorucci<sup>2</sup>, Mr Nicolò Perello<sup>1,2</sup> <sup>1</sup>University of Genoa, Genoa, Italy, <sup>2</sup>CIMA Research Foundation, Savona, Italy

PO02 (IWFC251) - STAKEHOLDER AND SOCIAL NETWORK ANALYSIS FOR UNDERSTANDING FOREST (FIRES) MANAGEMENT - A CONTRIBUTION BASED ON A SYSTEMATIC LITERATURE REVIEW

<u>Cláudia Fernandes</u><sup>1</sup>, Dr. Sandra Valente, Elisabete Figueiredo <sup>1</sup>University Of Aveiro, AVEIRO, Portugal

PO03 (IWFC412) - INDIGENOUS IDENTITY AND FOREST FIRE FIGHTERS IN THE MONARCH BUTTERFLY REGION, MEXICO Erika Garduño-Mendoza<sup>1</sup>, Diego Rafael Perez Salicrup 'IIES-UNAM, Morelia, Mexico

PO04 (IWFC242) - ENGAGING COMMUNITIES THROUGH ARTS: COMMUNAL THEATRE AS A PARTICIPATORY TOOL TO IMPROVE WILDFIRE RISK REDUCTION AND READINESS. Msc António Patrão<sup>1</sup>, Msc Frederic da Cruz Pires<sup>2</sup>, Ph. D. Eduardo Marques<sup>3</sup>, Ph. D. Mieko Yoshihama<sup>4</sup> <sup>1</sup>Technical Specialist, Spacial Informatics Group, San Francisco, USA, <sup>2</sup>School of Education and Social Sciences, Politécnico of Leiria, Leiria, Portugal, <sup>3</sup>Faculty of Social and Human Sciences, University of Azores, Ponta Delgada, Portugal, <sup>4</sup>School of Social Work, University of Michigan, Detroit, USA

## PO05 (IWFC65) - FIRE RISK ANALYSIS IN PORTUGUESE COMMUNITY FORESTS AND THE SEARCH FOR EFFECTIVE SOLUTIONS FOR ITS REDUCTION

**PhD Iryna Skulska Kolos**<sup>1</sup>, Professor Cristina Montiel<sup>2</sup>, Mr Francisco Castro Rego<sup>1</sup>, Professor Maria do Loreto Monteiro<sup>1</sup>, PhD Renata Pacheco<sup>1</sup>, PhD Inês Duarte<sup>1</sup>, Phd Catarina Sequeira<sup>1</sup>, Vanda Acácio<sup>1</sup>, Miss Conceição Colaço<sup>1</sup>

<sup>1</sup>Centre for Applied Ecology "Prof. Baeta Neves" (CEABN-InBIO), School of Agriculture, University of Lisbon, Lisbon, Portugal, <sup>2</sup>Complutense University of Madrid, Department of Geography. Profesor Aranguren, Madrid, Spain

PO06 (IWFC178) - TRADITIONAL BURNING FROM EXPERTS AND RURAL COMMUNITIES' PERSPECTIVE: EXPLORING BOTH MENTAL MODELS TO FOSTER AN EFFECTIVE RISK

### COMMUNICATION

**Mrs. Mayara Souza**<sup>1,2</sup>, Dr. Abílio Pereira Pacheco<sup>3,1,2</sup>, Dr. Jorge Grenha Teixeira<sup>1,2</sup> <sup>1</sup>Faculty of Engineering of the University of Porto, Porto, Portugal, <sup>2</sup>INESC TEC, Porto, Portugal, <sup>3</sup>ForestWISE, Collaborative Laboratory for Integrated Forest & Fire, Vila Real, Portugal

PO07 (IWFC184) - TRIBAL CONSULTING BEFORE AND DURING AN INCIDENT: CHANGE WITHIN THE US GOVERNMENT IS HAPPENING BUT MORE NEEDS TO BE DONE. Director, Office of Emergency Management Jason Steinmetz<sup>1</sup> <sup>1</sup>Bureau Of Indian Affairs, Washington, United States

Dureau Or Indian Analis, Washington, Onited States

PO08 (IWFC343) - STAKEHOLDER ENGAGEMENT IN THE DEFINITION OF RESILIENT STRATEGIES TO DEAL WITH CLIMATE CHANGE: FORES PROJECT APPROACH **Dr. Sandra Valente**<sup>1</sup>, Dr. Paula Maia<sup>2</sup>, Mrs. Virgínia Rocha<sup>1</sup>, Mr. David Carvalho<sup>2</sup> <sup>1</sup>ForestWISE, Vila Real, Portugal, <sup>2</sup>Universidade de Aveiro, Aveiro, Portugal

### PO09 (IWFC172) - EFFORTS TO REORGANIZE LANDSCAPE FIRE MANAGEMENT IN GREECE FOLLOWING RECENT MAJOR DISASTERS

**Dr Gavriil Xanthopoulos**<sup>1</sup>, Prof. Dr. Johann Georg Goldammer<sup>2</sup>, Professor Georgios Mallinis<sup>3</sup>, Dr Ioannis Mitsopoulos<sup>4</sup>, Mr George Eftychidis<sup>5</sup>

<sup>1</sup>Hellenic Agricultural Organization "Dimitra", Institute Of Mediterranean Forest Ecosystems, Athens, Greece, <sup>2</sup>The Global Fire Monitoring Center (GFMC), Fire Ecology Research Group, c/o Freiburg University, Freiburg, Germany, <sup>3</sup>Aristotle University of Thessaloniki, School of Rural and Surveying Engineering, Thessaloniki, Greece, <sup>4</sup>Natural Environment and Climate Change Agency (NECCA), Athens, Greece, <sup>5</sup>Satways Ltd, Athens, Greece

PO161 (IWFC355) TRADE-OFFS IN FOREST MANAGEMENT FOR FIRE PREVENTION PhD Associate Professor Kevin Cianfaglione<sup>1</sup>, Dr. Prof Silvano Landi, Dr. Prof Bartolomeo Schirone, Dr. Prof. Alessandro Bottacci, PhD Associate Professor Kevin Cianfaglione, Dr. Prof Camilla Wellstein, Dr. Tessa Oliver, Dr. Prof Giovanni Damiani 1Université Catholique De Lille, Francia

## **TECHNICAL INNOVATION**

### PO10 (IWFC138) - PYO3F: A PYTHON FRAMEWORK FOR FIRE-RELATED OPTIMIZATION **Dr. Filipe Alvelos**<sup>1</sup>, David Neto<sup>1</sup>

<sup>1</sup>ALGORITMI Research Centre / LASI, University of Minho, Braga, Portugal

## PO11 (IWFC119) - NOVEL REMOTELY PILOTED AERIAL SYSTEM BASED HYPERSPECTRAL IMAGING FOR WILDFIRES CHARACTERIZATION

Dr. Juan Pablo Arroyo-Mora<sup>1</sup>, Dr. Margaret Kalacska<sup>2</sup>, Dr. João Caetano<sup>3</sup>, Gonçalo Cruz<sup>3</sup>, Luis Felix<sup>3</sup>, **Dr. George Leblanc**<sup>1</sup>, Mr. Oliver Lucanus<sup>2</sup>, Gabriela Ifimov<sup>1</sup>

<sup>1</sup>NRC, Ottawa, Canada, <sup>2</sup>Applied Remote Sensing Laboratory - McGill University, Montreal, Canada, <sup>3</sup>Portugal Airforce Research Center, Pêro Pinheiro, Portugal

### PO12 (IWFC393) - ANALYSING DIFFERENCES IN FORESTED AREA AROUND VILLAGES OBTAINED WITH TWO NATIONAL CARTOGRAPHIC SOURCES







### Bruno Barbosa<sup>1</sup>, Ana Gonçalves<sup>1</sup>, Sandra Oliveira<sup>1,2</sup>, Jorge Rocha<sup>1,2</sup>

<sup>1</sup>Centre of Geographical Studies, Institute of Geography and Spatial Planning, University of Lisbon, Lisbon, Portugal, <sup>2</sup>Associate Laboratory Terra, Lisbon, Portugal

## PO13 (IWFC391) - SAFEFOREST: A SEMI-AUTONOMOUS ROBOTIC SYSTEM FOR FOREST CLEANING AND FIRE PREVENTION

Dr. Micael Couceiro<sup>1</sup>, Dr. Paulo Peixoto<sup>2</sup>, Dr. Carlos Viegas<sup>3</sup>, Dr. George Kantor<sup>4</sup>

<sup>1</sup>Ingeniarius, Ltd., Alfena, Portugal, <sup>2</sup>Institute of Systems and Robotics, Coimbra, Portugal, <sup>3</sup>Association for the Development of Industrial Aerodynamics, Coimbra, Portugal, <sup>4</sup>Carnegie Mellon University, Pittsburgh, USA

### PO14 (IWFC180) - DEFINITION OF A HOLISTIC REGULATORY FRAMEWORK FOR ENHANCING SAFETY AND RESILIENCE OF THE BUILT ENVIRONMENT IN THE WILDLAND-URBAN INTERFACE

**Phd Hélder D. Craveiro**<sup>1</sup>, Luana Tesch<sup>1</sup>, Aldina Santiago<sup>1</sup>, PhD Luís Laím<sup>1</sup>

<sup>1</sup>University of Coimbra, Department of Civil Engineering of the Faculty of Sciences and Technology -ISISE - Institute for Sustainability and Innovation in Structural Engineering, Coimbra, Portugal

## PO15 (IWFC260) -NEW IMPROVEMENTS ON THE BRAMS WILDFIRE-ATMOSPHERE MODELLING SYSTEM

**PhD Researcher level 1 Isilda Cunha Menezes**<sup>1</sup>, Luiz Rodrigues<sup>2</sup>, Saulo Freitas<sup>2</sup>, Mateus Ferreira e Freitas<sup>3</sup>, Rodrigo Braz<sup>2</sup>, Valter Ferreira de Oliveira<sup>4</sup>, Pedro Almeida<sup>1</sup>, Karla Longo<sup>2</sup>, Dr Diogo Lopes<sup>1</sup>, Joana Ferreira<sup>1</sup>, Myriam Lopes<sup>1</sup>, Ana Isabel Miranda<sup>1</sup>

<sup>1</sup>CESAM - University Of Aveiro, Aveiro, Portugal, <sup>2</sup>CPTEC - National Institute for Space Research, Brazil, <sup>3</sup>LaMCAD - Federal University of Goiás, Brazil, <sup>4</sup>Finatec, Brazil

### PO16 (IWFC55) - FIRE SEVERITY INDICATOR FOR FIREFIGHTING DISPATCH: BEHAVIOR ANALYSIS OF DIFFERENT TYPES OF FIRE EVENTS IN THE BRAZILIAN AMAZON **Dr Daniela de Faria**<sup>1</sup>, Henrique Bernini<sup>1</sup>

<sup>1</sup>Operations and Management Center of the Amazon Protection System (Censipam), Porto Velho, Brazil

### PO17 (IWFC97) - FIRE EDUCATION PLATFORM: A COLLABORATIVE KNOWLEDGE TRANSFER TOOL ON WILDFIRES. DEVELOPED UNDER THE FIRE-RES PROJECT

**Fabrício Fava**<sup>1</sup>, PhD Iryna Skulska Kolos<sup>2</sup>, Phd Catarina Sequeira<sup>2</sup>, Renata Martins Pacheco<sup>2</sup>, Miss Conceição Colaço<sup>2</sup>

<sup>1</sup>i2ADS/FBAUP, , Portugal, <sup>2</sup>CEABN/InBIO, Portugal

## PO18 (IWFC415) - A SYSTEM TO AUTOMATICALLY ASSIST IN THE GEOLOCATION OF FOREST FIRES WITH CROWDSOURCED DATA

**Dr. Cidália C. Fonte**<sup>1,2</sup>, Dr. Alberto Cardoso<sup>3</sup>, Dr Jacinto Estima<sup>3</sup>, Eng Ismael Jesus<sup>3</sup>, MSc Joaquim Patriarca<sup>2,3</sup>

<sup>1</sup>University of Coimbra, Department of Mathematics, Coimbra, Portugal, <sup>2</sup>Institute For Systems Engineering and Computers at Coimbra (INESC Coimbra), Coimbra, Portugal, <sup>3</sup>University of Coimbra, Department of Informatics Engineering, Center for Informatics and Systems of the University of Coimbra (CISUC), Coimbra, Portugal

PO19 (IWFC372) - SLING DRAGON:- "THE MOST SAFE AND EFFECTIVE TOOL FOR

### AERIAL CONTROLLED BURNING"

### Director Firefighting Division Sergio Fukamati<sup>1</sup>

<sup>1</sup>Sei Industries Ltd, 7400 Wilson Avenue, Delta, V7G 1H3, Canada

### PO20 (IWFC402) - DRONE REMOTE SENSING FOR REAL-TIME SITUATIONAL AWARENESS AND DECISION SUPPORT IN WILDFIRE MANAGEMENT

**Prof Eija Honkavaara**<sup>1</sup>, Dr. Raquel Alves de Oliveira<sup>1</sup>, Teemu Hakala<sup>1</sup>, Niko Koivumäki<sup>1</sup>, Dr Lauri Markelin<sup>1</sup>, Dr Roope Näsi<sup>1</sup>, Dr Juha Suomalainen<sup>1</sup> <sup>1</sup>Finnish Geospatial Research Institute. Espoo. Finland

### PO21 (IWFC418) - INNOVATION ON SOFTWARE APPLICATIONS AND TECHNOLOGICAL EQUIPMENTS AND SOLUTIONS, AND OPERATIONAL COMMUNICATIONS SYSTEMS.ON WILDFIRE MONITORING IN TANZANIA

### Ms Kekilia Kabalimu<sup>1</sup>

<sup>1</sup>MINISTRY OF NATURAL RESOURCES AND TOURISM, TANZANIA FOREST SERVICES, DAR ES SALAAM, Tanzania

### PO22 (IWFC318) - ALARMES: NEAR REAL-TIME BURNED AREA INFORMATION SYSTEM TO SUPPORT FIRE SUPPRESSION AND MANAGEMENT ACTIVITIES IN BRAZIL

**Prof Renata Libonati**<sup>1</sup>, PhD Miguel Pinto, Msc Julia Rodrigues, Msc Caio Sena, Msc Filippe Lemos Maia Santos, Dr Leonardo Peres, Liz Belém, phD Allan Pereira, Professor Carlos C. DaCamara <sup>1</sup>Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil

### PO23 (IWFC113) - ANALYSIS OF WILDFIRE MODEL FOR SYSTEM OF SYSTEMS RESEARCH <u>Mr Jorge Lovaco</u><sup>1</sup>

<sup>1</sup>Linköpings Universitet, Linköping, Sweden

## PO24 (IWFC520) - BURNED AREA VALIDATION EXPERIMENT FROM REMOTE SENSING MONITORING PRODUCTS

**Msc Alice Macedo**<sup>1</sup>, PhD Marcos Adami<sup>1</sup>, Dr. Fabiano Morelli<sup>1</sup>, PhD Thales Körting<sup>1</sup> <sup>1</sup>National Institute for Space Research, São José dos Campos, Brazil

## PO25 (IWFC219) - INSTALLATION OF AUTONOMOUS FIRE MONITORING SYSTEMS ON POWER TRANSMISSION OVERHEAD LINES

**Dr João Matos**<sup>1</sup>, Eng Jose Moreira<sup>2</sup>, Eng. Jorge Martins<sup>2</sup>, Phd Pedro Vieira<sup>1,3</sup>, Msc Rui Almeida<sup>1</sup> <sup>1</sup>Bee2firedetection SA, Abrantes, Portugal, <sup>2</sup>REN - Rede Eléctrica Nacional, S.A., Lisboa, Portugal, <sup>3</sup>NOVA School of Science and Technology, Caparica, Portugal

### PO26 (IWFC266) - THE "SENSOR MAN" IN FOREST FIREFIGHTING OPERATIONS. <u>Mr. Luiz Motta</u><sup>1</sup>, Mr. Lawrence Oliveira<sup>1</sup>, Ms. Talita Freitas<sup>1</sup> <sup>1</sup>Ibama. Brasília. Brazil

### PO27 (IWFC215) - USE OF HIGH-ALTITUDE BALLOONS FOR WILDFIRE MANAGEMENT -A DEDICATED "SATELLITE" FOR EACH MAJOR FIRE EVENT

**Professor Alexandra Moutinho**<sup>1</sup>, Maria João Sousa<sup>1</sup>, Miguel Almeida<sup>2</sup>, Diogo Henriques<sup>1</sup>, Miguel Bergano<sup>3</sup>









<sup>1</sup>IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Lisboa, Portugal, <sup>2</sup>ADAI, Universidade de Coimbra, Coimbra, Portugal, <sup>3</sup>Instituto de Telecomunicações, Aveiro, Portugal

PO28 (IWFC89) - A NEW ATLAS OF MONTHLY BURNED AREA MAPPING FOR PORTUGAL (1984-2021)

**Dr. Alana K. Neves**<sup>1</sup>, Dr. Manuel L Campagnolo<sup>1</sup>, Dr. João M N Silva<sup>1</sup>, Dr. José M. C. Pereira<sup>1</sup> <sup>7</sup>Forest Research Centre, School Of Agriculture, University Of Lisbon, Lisbon, Portugal

PO29 (IWFC349) - WILDFIRE DETECTION AND MONITORING Niko Peha<sup>1</sup>

<sup>1</sup>Overwatch Imaging Inc, Hood River, United States

PO30 (IWFC11) - DEFORESTATION AND FIRES IN THE BRAZILIAN AMAZON Dr. Ubirajara Oliveira<sup>1</sup>, **Dr. William Costa**, Dr. Professor Britaldo Soares-son <sup>1</sup>UFMG, Belo Horizonte, Brasil

### PO31 (IWFC416) - MULTISOURCE DATA INTEGRATION FOR IMPROVING FIRE BEHAVIOUR ANALYSIS AND IMPACT ON MEDITERRANEAN FORESTS: ALBENGA (LIGURIA, ITALY) CASE STUDY

**Mrs Lola Palmieri<sup>1,2</sup>**, Mr Umberto Morra di Cella<sup>1</sup>, Dr Paolo Fiorucci<sup>1</sup>, Mr Nicolò Perello<sup>1,2</sup> <sup>1</sup>Cima Research Foundation, Savona, Italy, <sup>2</sup>University of Genoa, Genoa, Italy

PO32 (IWFC326) - TERRAIN DIFFICULTY INDEX (TDI): EVALUATING THE OPPORTUNITIES IN THE LANDSCAPE TO SUPPORT INITIAL ATTACK ASSESSMENT. Dr Raul Quilez<sup>1</sup>, Carmen Robles<sup>1</sup>, Francisco Díez<sup>1</sup>, Dr. Adrian Cardil<sup>1</sup>, PhD Joaquín Ramirez<sup>1</sup> <sup>1</sup>Tecnosylva, León, Spain

## PO33 (IWFC403) - ORORATECH'S WILDFIRE SOLUTION - GLOBAL, FAST, RELIABLE, SATELLITE-BASED WILDFIRE DETECTION

**Dmitry Rashkovetsky**<sup>1</sup>, Max Helleis<sup>1</sup>, Julia Gottfriedsen<sup>1</sup>, Dr.-Ing. Martin Langer<sup>1</sup> <sup>1</sup>OroraTech GmbH, Germany

## PO34 (IWFC235) - A STRATEGIC APPROACH TO SOURCING AND USING FIRE INFORMATION INSAVANNA FIRE MANAGEMENT

**Mr Gernot Ruecker**<sup>1</sup>, Mr. Amara Ouattara<sup>2</sup>, Mr. Pascal Kouame<sup>2</sup>, Dr. Jean-Luc Kouassi<sup>3</sup>, Mr. Roger Kouadio<sup>2</sup>, Mr Djafarou Tiomoko<sup>4</sup>

<sup>1</sup>Zebris Geo-it Gmbh, Munich, Germany, <sup>2</sup>Office Ivoirien des Parcs et Réserves (OIPR), Abidjan, Côte d'Ivoire, <sup>3</sup>Institut National Polytechnique Felix Houphouet-Boigny and AMBERO GmbH, Yamousoukrou and Abidjan, Côte d'Ivoire, <sup>4</sup>GIZ Gesellschaft für Internationale Zusammenarbeit GmbH, , Côte d'Ivoire

### PO35 (IWFC76) - LAND TENDER: A COLLABORATIVE, CLOUD-BASED DECISION SUPPORT PLATFORM FOR RESOURCE MANAGEMENT AND WILDFIRE MITIGATION Hugh Safford<sup>2</sup>, Scott Conway<sup>1</sup>

<sup>1</sup>University Of California Davis, Davis, États-Unis, <sup>2</sup>Vibrant Planet, Incline Village, États-Unis

PO36 (IWFC339) - DEVELOPMENT OF AN EMISSION-BASED WILDFIRE EARLY WARNING SYSTEM

### <u>Haris Sefo</u>1

<sup>1</sup>Breeze Technologies UG & HafenCity Universität, Hamburg, Germany

## PO159 (IWFC245) - DEVELOPMENT OF A HUMAN BEHAVIOUR WILDFIRE IGNITION RISK INDEX

Pedro Almeida<sup>1</sup>, **PhD Researcher level 1 Isilda Cunha Menezes**<sup>1</sup>, Luiz Rodrigues<sup>2</sup>, Saulo Freitas<sup>2</sup>, Mateus Ferreira e Freitas<sup>3</sup>, Rodrigo Braz<sup>2</sup>, Valter Ferreira de Oliveira<sup>4</sup>, Karla Longo<sup>2</sup>, Dr Diogo Lopes<sup>1</sup>, Joana Ferreira<sup>1</sup>, Myriam Lopes<sup>1</sup>, Ana Isabel Miranda<sup>1</sup>

<sup>1</sup>Center for Environmental and Marine Studies (CESAM), Department of Environment and Planning, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal, <sup>2</sup>Center for Weather Forecasting and Climate Studies (CPTEC), Department of Physics, National Institute for Space Research, Cachoeira Paulista, SP, Brazil, <sup>3</sup>Multiuser Laboratory of High Performance Computing (LaMCAD), UFG Innovation Agency Building, Federal University of Goiás (UFG), Samambaia Campus, 74690-631, Goiânia, GO, Brazil, <sup>4</sup>Finatec, Brasília-DF, Campus Darcy Ribeiro, Brazil

## PLANNING

## PO38 (IWFC86) - ANALYSIS OF LAND USE AND LAND COVER CHANGES ON THE FIRE EFFECT IN A PROTECTED AREA IN THE BRAZILIAN SEMIARID

**Mariana Aragão**<sup>1</sup>, Fernanda Lucas<sup>1</sup>, Leonardo Duarte Biazatti<sup>1</sup>, Rita de Cássia Freire Carvalho<sup>1</sup>, Antônio Henrique Cordeiro Ramalho<sup>2</sup>, Nilton Cesar Fiedler<sup>1</sup>

<sup>1</sup>Federal University of Espírito Santo, Jerônimo Monteiro, Brazil, <sup>2</sup>Federal University of the South and Southeast of Pará, São Félix do Xingu, Brazil

# PO39 (IWFC104) - HOW TO LEARN ABOUT WILDFIRES BY PROMOTING PRACTICAL KNOWLEDGE ABOUT LOCAL ENVIRONMENTAL MANAGEMENT.

<u>Ms Helena Ballart</u><sup>1</sup>, Dr. Núria Prat<sup>1</sup>, Jordi Vendrell<sup>1</sup>, <u>Mr Guillem Canaleta</u><sup>1</sup>, Mr David Martin<sup>1</sup>, Mr Guillem Armengol<sup>1</sup>, Dr. Míriam Arenas<sup>2</sup>, Miss Conceição Colaço<sup>3</sup>, Finian Joyce<sup>4</sup>, Israel Rodriguez<sup>2</sup>, Phd Catarina Sequeira<sup>3</sup>, Iryna Skulska<sup>3</sup>, Renata Martins Pacheco<sup>3</sup>, Dr Maria Cifre-Sabater<sup>2</sup>

<sup>1</sup>Pau Costa Foundation (PCF), Taradell, Spain, <sup>2</sup>Universitat Oberta de Catalunya (UOC), Barcelona, Spain, <sup>3</sup>Instituto Superior de Agronomia (ISA), University of Lisbon., Lisbon, Portugal, <sup>4</sup>Leitrim County Council (LCC), , Ireland

PO40 (IWFC147) - WILDLAND FIRE MANAGEMENT NETWORK FOR BRAZILIAN WETLANDS LEARNINGS FROM SEASON 2022, APPLICATIONS FOR SEASON 2023. <u>Mr. Osmar Bambini</u><sup>1</sup>, Mr. Antônio Leblanc<sup>1</sup> <sup>1</sup>*umgrauemeio, Jundiaí, Brazil* 

PO41 (IWFC294) - EVALUATION OF COLORS FOR UNIFORM USED IN FIGHTING FOREST FIRE BASED ON THE PERCEPTION OF MILITARY FIRE FIGHTERS IN PARANÁ <u>Ms Luisiana Cavalca</u><sup>2</sup>, Ms Lucieli Rossi<sup>1</sup>

<sup>1</sup>Universidade Federal do Paraná, Curitiba, Brazil, <sup>2</sup>Corpo De Bombeiros Militar Do Paraná, Curitiba, Brazil









## PO42 (IWFC420) - THE INFLUENCE OF EXTREME FIRE EXPERIENCE ON COMPANIES' PREPAREDNESS IN PORTUGAL

Master Fernando Correia<sup>1,2</sup>, Dr Fantina Maria Tedim<sup>1,2</sup>, PhD André Samora-Arvela<sup>1,2</sup>, Master Cláudia Magalhães<sup>1,2</sup>, Dr. Diogo Miguel Pinto<sup>1,2</sup>

<sup>1</sup>Centre of Studies in Geography and Spatial Planning, Porto, Portugal, <sup>2</sup>Faculty of Arts of University of Porto , Porto, Portugal

# PO43 (IWFC304) - LEARNING TO LIVE WITH FIRE - PRIORITIZED WILDFIRE EVACUATION CHECKLIST

### Dr. Douglas Cram<sup>1</sup>

<sup>1</sup>New Mexico State University, Las Cruces, United States

### PO44 (IWFC379) - FIRE, FLOOD AND PANTANAL VEGETATION

**Dr. Geraldo Alves Damasceno Junior**<sup>1</sup>, MsC Alexandre de Matos Martins Pereira<sup>1,2</sup>, Dr. Jens Oldeland<sup>3</sup>, Dr. Pia Parolin<sup>4</sup>

<sup>1</sup>Laboratório de Ecologia Vegetal, Instituto de Biociências, Universidade Federal De Mato Grosso Do Sul, Campo Grande, Brazil, <sup>2</sup>Centro Nacional de Prevenção e Combate aos Incêndios Florestais (Prevfogo)/ Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA), Campo Grande, Brazil, <sup>3</sup>Biodiversity, Evolution, and Ecology of Plants (BEE), Institute of Plant Sciences and Microbiology, University of Hamburg., Hamburg, Germany, <sup>4</sup>Université Côte d'Azur INRAE, CNRS, ISA, Sophia Antipolis, Nice, France

# PO45 (IWFC377) - LONG-TERM ECOLOGICAL RESEARCH ON FIRE IN PANTANAL WETLAND: A SUBSIDY TO INTEGRATED FIRE MANAGEMENT.

**Dr. Geraldo Alves Damasceno Junior**<sup>1</sup>, Dr. Arnildo Pott<sup>1</sup>, Dr. leda Maria Bortolotto<sup>1</sup>, Dr. Danilo Bandini Ribeiro<sup>1</sup>, Doctor Edna Scremin-Dias<sup>1</sup>, MsC Alexandre de Matos Martins Pereira<sup>1,3</sup>, M.Res. Maxwell Oliveira<sup>2</sup>, Dr. Rosa Helena da Silva<sup>1</sup>, Doctor Tamires Yule<sup>1</sup>, Dr. Francielli Bao<sup>1</sup>, Dr. Fábio de Oliveira Roque<sup>1</sup> <sup>1</sup>Universidade Federal De Mato Grosso Do Sul, Campo Grande, Brazil, <sup>2</sup>Universidade Federal de Minas Gerais, Belo Horizonte, Brazil, <sup>3</sup>Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA), Campo Grande, Brazil

## PO46 (IWFC466) - FIRE DYNAMICS IN THE AMAZON-CERRADO TRANSITION ZONE OF MARANHÃO STATE, BRAZIL

**Me Ana Larissa De Freitas**<sup>1</sup>, Dr Guilherme Mataveli<sup>2</sup>, Me Paulo H. A. Leão<sup>1</sup>, Dr Celso H. L. Silva-Junior<sup>3,4,5</sup>, Dr Tiago Ferraz<sup>6</sup>, Dra Swanni Alvarado<sup>7</sup>, Dra Liana O. Anderson<sup>1</sup>

<sup>1</sup>National Centre for Monitoring and Early Warning of Natural Disasters, São José dos Campos, Brazil, <sup>2</sup>National Institute for Space Research, São José dos Campos, Brazil, <sup>3</sup>Institute of Environment and Sustainability, University of California, Los Angeles , United States of America, <sup>4</sup>Jet Propulsion Laboratory - JPL, California Institute of Technology, Pasadena, United States of America, <sup>5</sup>Programa de Pós-graduação em Biodiversidade e Conservação, Universidade Federal do Maranhão - UFMA, São Luís, Brazil, <sup>6</sup>Universidade Estadual do Maranhão, , Brazil, <sup>7</sup>Universidad del Rosario, Facultad de Ciencias Naturales, Bogotá, Colômbia

PO47 (IWFC511) - DSS FOR PRIORITIZING INTERVENTIONS AND INSPECTIONS OF FUEL MANAGEMENT BANDS IN THE WUI

Madalena Dias Ferreira, Phd Catarina Sequeira<sup>1</sup>, Miss Conceição Colaço<sup>1</sup>

<sup>1</sup>Instituto Superior de Agronomia, Lisboa, Portugal

PO48 (IWFC519) - IMPORTANCE OF INTEGRATED PLANNING IN PRACTICE ON RISK GOVERNANCE OF WILDFIRE MANAGEMENT <u>Ms Maria João Gomes</u><sup>1</sup>, Mr Mario Monteiro, Mr João Verde <sup>1</sup>AGIF, Lisbon, Portugal

PO49 (IWFC246) - ANALYSIS OF VILLAGES WHERE RECENT WILDFIRE MITIGATION INITIATIVES ARE BEING IMPLEMENTED IN PORTUGAL Ana Goncalves<sup>1</sup>, Bruno Barbosa<sup>1</sup>, Sandra Oliveira<sup>1</sup>, José Luís Zêzere<sup>1</sup>

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## PO50 (IWFC469) - AUSTRIA FIRE FUTURES - NOVEL AND INTEGRATED WILDFIRE HOT SPOT MAPPING

Dr. Florian Kraxner<sup>1</sup>, Dr Andrey Krasovskiy<sup>1</sup>, Ms Charlotte Kottusch<sup>1</sup>, **Ms Shelby Corning**<sup>1</sup>, Dr Dmitry Schepaschenko<sup>1</sup>, Dr. Harald Vacik<sup>2</sup>, Prof Mathias Neumann<sup>2</sup>, Dr. Mortimer M. Müller<sup>2</sup>, Prof Arne Arnberger<sup>2</sup>, Prof Herbert Formayer<sup>2</sup>, Dr David Leidinger<sup>2</sup>, Dr Tobias Schadauer<sup>3</sup>, Dr Susanne Karel<sup>3</sup>, Dr Christoph Bauerhansl<sup>3</sup>

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### PO51 (IWFC50) - FOREST SOIL MANAGEMENT - A POST-FIRE SOIL EROSION ASSESSMENT BY COMPARISON OF LINEAR REGRESSION AND REVISED-MMF MODEL APPLICATION

### Ana Rita Lopes

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PO52 (IWFC504) - THE EVOLUTIONARY LEAP OF ENVIRONMENTAL EDUCATION FROM THE ZERO FIRE POLICY TO THE PERSPECTIVE OF INTEGRATED FIRE MANAGEMENT. Mr. Marcos Guedes<sup>1</sup>, **Sr. Ricardo Lopes**<sup>1</sup>

<sup>1</sup>Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis, Brasilia, Brazil

### PO53 (IWFC356) - INTEGRATING FOREST AND FIRE MANAGEMENT THROUGH A NOVELSIMULATION-BASED OPTIMIZATION APPROACH Dr. Filipe Alvelos, **Isabel Martins**, Susete Marques

### PO54 (IWFC334) - BIOMASS BURNING EMISSIONS DURING THE 2020 PANTANAL BURNING CRISIS: THE NEED FOR A FIRE MANAGEMENT POLICY

Dr Guilherme Mataveli<sup>1</sup>, **Me Ana Larissa De Freitas**<sup>2</sup>, Dr. Alber Sanchez<sup>1</sup>, Dr. Elisabete Moraes<sup>1</sup>, Dr. Luiz Aragão<sup>1</sup>

<sup>1</sup>National Institute for Space Research, , Brazil, <sup>2</sup>National Center for Monitoring and Early Warning of Natural Disasters, Brazil

# PO55 (IWFC152) - OPTIMISATION METHODS FOR WILDFIRE SUPPRESSION RESPONSE PLANNING

Dr. André Bergsten Mendes<sup>1</sup>, Dr. Filipe Alvelos<sup>2</sup>, Dr. António Vieira<sup>3</sup>, Dr. António Bento-Gonçalves<sup>3</sup>, Mrs.









### Sarah Moura Batista dos Santos<sup>3</sup>

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### PO56 (IWFC341) - FIRE MANAGEMENT DECISIONS UNDER CLIMATE CHANGE CONTEXT: RESPONSE OF SUB-ADULT TREES TO FIRE SEASONS IN GUINEAN SAVANNA (WEST AFRICA)

### Aya Brigitte N'Dri<sup>1</sup>, K. Prosper Kpangba<sup>1</sup>, A. Paricia Werner<sup>2</sup>, Adama Bakayoko<sup>1</sup>

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### PO57 (IWFC247) - FIELD OBSERVATION SHEETS TO IDENTIFY RESILIENCE TO FOREST FIRES IN CHILEAN MEDITERRANEAN LANDSCAPES

### Carolina Ojeda Leal<sup>1</sup>, Dr Kay Bergamini

<sup>1</sup>Universidad De Concepción, Concepción, Chile, <sup>2</sup>Pontificia Universidad Católica de Chile, Providencia, Chile

### PO58 (IWFC439) - CARBON STOCK AND GREENHOUSE GAS EMISSIONS CAUSED BY WILDFIRES IN MONODOMINANT STANDS OF COPERNICIA ALBA IN THE PANTANAL WETLAND.

**M.Res. Maxwell Oliveira**<sup>1</sup>, Dr. Rosa Helena da Silva<sup>2</sup>, Dr. Francielli Bao<sup>2</sup>, MsC Alexandre de Matos Martins Pereira<sup>2</sup>, Ph.D. José Marcato Junior<sup>2</sup>, Dr. Arnildo Pott<sup>2</sup>, Dr. Geraldo Alves Damasceno Junior<sup>2</sup> <sup>1</sup>Universidade Federal De Minas Gerais, , Brazil, <sup>2</sup>Universiade Federal de Mato Grosso do Sul, Corumbá, Brasil

### PO59 (IWFC10) - MONTE CARLO SIMULATIONS FOR ESTIMATING FIRE PROBABILITY

**Dr UBIRAJARA OLIVEIRA**<sup>1</sup>, Dr. Professor Britaldo Soares-filho, Dr WILLIAM COSTA <sup>1</sup>UFMG, Belo Horizonte, Brasil

## PO60 (IWFC461) - DO TREE DOMINANCES DEFINE DIFFERENT FUEL BEDS AT THE LOCAL SCALE?

**Ruben Ortiz Mendoza<sup>12</sup>**, Diego Rafael Perez Salicrup<sup>2</sup>, Marco A. González Tagle<sup>1</sup> <sup>1</sup>Facultad de Ciencias Forestales, Universidad Autónoma de Nuevo León, Carretera Nacional km 145. C.P. 67700. Linares, México, <sup>2</sup>Centro de Investigaciones en Ecosistemas y Sustentabilidad, Universidad Nacional Autónoma de México, Antigua carretera a Pátzcuaro 8701. C.P. 58190., Michoacán

## PO61 (IWFC272) - FIRE-SPOTTING RISK FOR EMERGENCY PLANNING: THE ROLE OF MESO- AND MACRO- SCALE FACTORS

**PhD Gianni Pagnini**<sup>1,4</sup>, MsC Marcos López-De-Castro<sup>1</sup>, PhD Vera Egorova<sup>2</sup>, Stefano Macrelli<sup>3</sup> <sup>1</sup>BCAM - Basque Center for Applied Mathematics, Bilbao,, Spain, <sup>2</sup>Departamento de Matemática Aplicada y Ciencias de la Computación, E.T.S.I. Industriales y de Telecomunicación, Universidad de Cantabria, Santander,, Spain, <sup>3</sup>Department of Physics and Astronomy - University of Bologna, Bologna, Italy, <sup>4</sup>Ikerbasque-Basque Foundation for Science, Bilbao, Spain

### PO62 (IWFC61) - REMAINS: A NEW FIRE-LANDSCAPE MODELLING PLATFORM TO SIMULATE INTEGRATED FIRE MANAGEMENT SCENARIOS

Silvana Pais<sup>1,2,3</sup>, Núria Aquilué<sup>4</sup>, Dr. Adrián Regos<sup>1,3,4,5</sup>

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## PO63 (IWFC358) - EXPERIENCE FROM STRUCTURING A FEDERAL STRATEGY FOR VOLUNTEERING IN INTEGRATED FIRE MANAGEMENT IN BRAZIL

**Dra Angela Pellin**<sup>1</sup>, Sra Mariana Senra De Oliveira<sup>2</sup>, Mr. Mauricio Marcon Rebelo da Silva<sup>3</sup>, Ms. Luciana de Oliveira Rosa Machado<sup>5</sup>, Ms. Giovana Dominicci Silva<sup>1</sup>, Mr. André Luis Lima<sup>4</sup>

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## PO64 (IWFC107) - ARTICULATION OF THE BRIDAGES PROGRAM WITH STATE INSTITUIONS INTHE MANAGEMENT OF INTEGRATED FIRE MANAGEMENT ACTIONS Ana Virgínia Pereira Vieira De Melo<sup>1</sup>, Luiz Otávio de Araujo Corrêa

<sup>1</sup>Ibama, Recife, Brazil

## PO65 (IWFC363) - FIRE EFFECTS ON THE FLOWERING OF ENDEMIC SPECIES IN THE BRAZILIAN RUPESTRIAN GRASSLANDS

Dr. Gudryan Baronio<sup>1</sup>, MSc MariaLuiza Azevedo<sup>2</sup>, Dr. Paulo Sano<sup>3</sup>, Biologist Roberto Almeida<sup>3</sup>, Dr. André Rech<sup>4</sup>, **Dr. Vania Pivello**<sup>1</sup>

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## PO66 (IWFC17) - COMPUTATIONALLY EFFICIENT BURN PROBABILITY APPROXIMATION USING A CONNECTIVITY INDEX

**<u>Mr Douglas Radford</u><sup>1</sup>**, Prof. Holger R. Maier<sup>1</sup>, Assoc. Prof. Hedwig van Delden<sup>1,2</sup>, Dr Aaron Zecchin<sup>1</sup>, Dr Amelie Jeanneau<sup>1</sup>

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## PO67 (IWFC371) - OBSTACLES AND SOLUTIONS TO INCREASING PRESCRIBED BURNING ON CALIFORNIA'S CENTRAL COAST RANGELANDS

**Livestock And Natural Resources Advisor Devii Rao**<sup>1</sup>, Fire Fuel Mitigation Program and Forest Health Coordinator Jamie Tuitele-Lewis<sup>2</sup>, Program Manager Jared Childress<sup>3</sup>, Prescribed Burn Organizer Alex Michel<sup>3</sup>







E-POSTER DISPLAY

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### PO68 (IWFC160) - EIGHTEEN YEARS OF MIOMBO FIRE-RELATED RESEARCH: LESSONS FOR WOODLANDS CONSERVATION AND RESTORATION

**Dr Natasha Ribeiro**<sup>1</sup>, Dr Romana Rombe Bandeira, Mr Aniceto Chauque, Dr Ivete Maquia, Dr Ana Isabel Ribeiro de Barros

<sup>1</sup>Department of Forest Engineering, Faculty of Agronomy and Forest Engineering, UEM, Maputo, Mozambique

# PO69 (IWFC27) - CLIMATE CHANGE AND WILDFIRES: SEVERITY WAVES INDICATE THE AMAZON RAINFOREST'S POSSIBLE FUTURE

**Fernando Rodovalho**<sup>2</sup>, Sr. Rodrigo Falleiro<sup>1</sup>, Anderson Nunes<sup>1</sup>, Sra Ana Maria Canut Cunha<sup>1</sup>, Emilton Paixão<sup>3</sup>

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# PO70 (IWFC227) - EVACUATION IN RURAL FIRE SITUATION IN PORTUGAL - CABANÕES CASE STUDY

### Andreia Rodrigues<sup>1</sup>

<sup>1</sup>Universidade de Coimbra, Portugal

## PO71 (IWFC277) - SCIENCE SUPPORTING FIRE MANAGEMENT DECISIONS: WHERE TO PLACE TREATMENTS?

**Ana C.L. Sá**<sup>1</sup>, PhD student Bruno Aparicio<sup>1</sup>, Prof. José Miguel Cardoso Pereira<sup>1</sup>, Fábio Silva<sup>2</sup>, Dr. Akli Benali<sup>1</sup>

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## PO72 (IWFC411) - THE CHALLENGE OF WILDFIRE MANAGEMENT THROUGH SPATIAL PLANNING: LESSONS ACROSS THE WORLD

**PhD André Samora-Arvela**<sup>1</sup>, Dr. Catarina Coimbra, Dr. Miguel Fontes, Master Fernando Correia, Dr. Diogo Miguel Pinto, Master Cláudia Magalhães, Dr Fantina Maria Tedim

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# PO73 (IWFC73) - THE FRAGMENTED LEGAL REGIME OF VELDFIRE MANAGEMENT IN SOUTH AFRICA.

Mr GLENWIN SEFELA<sup>1</sup>, MR BRAMLEY LEMINE <sup>1</sup>Nelson Mandela University, GEORGE, SOUTH AFRICA

## PO74 (IWFC36) - ECUADOR'S AMAZONÍA SIN FUEGO PROGRAMME: A STRATEGY FOR REDUCING FOREST FIRES

**Mr. Daniel Segura**<sup>1</sup>, Miss. Joselyn Moreno<sup>1</sup>, Lara Steil, Mr. Pietro Graziani, Mr. Andre Galvao, Mr. Mauricio Velásquez

<sup>1</sup>Ministerio del Ambiente, Agua y Transición Ecológica del Ecuador, Quito, Ecuador

PO75 (IWFC3) - FIRE REGIMES AND RURAL LANDSCAPE DYNAMICS IN CENTRAL MOUNTAIN SYSTEM Phd Catarina Sequeira<sup>1</sup>, PhD Francisco Castro Rego<sup>1</sup> 'CEABN-ISA, ULisboa, Lisboa, Portugal

# PO76 (IWFC443) - PROJECTING FUTURE WILDFIRE SPREAD POTENTIAL IN BRITISH COLUMBIA, CANADA

**Leona Shepherd**<sup>1</sup>, Dante Acuna Castellanos<sup>1</sup>, Dr Mike Flannigan<sup>1</sup> <sup>1</sup>Thompson Rivers University, Kamloops, Canada, <sup>2</sup>University of Alberta, Edmonton, Canada

PO77 (IWFC70) - A JOURNEY OF THE BUSHFIRE STRATEGY DEVELOPMENT IN VICTORIA, AUSTRALIA <u>Mr Alen Slijepcevic</u><sup>1</sup>, Mr Geoff Morris<sup>1</sup>, Ms Sarah Harris<sup>1</sup> <sup>1</sup>Country Fire Authority, Melbourne, Australia

### PO78 (IWFC315) - GEOLOCATION OF RESERVOIRS/WATERSHEDS FROM SATELLITE <u>Mr. Luís Sousa</u><sup>1</sup>, Mr. Guilherme Rocha, Mr. Cláudio Sousa <sup>1</sup>LS-Engenharia Geográfica, Faro, Portugal

## PO79 (IWFC204) - A QUANTIFICATION OF LAND GOVERNANCE ROLE IN MITIGATING WILDFIRE IMPACTS IN ITALY

**Gian Luca Spadoni**<sup>1,2</sup>, Jose V. Moris<sup>1</sup>, Dr. Giorgio Vacchiano<sup>3</sup>, Mario Elia<sup>4</sup>, Matteo Garbarino<sup>1</sup>, Emanuele Sibona<sup>1</sup>, Antonio Tomao<sup>5,6</sup>, Anna Barbati<sup>5</sup>, Lorenzo Sallustio<sup>7</sup>, Luca Salvati<sup>8</sup>, Carlotta Ferrara<sup>8</sup>, Saverio Francini<sup>9,10</sup>, Enrico Bonis<sup>11</sup>, Ilaria Dalla Vecchia<sup>11</sup>, Andrea Strollo<sup>12</sup>, Marco Di Leginio<sup>12</sup>, Michele Munafò<sup>12</sup>, Gherardo Chirici<sup>9,10</sup>, Raoul Romano<sup>8</sup>, Piermaria Corona<sup>5,13</sup>, Marco Marchetti<sup>7</sup>, Renzo Motta<sup>1</sup>, Davide Ascolii<sup>1</sup> <sup>1</sup>University Of Turin, Turin, Italy, <sup>2</sup>University School for Advanced Studies Pavia (IUSS Pavia), Pavia, Italy, <sup>3</sup>University of Milan, Milan, Italy, <sup>4</sup>University of Bari Aldo Moro, , <sup>5</sup>University of Tuscia, Viterbo, Italy, <sup>6</sup>University of Udine, Udine, Italy, <sup>7</sup>University of Florence, Florence, Italy, <sup>10</sup>Fondazione per il *Futuro delle Città, Florence, Italy, <sup>11</sup>Forest Stewardship Council Italy, Italy, <sup>12</sup>Italian National Institute for Environmental Protection and Research (ISPRA), Rome, Italy, <sup>13</sup>CREA Research Centre for Forestry and Wood, Arezzo, Italy* 

### PO80 (IWFC244) - SUPPORTING EFFECTIVE FIRE MANAGEMENT IN UGANDA Mr. Richard Ssemmanda<sup>1</sup>

<sup>1</sup>Ecological Trends Alliance, , Uganda

PO81 (IWFC362) - ROLE OF A CIVIL SOCIETY ORGANISATION IN WILDFIRE RISK AWARENESS AND PREPAREDNESS WITHIN FOREIGN COMMUNITIES AND VISITORS **David Thomas**'

<sup>1</sup>David Thomas, Boliqueime, Portugal

PO82 (IWFC25) - LINKS BETWEEN WILDLAND FIREFIGHTER PERFORMANCE AND WORKING CONDITIONS







**Dr. Robin Verble**<sup>1</sup>, Rachel Granberg<sup>2</sup>, Mr Seth Pearson<sup>2</sup>, Dr. Matt Thimgan<sup>1</sup> <sup>1</sup>Missouri University Of Science & Technology, Rolla, United States, <sup>2</sup>US Forest Service

PO83 (IWFC187) - IMFIRE - AN INTELLIGENT WILDFIRE MANAGEMENT AND DECISION SUPPORT SYSTEM

**Dr. Carlos Viegas**<sup>1</sup>, João Paulo<sup>2</sup>, Jérôme Mendes<sup>2</sup>, Luis Ribeiro<sup>1</sup>, António Gameiro Lopes<sup>1</sup>, Jaime Silva<sup>3</sup>, João Mira<sup>4</sup>, Ana Isabel Miranda<sup>5</sup>

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### PO160 (IWFC35) - AUTHORIZED CONTROLLED BURNS AS A FIRE MANAGEMENT TOOL IN THE SERRA DA CANASTRA NATIONAL PARK/MINAS GERAIS /BRAZIL

**Bianca Zorzi Tizianel**<sup>1</sup>, Helder Marques, Carlos Bernardes, Fernando Tizianel <sup>1</sup>ICMBio, São Roque de Minas, Brasil ork is unendorsed and not financially supported by this organization), United States

## **PREVENTION & PRE-SUPPRESSION**

### PO84 (IWFC531) - THE JUDEAN MOUNTAINS FIRE - 2021 (2): NEW INSIGHTS ON FOREST MANAGEMENT AND FIRE PREVENTION

Mor Ashkenazi<sup>2</sup>, Yagil Osem<sup>1</sup>, Yahel Porat<sup>2</sup>, Maor Elron<sup>3</sup>, Chanocch Zoref<sup>2</sup>

<sup>1</sup>Department of Natural Resources, Volcani Institute, ARO Israel, , Israel, <sup>2</sup>Forestry Division, KKL-JNF Israel, , Israel, <sup>3</sup>Judean Mountains Regional Forest Department, KKL-JNF Israel, Israel

PO85 (IWFC421) - TWENTY ONE YEARS OF PRESCRIBED FIRE ON THE ISLAND OF "GRAN CANARIA" (CANARY ISLANDS, SPAIN) AND ITS INFLUENCE ON WILDFIRES FOREST ENGINEER EDUARDO BALGUERÍAS<sup>1</sup>, Federico Grillo<sup>1,2</sup>, Rubén Rodríguez<sup>1</sup>, Domingo Molina<sup>3</sup> <sup>1</sup>Cabildo De Gran Canaria. Servicio Técnico de Medio Ambiente, , Spain, <sup>2</sup>Universidad de Las Palmas de Gran Canaria, Las Palmas , Spain, <sup>3</sup>Universidad de Lleida. Escuela Técnica Superior de Ingeniería Agraria, Lleida, Spain

### PO86 (IWFC442) - UNGULATES AS ECOSYSTEM SERVICE MEDIATORS IN MEDITERRANEAN ECOSYSTEMS: WILDFIRE PREVENTION AND CARBON STORAGE **Dr. Miguel Bugalho**<sup>1</sup>

<sup>1</sup>Centre for Applied Ecology "Prof. Baeta Neves" (CEABN), School of Agriculture, University Of Lisbon, Lisbon, Portugal

PO87 (IWFC385) - SMALL AND FLEXIBLE BIOREFINERIES AS A SMART TOOL TO PREVENT WILDFIRES Lucas Coelho<sup>1</sup>, Eng Eduardo Diebold<sup>1</sup> <sup>7</sup>Stex, Casal Comba, Portugal

# PO88 (IWFC447) - NUMERICAL MODELLING OF WILDFIRE PROPAGATION IN WILDLAND URBAN INTERFACE AREAS, WITH FUEL MANAGEMENT TRACKS

**Prof. Antonio Correia**<sup>1</sup>, Prof. Alexandra Ribeiro<sup>1</sup>, Prof. Luís Santos<sup>2</sup>, Prof. Susana Meneses<sup>1</sup> <sup>1</sup>SUScita, Polytechnic Institute of Coimbra - Superior School of Engineering, Coimbra, Portugal, <sup>2</sup>Citta, SUScita, Polytechnic Institute of Coimbra - Superior School of Engineering, Coimbra, Portugal

## PO89 (IWFC453) - A STATISTICAL MODEL TO ASSESS THE IMPACT OF POLICIES OF IGNITION LIMITATION IN PORTUGAL

Professor Carlos C. da Camara<sup>1</sup>, Sílvia A. Nunes<sup>1</sup>, Dr. José M. C. Pereira<sup>2</sup>

<sup>1</sup>IDL, Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal, <sup>2</sup>CEF, Instituto Superior de Agronomia, Universidade de Lisboa, Lisboa, Portugal

### PO90 (IWFC83) - VOLUNTEER BRIGADES, INTEGRATED FIRE MANAGEMENT IN CONSERVATION UNITS AND THE RELEVANCE OF ORGANIZED CIVIL SOCIETY PARTICIPATION

Anderson de Freitas e Silva, Brigadas Voluntárias, o Manejo Integrado do Fogo em Unidades de Conservação e a Relevância da Participação da Sociedade Civil Organizada José Eugênio Cortes Figueira, Brigadas Voluntárias, o Manejo Integrado do Fogo em Unidades de Conservação e a Relevância da Participação da Sociedade Civil Organizada Alexandre França Tetto, Brigadas Voluntárias, o Manejo Integrado do Fogo em Unidades de Conservação e a Relevância da Participação da Sociedade Civil Organizada Giovana Bomfim de Alcantara <sup>1</sup>Brigada 1, Belo Horizonte, Brasil

## PO91 (IWFC513) - FUEL MANAGEMENT OF FIRE-ADAPTED INVASIVE SPECIES - ONE SIZE DOES NOT FIT ALL

**Ernesto Deus**<sup>1,2</sup>, Luís Queirós<sup>2</sup>, Mauro Nereu<sup>2</sup>, Paulo Fernandes<sup>3</sup>, Joaquim Silva <sup>1</sup>Polytechnic of Coimbra, School of Agriculture, Coimbra, Portugal, <sup>2</sup>Centre for Functional Ecology-Science for People & the Planet, University of Coimbra, Coimbra, Portugal, <sup>3</sup>Centre of the Research and Technology of Agro-Environmental and Biological Science, CITAB, University of Trás-os-Montes and Alto Douro, Vila Real, Portugal

### PO92 (IWFC58) - INTEGRATED FIRE MANAGEMENT IN RESERVA NATURAL SERRA DO TOMBADOR - BRAZILIAN SAVANNA.

**André Luís dos Santos Zecchin**<sup>1</sup>, Paulo Eliardo Morais de Lima<sup>1</sup> <sup>1</sup>Fundação Grupo Boticário, Curitiba, Brazil

### PO93 (IWFC182) - EVALUATION OF THE FÓRMULA DE MONTE ALEGRE FOREST FIRE DANGER INDEX IN THE EAST REGION OF PARANÁ, BRAZIL

Heitor Ferreira<sup>1</sup>, **Antônio Carlos Batista Antônio Carlos Batista**<sup>1</sup>, Dr. Alexandre França Tetto<sup>1</sup>, DR Daniela Biondi<sup>1</sup>

<sup>1</sup>Federal University of Paraná, Curitiba, Brazil

### PO94 (IWFC212) - A FIELD EXPERIMENTAL TEST ON A MOCKUP OF STEEL SANDWICH PANELS SUBJECTED TO SHRUB FIRE

**Cesare Fiorini**<sup>1</sup>, Phd Hélder D. Craveiro<sup>1</sup>, Aldina Santiago<sup>1</sup>, PhD Luís Laím<sup>1</sup> <sup>1</sup>/SISE - UC, Coimbra, Portugal







### PO95 (IWFC118) - PREVENTION AND PROTECTION OF FIRES IN RURAL URBAN AREAS Gregorio Garcia<sup>1</sup>

<sup>1</sup>Universidad Politecnica De Madrid, Madrid, Spain

PO96 (IWFC181) - DEVELOPMENT OF A FIRE RISK INFORMATION SYSTEM (SIRI) FOR CONSERVATION UNITS IN THE CERRADO BIOME TO SUPPORT DECISION-MAKING Dr Henrique Luis Godinho Cassol<sup>1</sup>, MSc Andeise Cerqueira Dutra<sup>1</sup>, MSc Tânia B Hoffmann<sup>1</sup>, Dr Egidio Arai<sup>1</sup>, MSc Valdete Duarte<sup>1</sup>, Dr Cesare Di Girolamo Neto<sup>2</sup>, Dr Yosio Edemir Shimabukuro<sup>1</sup> <sup>1</sup>National Institute for Space Research (INPE), São José dos Campos, Brazil, <sup>2</sup>Food4Sustainability, F4S, Lisboa, Portugal

### PO97 (IWFC37) - CFD MODELLING OF LABORATORY-SCALE EXPERIMENTS REPRODUCING THE FIRE BEHAVIOUR OF LIVE VEGETATION AT WILDLAND URBAN INTERFACE (WUI)

**<u>Mr Bruno Guillaume</u><sup>1</sup>**, Mr Bertrand Girardin<sup>1</sup>, Dr Anne Ganteaume<sup>2</sup> <sup>1</sup>Efectis France, Bordeaux, France, <sup>2</sup>INRAE-RECOVER, Aix-en-Provence, France

### PO98 (IWFC406) - ASSESSMENT OF FUEL TREATMENT DYNAMICS UNDER ELECTRIC POWER TRANSMISSION LINES

Dalila Lopes<sup>1</sup>, Ana Magalhães<sup>2</sup>, Inês Lopes<sup>3</sup>, Prof. Paulo Fernandes<sup>1,2</sup>

<sup>1</sup>CITAB - Centre for the Research and Technology of Agro-Environmental and Biological Sciences, UTAD, Vila Real, Portugal, <sup>2</sup>ForestWISE - Collaborative Laboratory for Integrated Forest and Fire Management, Vila Real, Portugal, <sup>3</sup>E-REDES, Portugal

## PO99 (IWFC236) - EARLY WILDFIRE DETECTION AND GEO REFERENCING SYSTEM BASED ON OPTICAL VIDEO SURVEILLANCE CAMERAS Andris Lurins<sup>1</sup>, Armands Dirins

<sup>1</sup>Amplicam, Riga, Latvia

### PO100 (IWFC496) - ENHANCE THE KNOWLEDGE OF WILDFIRE IGNITION CAUSES AND MOTIVATIONS IN PORTUGAL AND SPAIN: PATH DEVELOPMENT, TRENDS AND NEEDS Cláudia Nunes Magalhães<sup>1</sup>, PhD Carmen Vázquez-varela<sup>2</sup>, PhD José M<sup>a</sup> MARTÍNEZ NAVARRO, **Dr** Fantina Maria Tedim

<sup>1</sup>Faculty of Arts of University of Porto, Porto, Portugal, <sup>2</sup>Department of Geography and Spatial Planning, Universidad de Castilla-La Mancha, Cuenca, Spain, <sup>3</sup>Geography Department, Faculty of Arts of University of Porto, Porto, Portugal

# PO102 (IWFC386) - FIRE HAZARD DIFFERENCES BETWEEN CONTIGUOUS FORESTS IN CENTRAL PORTUGAL

**<u>Aline Oliveira</u><sup>1</sup>**, Ricardo Neves<sup>1</sup>, Joaquim Silva<sup>1</sup>, Elisa Moura<sup>1</sup> <sup>1</sup>Escola Superior Agrária, Instituto Politécnico de Coimbra, Coimbra, Portugal

PO103 (IWFC457) - FIRE BEHAVIOR IN THE LITTER LAYER IN PINE-OYAMEL AND PINE-OAK FORESTS

**Ruben Ortiz Mendoza<sup>1,2</sup>**, Marco A. González Tagle<sup>1</sup>, Diego Rafael Perez Salicrup<sup>2</sup> <sup>1</sup>Facultad de Ciencias Forestales, Universidad Autónoma de Nuevo León, Carretera Nacional km 145. C.P. 67700. Linares, México, <sup>2</sup>Centro de Investigaciones en Ecosistemas y Sustentabilidad,Universidad Nacional Autónoma de México, Antigua carretera a Pátzcuaro 8701. C.P. 58190. Morelia, México

# PO104 (IWFC409) - THE ROLE OF VEGETATION IN FOREST FIRE DANGER RATING SYSTEMS: RISICO EXPERIENCE IN ITALY

**Mr Nicolò Perello<sup>1,2</sup>**, Dr Andrea Trucchia<sup>2</sup>, Mr Mirko D'Andrea<sup>2</sup>, Mr Giorgio Meschi<sup>2</sup>, Dr Silvia Degli Esposti<sup>2</sup>, Dr Paolo Fiorucci<sup>2</sup>

<sup>1</sup>University of Genova, Genova, Italy, <sup>2</sup>CIMA Research Foundation, Savona, Italy

### PO105 (IWFC95) - THE ROLE OF INTEGRATED FIRE MANAGEMENT ON CLIMATE CHANGE ADAPTATION FOR ECOSYSTEM SERVICES IN TROPICAL AND SUBTROPICAL REGIONS

**Dr Núria Prat-Guitart**<sup>1</sup>, Dr Imma Oliveras<sup>2</sup>, Ms Mariona Borras<sup>1</sup>, Ms Helena Ballart<sup>1</sup>, Ms Ariadna Goenaga<sup>1</sup>, Dr Lucía de la Riva<sup>1</sup>, Sr Juan Caamaño Azcárate<sup>1</sup>, Mr David Martin<sup>1</sup>, Mr Guillem Canaleta<sup>1</sup>, Mr Guillem Armengol<sup>1</sup>, Mr Jordi Vendrell Flotats<sup>1</sup>

<sup>1</sup>Pau Costa Foundation, Taradell, Spain, <sup>2</sup>Institut de Recherche pour le Developpement, Montpellier, France

# PO106 (IWFC432) - MANAGING POST-HARVEST RESIDUES IN EUCALYPT PLANTATIONS WITH PRESCRIBED FIRE - FIRSTS EFFECTS IN TOPSOIL AND STUMP SURVIVAL

Dr. Ana Quintela<sup>1</sup>, Mariana Lima<sup>2</sup>, Dr. Paula Maia<sup>2</sup>, Dr. Oscar Pelayo<sup>3</sup>, Eng. Cláudio Teixeira<sup>1</sup>, Sérgio Fabres<sup>1</sup>, Doctor Jacob Keizer<sup>2</sup>, **Dr. Sofia Corticeiro<sup>2</sup>** 

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 <sup>2</sup>CESAM and Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, , Portugal,
 <sup>3</sup>MED, Universidade de Évora, Pólo da Mitra, Apartado 94, 7006-554 Évora, Portugal

# PO107 (IWFC369) - CATTLE GRAZING REDUCES FUEL LOADS ENOUGH TO LESSEN FIRE HAZARDS IN MANY GRAZED AREAS

### Rangeland Management Specialist and Project Manager Felix Ratcliff<sup>1</sup>, Livestock And Natural Resources Advisor Devil Rao<sup>2</sup>, Livestock and Natural Resources Advisor Sheila Barry<sup>3</sup>, PhD Student Shane Dewees<sup>4</sup>, Wildlife Management Specialist - Agent Luke Macaulay<sup>5</sup>, Area Natural Resource/ Watershed Advisor Royce Larsen<sup>6</sup>, Livestock and Range Advisor Matthew Shapero<sup>7</sup>, M.S. Student Rowan Peterson<sup>8</sup>, Adjunct Professor Wildfire Dynamics Max Moritz<sup>4</sup>, Livestock and Natural Resources Advisor Larry Forero<sup>9</sup>

<sup>1</sup>Lawrence D. Ford, Consultants in Rangeland Conservation Science, Felton, United States, <sup>2</sup>University Of California Cooperative Extension, Hollister, United States, <sup>3</sup>University Of California Cooperative Extension, San Jose, Unisted States, <sup>4</sup>University of California Santa Barbara, Santa Barbara, United States, <sup>5</sup>University of Maryland Extension, Queenstown, United States, <sup>6</sup>University Of California Cooperative Extension, Templeton, United States, <sup>7</sup>University Of California Cooperative Extension, Ventura, United States, <sup>8</sup>University of California Davis, Davis, United States, <sup>9</sup>University Of California Cooperative Extension, Redding, United States

# PO108 (IWFC514) - ANALYSIS OF THE IMPACTS OF WILDFIRES ON THE WAY OF LIFE OF THE INDIGENOUS POPULATIONS OF XINGU

### Fernando Rodovalho<sup>1</sup>

<sup>1</sup>Instituto de Pesquisas Ecológicas, Rio de Janeiro, Brazil









## PO109 (IWFC515) - EFFECTS OF TWO TRAINING PROGRAMS ON IMPROVING THE WILDLAND FIREFIGHTERS' PHYSICAL FITNESS

MD Fabio García-Heras<sup>1</sup>, MD Jorge Gutiérrez-Gutiérrez<sup>1</sup>, Dr Belén Carballo-Leyenda<sup>1</sup>, MD Juan Rodríguez-Medina<sup>1</sup>, Dr José Gerardo Villa-Vicente<sup>1</sup>, **PhD Jose A. Rodríguez-Marroyo<sup>1</sup>** <sup>1</sup>Department of Physical Education and Sports, Institute of Biomedicine (IBIOMED), University of León, León, Spain

### PO110 (IWFC193) - FOREST AND LAND FIRE PREVENTION THROUGH ZERO-BURNING PRACTICES BY RURAL COMMUNITIES IN INDONESIA

**Prof. Bambang Hero Saharjo**, DR Hwan-ok MA, Mr. Heru Setyoko <sup>1</sup>Ipb University, BOGOR, INDONESIA, <sup>2</sup>ITTO, Nishi-Ku, JAPAN, <sup>3</sup>FIELD INDONESIA, SOUTH JAKARTA, INDONESIA

PO111 (IWFC248) - ASSESSING THE FIRE DANGER IN THE WILDLAND-URBAN INTERFACE OF AN ALPINE ENVIRONMENT

**Msc. Mariana Silva Andrade**<sup>1</sup>, Dr. Mortimer M. Müller<sup>1</sup>, MSc. Gergö Dioszegi<sup>1</sup>, Dr. Harald Vacik<sup>1</sup> <sup>1</sup>University of Natural Resources and Life Sciences, Vienna, Austria

### PO112 (IWFC43) - FUEL MANAGEMENT IN THE SERRA DA CANASTRA NATIONAL PARK/ MINAS GERAIS/BRAZIL AS A STRATEGY TO CONTAIN LARGE FIRES;

**Bianca Zorzi Tizianel**<sup>1</sup>, Fernando Tizianel, Carlos Bernardes, Helder Marques, Guilherme Silva Pinto <sup>1</sup>Icmbio, São Roque de Minas, Brasil

## **ADAPTIVE MANAGEMENT**

### PO113 (IWFC214) - A PRELIMINARY STUDY ON FOREST MANAGEMENT IN URBAN-FOREST INTERFACE AREAS IN THE MUNICIPALITY OF SERTÃ

Cátia Antunes<sup>1</sup>, **Doutora Sofia Knapic<sup>1</sup>**, Doutor Alfredo Dias<sup>1</sup>

<sup>1</sup>SerQ - Centro de Inovação e Competências da Floresta, Sertã, Portugal, <sup>2</sup>SerQ - Centro de Inovação e Competências da Floresta, Sertã, Portugal, <sup>3</sup>Universidade de Coimbra, Coimbra, Portugal

### PO114 (IWFC501) - MAPPING THE ECONOMIC LOSS OF ECOSYSTEM SERVICES CAUSED BY THE FOREST FIRES IN LIGURIA, ITALY

**Bushra Sanira Asif**<sup>1,2</sup>, Umberto Pernice<sup>2</sup>, Dr Paolo Fiorucci<sup>2</sup>, Mr Nicolò Perello<sup>1,2</sup> <sup>1</sup>University of Genoa, Genoa, Italy, <sup>2</sup>CIMA Research Foundation, Savona, Italy

## PO115 (IWFC430) - CONTRIBUTION OF A VOLUNTARY FIRE BRIGADE (VFB) TO THE DECREASE OF AREAS AFFECTED BY WILDFIRE IN AN ATLANTIC FOREST PATCH

Contribution of a voluntary fire brigade (VFB) to the decrease of areas afeccted by wildfire in an Atlantic Forest patch Hallan Chimura<sup>2</sup>, **Vinícius De Zorzi<sup>1,2</sup>**, Contribution of a voluntary fire brigade (VFB) to the decrease of areas afeccted by wildfire in an Atlantic Forest patch Mateus Queiroz<sup>2</sup>, Contribution of a voluntary fire brigade (VFB) to the decrease of areas afeccted by wildfire in an Atlantic Forest patch Daniela Fujiwara<sup>2</sup>, Doctor Christian Berlinck<sup>2</sup>, Contribution of a voluntary fire brigade (VFB) to the decrease of areas afeccted by wildfire in an Atlantic Forest patch Daniela Fujiwara<sup>2</sup>, Doctor Christian Berlinck<sup>2</sup>, Contribution of a voluntary fire brigade (VFB) to the decrease of areas afeccted by wildfire in an Atlantic Forest patch Guilherme

### Souza<sup>1</sup>

<sup>1</sup>The Nature Conservancy - Brazil, São Paulo, Brasil, <sup>2</sup>SIMBiOSE, Atibaia, Brasil

### PO116 (IWFC367) - WILDFIRE INSURANCE: WHAT ROLE IN EUROPE? Ms. Teresa Deubelli-Hwang<sup>1</sup>, Ms. JoAnne Linnerooth-Bayer<sup>1</sup>

<sup>1</sup>International Institute for Applied Systems Analysis, Laxenburg, Austria

### PO117 (IWFC157) - FROM MANAGING THE FIRE TOWARDS GOVERNING THE SYSTEM: FACILITATING COEXISTENCE WITH WILDFIRES IN CYPRUS

Judith Kirschner<sup>1</sup>

<sup>1</sup>European University Cyprus – Pyrolife, , Cyprus

### PO118 (IWFC451) - "DESIGNING" FOREST RESILIENCE UNDER CLIMATE CHANGE -BEYOND TREES AND FUEL LOAD

**Dr. Paula Maia**<sup>1</sup>, Doctor Jacob Keizer<sup>2</sup>, Dr. Paulo Fernandes<sup>4</sup>, Ph.D. David Carvalho<sup>3</sup>

<sup>1</sup>CESAM, Departamento de Biologia, Universidade de Aveiro,, Aveiro, Portugal, <sup>2</sup>CESAM, Departamento de Ambiente e Ordenamento, Universidade de Aveiro, <sup>3</sup>CESAM, Departamento de Física, Universidade de Aveiro, <sup>4</sup>ForestWise - Laboratório Colaborativo para a Gestão Integrada da Floresta e do Fogo, Vila Real, Portugal

### PO119 (IWFC353) - SMOKE FROM WILDFIRES IN CONTAMINATED SITES BY RADIONUCLIDES: A MODELLING CASE STUDY

**Tobias Osswald**<sup>1</sup>, Carla Gama<sup>1</sup>, Vera Rodrigues<sup>1</sup>, Dr Diogo Lopes<sup>1</sup>, Dmytrii Holiaka<sup>2</sup>, Prof. Sergiy Zibtsev<sup>2</sup>, Victor Myroniuk<sup>2</sup>, Valery Kashparov<sup>2</sup>, Ana Isabel Miranda<sup>1</sup>

<sup>1</sup>CESAM and Department of Environment and Planning, University of Aveiro, Aveiro, Portugal, <sup>2</sup>National University of Life and Environmental Sciences of Ukraine, Ukraine

### PO122 (IWFC239) - RESULTS OF MONITORING OF LANDSCAPE FIRES IN UKRAINE IN RELATION TO MILITARY INVASION OF RUSSIAN FEDERATION TO UKRAINE IN 2022 **Prof. Sergiy Zibtsev**<sup>1</sup>

<sup>1</sup>Regional Eastern Europe Fire Monitoring Center, Kyiv, Ukraine

## **POST-FIRE INTERVENTION**

PO124 (IWFC396) - MOLECULAR CHARACTERISATION OF FIRE-AFFECTED SOIL ORGANIC MATTER BY A 5TH GENERATION WILDFIRE IN SW-PORTUGAL

**Ph.D. Nicasio T. Jiménez-Morillo**<sup>1,2</sup>, Ph.D. Nuno Guiomar<sup>1,3</sup>, Ph.D. Ana Miller<sup>2,4</sup>, Ph.D. José María De la Rosa<sup>2</sup>, Ph.D. José Antonio González-Pérez<sup>2</sup>

<sup>1</sup>MED-Universidade de Évora, Évora, Portugal, <sup>2</sup>IRNAS-CSIC, Sevilla, España, <sup>3</sup>EaRSLab, Earth Remote Sensing Laboratory-Universidade de Évora, Évora, Portugal, <sup>4</sup>HERCULES Laboratory-Universidade de Évora, Évora, Portugal

### PO125 (IWFC186) - USING THE FEMME TOOL FOR PLANNING EMERGENCY STABILIZATION IN A SPECIFIC BURNT AREA

Doctor Jacob Keizer<sup>1</sup>, Josefine Döring<sup>1</sup>, Dr. António Fernandes<sup>2</sup>, Dr. Antonio Girona-García<sup>3</sup>, Phd Joana







E-POSTER DISPLAY

Parente<sup>4</sup>, Dr. Ana Machado<sup>1</sup>, Dr. Bruna Oliveira<sup>1</sup>, Dr. Diana Vieira<sup>5</sup>

<sup>1</sup>University of Aveiro, Aveiro, Portugal, <sup>2</sup>University of Porto, Porto, Portugal, <sup>3</sup>Biodiversity Research Institute (IMIB; CSIC-University of Oviedo-Principality of Asturias), Mieres, Spain, <sup>4</sup>University of Lisbon, Lisbon, Portugal, <sup>5</sup>Joint Research Centre (JRC), European Commission, Ispra, Italy

### PO126 (IWFC518) - EVALUATION OF AREAS AFFECTED BY FOREST FIRES AND FIRES IN THE STATE OF MARANHÃO - BRAZIL BETWEEN 2001 AND 2021

**Jhessyka Yasminni Lôbo**<sup>1</sup>, Mr Marcos Giongo<sup>2</sup>, Jose Raimundo Costa Filho<sup>2</sup>, Dra Aline Silvestre Pereira Dornelas Dornelas<sup>1</sup>, Antônio Carlos Batista Antônio Carlos Batista<sup>3</sup>, Airton César da Silva Araújo<sup>1</sup>, Michelle Menezes<sup>1</sup>

<sup>1</sup>Universidade Federal Do Tocantins, Gurupi, Brazil, <sup>2</sup>Corpo de Bombeiros Militar do Maranhão, São Luis, Brasil, <sup>3</sup>Universidade Federal do Paraná, Curitiba, Brasil

PO127 (IWFC465) - FIRE AS A TOOL FOR LAND USE CONVERSION IN THE ATLANTIC FOREST

**Fernanda Lucas**<sup>1</sup>, Rita de Cássia Freire Carvalho<sup>1</sup>, Mariana Aragão<sup>1</sup>, Leonardo Duarte Biazatti<sup>1</sup>, Antônio Henrique Cordeiro Ramalho<sup>2</sup>, Nilton Cesar Fiedler<sup>1</sup>

<sup>1</sup>Universidade Federal Do Espírito Santo, Jerônimo Monteiro, Brazil, <sup>2</sup>Universidade Federal do Sul e Sudeste do Pará, São Félix do Xingu, Brazil

## PO128 (IWFC512) - FIRE IN MARGINAL ECOSYSTEMS OF THE ATLANTIC FOREST WITH MARINE INFLUENCE

**Fernanda Lucas'**, Mariana Aragão<sup>1</sup>, Leonardo Duarte Biazatti<sup>1</sup>, Gabriel Severo Carvalho<sup>1</sup>, Eduardo Machado da Silva<sup>1</sup>, Nilton Cesar Fiedler<sup>1</sup>

<sup>1</sup>Universidade Federal do Espírito Santo, Jerônimo Monteiro, Brazil

### PO129 (IWFC211) - THE EFFECT OF FIRE ON PHYSICAL AND CHEMICAL PROPERTIES SOIL OF ZAGROS FORESTS(CASE STUDY: SARVABAD CITY, KURDISTAN PROVINCE) Bahman Moradi<sup>1</sup>

<sup>1</sup>Kurdistan General Directorate Of Natural Resources And Watershed Management, sanandaj, Iran

## **RISK HANDLING**

### PO130 (IWFC490) - CLIMATE CHANGE AND THE XINGU INDIGENOUS TERRITORY Traiú Assalu Mehinaco<sup>1</sup>

<sup>1</sup>Indigenous from the Mehinako people of the Xingu Indigenous Park and collaborator of PrevFogo/ Ibama in Brazil, Xingu, Brazil

PO131 (IWFC68) - THE EFFECT OF SPATIAL DEPENDENCE AND LAND COVER ON WILDFIRE RISK IN CASTELO-BRANCO AND GUARDA (PORTUGAL)

Jesús Barreal Pernas<sup>1</sup>, Susete Marques

<sup>1</sup>Complutense University of Madrid, Madrid, España

PO132 (IWFC389) - CHARACTERIZATION OF EXPOSURE TO AIR POLLUTANTS DURING FIREFIGHTING ACTIVITIES BY BIOMONITORING **MSc Bela Barros**<sup>1</sup>, MSc Ana Margarida Paiva<sup>1</sup>, Dr Marta Oliveira<sup>1</sup>, PhD Simone Morais<sup>1</sup> <sup>1</sup>*REQUIMTE-LAQV, Instituto Superior de Engenharia do Porto, Instituto Politécnico do Porto, Rua Dr. António Bernardino de Almeida 431, 4249-015 Porto, Porto, Portugal* 

## PO133 (IWFC87) - MAPPING THE RISK OF FOREST FIRES IN PROTECTED AREAS THROUGH FUZZY LOGIC

**Leonardo Duarte Biazatti**<sup>1</sup>, Nilton Cesar Fiedler<sup>1</sup>, Antônio Henrique Cordeiro Ramalho<sup>2</sup>, Mariana Aragão<sup>1</sup>, Robert Gomes<sup>1</sup>, Gabriel Severo Carvalho<sup>1</sup>, Fernanda Lucas<sup>1</sup> <sup>1</sup>Federal University of Espirito Santo - UFES, Jerônimo Monteiro, Brazil, <sup>2</sup>Federal University of the South and Southeast of Pará - UNIFESSPA, São Félix do Xingu, Brazil

PO134 (IWFC276) - MAKING SCIENCE USABLE FOR FIRE WEATHER WARNINGS <u>Dr. Timothy Brown</u><sup>1</sup>, Dr. Tamara Wall<sup>1</sup> <sup>1</sup>Desert Research Institute, Reno, United States

### PO135 (IWFC105) - FIRE FLOCKS PROJECT: PARTICIPATING FARMERS' PERCEPTIONS AND CONSUMER PREFERENCES FOR LABELING EXTENSIVE LIVESTOCK PRODUCTS PROVIDING WILDFIRE PREVENTION SERVICES

PhD Sergi Nuss-Girona<sup>2</sup>, PhD Emma Soy-Massoni<sup>1</sup>, **Mr Guillem Canaleta**<sup>1</sup>, Mrs Ona Alay<sup>1</sup>, Mrs Rut Domènech<sup>4</sup>, Dr Núria Prat-Guitart<sup>1</sup>, Mrs Kathleen Uyttewaal<sup>1,5</sup>, PhD Elsa Varela<sup>3</sup>, Mr Marc Arcarons<sup>1</sup>, Mr Jonathan Troncho<sup>1</sup>, Mr David Martin<sup>1</sup>, Mr Jordi Vendrell Flotats<sup>1</sup>

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### PO136 (IWFC331) - STATISTICAL MODELLING USING CATEGORICAL DATA FOR STUDYING RELATIONSHIP BETWEEN FIRES & PARAMETERS AND FOR CREATION OF FOREST FIRE RISK ZONATION

**Dr. Sunil Chandra**<sup>1</sup>, Mr. Anoop Singh<sup>1</sup>, Mr. Satyendra Kumar<sup>1</sup>, Mr. Vikas Gusain<sup>1</sup> <sup>1</sup>Forest Survey of India, Dehradun, India

PO137 (IWFC380) - STATISTICAL MODELLING USING CATEGORICAL DATA FOR STUDYING RELATIONSHIP BETWEEN WILDFIRES AND FIELD PARAMETERS FOR CREATION OF FOREST FIRE RISK ZONATION

**Dr. Sunil Chandra**<sup>1</sup>, Mr. Anoop Singh<sup>1</sup>, Mr. Satyendra Kumar<sup>1</sup>, Mr. Vikas Gusain<sup>1</sup> <sup>1</sup>Forest Survey of India, Dehradun, India

PO138 (IWFC296) - TOWARDS A MORE INTEGRATED APPROACH TO SOCIAL VULNERABILITY: THE CASE OF BARCELONA'S WUI

Dr Israel Rodríguez-Giralt, **Dr Maria Cifre-Sabater**, Dr Míriam Arenas-Conejo, Álvaro Poo-Astudillo <sup>1</sup>Universitat Oberta De Cataluna, Barcelona, Espanya

PO139 (IWFC167) - WILDFIRE RISK REDUCTION: THE ROLE OF ENVIRONMENTAL EDUCATION

### Miss Conceição Colaço<sup>1</sup>

<sup>1</sup>CEABN-InBIO - Instituto Superior Agronomia, University of Lisbon, Lisbon, Portugal









## PO140 (IWFC438) - USE OF COUPLED SIMULATIONS TO UNDERSTAND PYRO-CONVECTIVE ACTIVITY IN PORTUGAL

**Dr Flavio T. Couto**<sup>1</sup>, Cátia Campos<sup>1</sup>, Carolina Purificação<sup>1</sup>, Filippe Santos<sup>1</sup>, Roberta Baggio<sup>2</sup>, Jean-Baptiste Filippi<sup>2</sup>, Rui Salgado<sup>1</sup>

<sup>1</sup>University Of Évora, Évora, Portugal, <sup>2</sup>University of Corsica Pascal Paoli – SPE, Corte, France

## PO141 (IWFC473) - MAPPING OF ACTIVE FIRE FRONTS IN SENTINEL-2 IMAGES IN THE SERRA DO CIPO NATIONAL PARK - MG - BRAZIL

**B.sc. Paulo Cunha**<sup>1</sup>, Dr. Fabiano Morelli<sup>1</sup>, Henrique Bernini<sup>2</sup>, Dr Daniela de Faria<sup>2</sup> <sup>1</sup>National Institute For Space Research (INPE), São José dos Campos, Brazil, <sup>2</sup>Operations and Management Center of the Amazonian Protection System (CENSIPAM), Porto Velho, Brazil

## PO142 (IWFC259) - PASTORAL FIRES AND THEIR IMPACT ON THE ALTO MINHO FIRE REGIME

**<u>Msc Emanuel de Oliveira</u>¹**, Prof. Paulo Fernandes <sup>1</sup>Universidad de Santiago de Compostela, Vila Nova de Cerveira, Portugal

## PO143 (IWFC305) - PERCEPTION OF RISK AND CONFLICTS IN EVENTS IN DIFFERENT LOCATIONS IN FIREFIGHTING IN THE 2020 SEASON IN BRAZIL

### Mrs Mônia Fernandes<sup>1</sup>, Mrs Rafaela Souza<sup>2</sup>

<sup>1</sup>Instituto Chico Mendes De Conservação Da Biodiversidade, Brazil, <sup>2</sup>Instituto Chico Mendes De Conservação Da Biodiversidade

### PO144 (IWFC166) - FIREFIGHTING TO FIRELIGHTING: CHALLENGES AND OPPORTUNITIES IN IMPLEMENTING INDIGENOUS BURNING IN CALIFORNIA

**Dr. Nina Fontana**, Dr. Beth Rose Middleton Manning <sup>1</sup>University Of California, Davis, Davis, United States

## PO145 (IWFC229) - FOREST FIRE RISK ZONING IN PICO PARANÁ STATE PARK AND SURROUNDINGS, BRAZIL

### **Rafael Hartmann Gava**<sup>1</sup>

<sup>1</sup>Ufpr, Curitiba, Brazil

# PO146 (IWFC120) - A FRAMEWORK FOR QUANTIFYING WILDFIRE LIABILITY RISK FOR (RE)INSURANCE PURCHASING AND MITIGATION PURPOSES

### Dr. Mark Hope<sup>1</sup>

<sup>1</sup>Guy Carpenter, Chicago, United States

### PO147 (IWFC316) - MODELING HISTORICAL AND FUTURE FOREST FIRES IN SOUTH KOREA: THE FLAM OPTIMIZATION APPROACH

Hyun-Woo Jo<sup>1</sup>, Dr Andrey Krasovskiy<sup>2</sup>, Mina Hong<sup>3</sup>, **Ms Shelby Corning**<sup>2</sup>, Whijin Kim<sup>1</sup>, Dr. Florian Kraxner<sup>2</sup>, Prof Woo-Kyun Lee<sup>1</sup>

<sup>1</sup>Department of Environmental Science and Ecological Engineering, Korea University, Seoul, Republic of Korea, <sup>2</sup>Agriculture Forestry and Ecosystem Services (AFE) Group, Biodiversity and Natural Resources (BNR) Program, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria, <sup>3</sup>OJEong Resilience Institute (OJERI), Korea University, Seoul, Republic of Korea

### PO148 (IWFC257) - FIRE RISK ASSESSMENT IN THE WILDLAND-URBAN INTERFACE (WUI) OF PORTUGAL TO PRIORITIZE PREVENTION OPERATIONS

**Dr Yannick Le Page**<sup>1</sup>, Rita Nicolau<sup>2</sup>, Dr. Manuel L Campagnolo<sup>3</sup>, Mário Caetano<sup>2</sup>, Prof. José Miguel Cardoso Pereira<sup>3</sup>

<sup>1</sup>Agency for Integrated Rural Fire Management, Lousã, Portugal, <sup>2</sup>Direção-Geral do Território, Lisbon, Portugal, <sup>3</sup>School of Agriculture, University of Lisbon, Lisbon, Portugal

# PO149 (IWFC476) - FOREST FUELS MOISTURE CONTENT MONITORING AND ASSESSING THEIR BEHAVIOUR IN THE LIGHT OF NEW CLIMATIC CONDITIONS

**Mr Sérgio Lopes**<sup>1</sup>, Professor Eusébio Conceição<sup>2</sup>, Professor Joaquim Alonso<sup>3</sup>, Professor Domingos Viegas<sup>4</sup>

<sup>1</sup>Polytechnic Institute of Viseu, Campus Politécnico, 3504-510, Portugal, <sup>2</sup>University of Algarve, Campus de Gambelas, 8005-139, Portugal, <sup>3</sup>Polytechnic Institute of Viana do Castelo, Rua D. Mendo Afonso, 4990-706, Portugal, <sup>4</sup>University of Coimbra, Association for the Development of Industrial Aerodynamics, Rua Pedro Hispano, 12, 3031-289, Portugal

### PO150 (IWFC254) - ASSESSING WILDFIRES SMOKE POTENTIAL IMPACTS

Dr Diogo Lopes<sup>1</sup>, F.J. Alcasena<sup>2</sup>, M. Bugaric<sup>3</sup>, M. Rodrigues<sup>4</sup>, Dr. Adrián Jiménez-Ruano<sup>4</sup>, Tobias Osswald<sup>1</sup>, Vera Rodrigues<sup>1</sup>, **Ana Isabel Miranda**<sup>1</sup>

<sup>1</sup>University Of Aveiro, Portugal, <sup>2</sup>University of Lleida, Spain, <sup>3</sup>University of Split, Croatia, <sup>4</sup>University of Zaragoza, Spain

### PO151 (IWFC317) - FIRE USE AND WILDFIRES IN AGRARIAN REFORM SETTLEMENT PROJECTS IN THE SOUTHWEST OF TOCANTINS STATE, BRAZIL

**Gisele Milare**<sup>1,2</sup>, Angélica Giarolla<sup>1</sup>, Maria Isabel Escada<sup>1</sup> <sup>1</sup>Instituto Nacional de Pesquisas Espaciais, São José dos Campos, Brazil, <sup>2</sup>Instituto Nacional de Colonização e Reforma Agrária, Palmas, Brazil

# PO152 (IWFC437) - USING MACHINE LEARNING FOR SHORT-TERM WILDFIRE HAZARD ESTIMATION

**Julia Gottfriedsen**<sup>1</sup>, Dmitry Rashkovetsky<sup>1</sup>, Dominik Laux<sup>1</sup>, Johanna Strebl<sup>1</sup>, Max Helleis<sup>1</sup>, Dr.-Ing. Martin Langer<sup>1</sup>

<sup>1</sup>OroraTech GmbH, Munich, Germany

### PO153 (IWFC161) - INSURANCE SOLUTIONS FOR CALIFORNIA WILDFIRE; FINANCIAL QUANTIFICATION OF COMMUNITY AND LOCATION LEVEL MITIGATION **Kimberly Roberts**<sup>1</sup>, Sydney Chamberlin<sup>2</sup>, Manuel Chiroze <sup>1</sup>Guy Carpenter, Fort Collins, United States, <sup>2</sup>The Nature Conservancy

# PO154 (IWFC139) - WILDFIRE PREPAREDNESS AND IMPACTS NEEDS ASSESSMENT FOR CALIFORNIA, USA

### Ms Barbara Satink Wolfson<sup>1</sup>

<sup>1</sup>University Of California Cooperative Extension, Hollister, United States

### PO155 (IWFC66) - INDIGENOUS PERCEPTION OF CLIMATE CHANGE AND HEALTH IMPACTS OF FOREST FIRES IN THE BRAZILIAN AMAZON

**Ana Schramm**<sup>1</sup>, Sandra de Souza Hacon<sup>1</sup>, Angela Ostritz<sup>2</sup>, Maíra Laeta<sup>3</sup>, Luiz Carlos Ferreira Penha<sup>4</sup>, M.sc. Ananda Andrade<sup>5</sup>, Kumessi Waura<sup>6</sup>, Mandei Amondowa<sup>7</sup>, Celiana Cypcwyj Krikati<sup>8</sup>, Patrícia Cruz Tenharim<sup>9</sup>, Cleudes Gomes de Araujo Shanenawa<sup>10</sup>, Jonair Nrõmekwa Xerente<sup>1</sup>

<sup>1</sup>National School of Public Health - Oswaldo Cruz Foundation, Rio de Janeiro, Brazil, <sup>2</sup>Cooperação Social / Inovação, Fundação Oswaldo Cruz, Fortaleza, Brazil, <sup>3</sup>Department of Vertebrates, Federal University







of Rio de Janeiro, Rio de Janeiro, Brazil, <sup>4</sup>Coordination of Indigenous Organizations of the Brazilian Amazon, Manaus, Brazil, <sup>5</sup>University of Brasília, Department of Geography, Brasília, Brazil, <sup>6</sup>Kuikuro People, Parque Xingu Indigenous Territory, Brazil, <sup>7</sup>Amondowa People, Uru Eu Wau Wau Indigenous Territory, Brazil, <sup>8</sup>Krikati People, Krikati Indigenous Territory, Brazil, <sup>9</sup>Tenharim People, Tenharim Marmelos Indigenous Territory, Brazil, <sup>10</sup>Shanenawa People, Katukina Kaxinawá Indigenous Territory, Brazil, <sup>11</sup>Xerente People, Xerente Indigenous Territory, Brazil

## PO156 (IWFC129) - RISKS ASSOCIATED WITH THE OCCUPATIONAL EXPOSURE OF FIREFIGHTERS DURING WILDLAND FIRES

**Miss Joana Teixeira**<sup>1</sup>, PhD Simone Morais<sup>1</sup>, Dra Francisca Rodrigues<sup>1</sup>, Dra Alice Santos-Silva<sup>2</sup>, Dra Cristina Delerue-Matos<sup>1</sup>, Dr Marta Oliveira<sup>1</sup>

<sup>1</sup>REQUIMTE/LAQV - Instituto Superior de Engenharia, Instituto Politécnico do Porto, Portugal, <sup>2</sup>UCIBIO/ REQUIMTE, Laboratório de Bioquímica, Departamento de Ciências Biológicas, Faculdade de Farmácia, Universidade do Porto, Portugal

## PO157 (IWFC364) - CLIMATE CHANGE AND THE IMPACT ON THE FINE FUELS MOISTURE CONTENT AFFECTING FOREST FIRE INTENSITY

**Gilberto Vaz**<sup>1,2</sup>, Jorge Raposo<sup>1,2</sup>, Daniela Alves<sup>2</sup>, Luís Reis<sup>2</sup>, Professor Domingos Viegas<sup>2</sup> <sup>1</sup>Coimbra Polytechnic - ISEC, Coimbra, Portugal, <sup>2</sup>Univ Coimbra, ADAI, Department of Mechanical Engineering, Coimbra, Portugal

### PO158 (IWFC264) - EXTREME FIRE BEHAVIOUR ANALYSIS AND MODELLING

**Professor Domingos Viegas**<sup>1</sup>, Carlos Ribeiro, Thiago Barbosa <sup>1</sup>Univ Coimbra, ADAI, Department of Mechanical Engineering, Coimbra, Portugal

## **TECHNICAL VISITS**

As part of the **8<sup>th</sup> IWFC**, Technical Visits in English-speaking are available to participants upon registration. The locations for technical visits are conveniently located in and around Porto. **Round-trip travel from the Conference venue to the venues is arranged for groups up to 50 participants with a minimum of 20 (each).** 

### 1) VILA POUCA DE AGUIAR

Monday, 15th May 2023 - 8:00 AM to 6:00 PM

### Price: 70€

VAT included

LIFE MARONESA is a Governance, Information and Climate Action project, which aims to implement strategies to adapt to climate change through a sustainable model of extensive livestock production.

Addresses the problem of abandonment of mountain pastures, particularly in common areas, the increase in the intensity of summer rural fires, the reduction of the stock of carbon sequestered in the organic matter of soils in mountain areas and the effective reduction of the Maronesa breed.

Its main objective is to improve the climate resilience of livestock farms and promote increased carbon retention in soil organic matter.

The project is based on a demonstration model of agricultural and livestock practices, which have been integrated by a vanguard producer, and which will be integrated intofour replication areas, through producers who follow this exploration model.

The intervention areas are located in the 4 most representative municipalities of Solar da Raça Maronesa, Vila Pouca de Aguiar, Vila Real, Ribeira de Pena and Mondim de Basto, the region with the highest number of Maronesa cattle farms.

### **PROGRAM:**

8:00 AM | Departure from Porto - Alfândega do Porto Congress Center
10:15 AM | Reception - Ferreirinho, Telões
10:30 AM | Visit to the Maronesa Life Project
12:45 AM | Cocktail-style lunch at Casa de Telões
2:30 PM | Departure to the Adventure Park from Ribeira de Pena
3:30 PM | Activities in the Adventure Park\*
6:00 PM | Return to Porto

\* Please note that If you want to book the "Fantasticable" activity (Aventura Park, Ribeira de Pena), you can purchase it on site for €25



### 2) REN | FOREST DEFENSE NETWORKS - PARQUE SERRAS DO PORTO Monday, 15<sup>th</sup> May 2023 - 3:00 PM to 6:00 PM

### Price: 30€

VAT included

In Portugal, REN has about 10,000 kilometres (around 36,000 hectares) of power line and gas pipeline easements, with more than 66% of these easements (23,000 hectares) in forest areas. In the last five years, REN has managed vegetation on more than 44,000 hectares (7,200 hectares in 2022). Due to the company's relevance in defending the Forest, REN has been implementing a series of vegetation management strategies that, in addition to providing security to its infrastructure, increase the resilience of the territories to the risk of wildfires.

In addition to learning in detail about REN's vegetation management strategy, during this initiative this technical visit will include the presentation of a system that monitors the forest through optical cameras, while simulating and predicting the fire's behaviour (a project involving the University of Coimbra and whereness).

Additionally, we will look at a plan to enable a territory (Serras do Porto Park) to fight wildfires, based on the facilities already present on the land, with the participation of ForestWISE (collaborative laboratory that promotes the integrated management of forest and fire, based on (co)research and development activities, knowledge transfer, and technology), Parque Serras do Porto (municipal entity that manages the land), REN (the energy infrastructure manager present in the land), and The Navigator Company (one of the world's leading players in the pulp and paper industry and one of the largest owners of that territory).

REN will also demonstrate two pioneering machines for clearing forests and preventing fires – the RAP--TOR 100 and the RAPTOR 300, which have improved silviculture and fuel management operations and made the defence of forests against fires more effective.

### ABOUT REN

REN - Redes Energéticas Nacionais is the company that manages the main electricity and natural gas transmission facilities in Portugal. REN is also operating in the natural gas distribution business through the development and management of the gas distribution network in the northern coastal region of Portugal. REN is also involved in the telecommunications business through RENTELECOM, which covers a variety of services relating to infrastructure, managed services, and consultancy. In compliance with all required quality and safety standards, REN aims to be one of the most efficient electricity and natural gas transmission system operators in Europe. The company also holds a 42.5% stake in the share capital of Electrogas, which operates a natural gas transmission system located in central Chile, and, in 2019, acquired Transemel, an electricity transmission company predominantly located in northern Chile.

### **PROGRAM:**

3:00 PM | Departure for technical visit -Alfândega do Porto Congress Center
4:00 PM | Welcome - João Gaspar - Sustainable Networks and Easements of REN and Carlos Fonseca - CTO of ForestWISE
4:10 PM | Vegetation Management: REN's Strategy - Pedro Marques
4:25 PM | Resilience Networks of Serras do Porto Park - Carlos Fonseca - ForestWISE
4:40 PM | Fire simulator - José Moreira - REN and Carlos Viegas - University of Coimbra
5:00 PM | Demonstration of forest cleaning and fire prevention machines - Raptor 100 and 300 -Tomás Marques - Bermarthor
5:30 PM | Closing

**6:00 PM** | Return and arrival at the Alfândega do Porto Congress Center











## **SOCIAL PROGRAM**

Don't miss out on this unique opportunity to network and make meaningful connections with fellow colleagues. We look forward to seeing you there!

### WELCOME COCKTAIL

ALFANDEGA DO PORTO EXHIBITION AREA 15<sup>th</sup> May 2023 I 6:00 PM to 8:00 PM

The 8<sup>th</sup> IWFC opens its doors with a unique event held at the **Alfândega do Porto Congress Center**. During the two hours that mark the **Exhibition Opening**, you can socialize with the industry and top global experts in the sector.



### **CONFERENCE DINNER**



### PALÁCIO DA BOLSA 18<sup>th</sup> May 2023 I 8:00 PM to 11:00 PM

## Price: 70€

VAT included

This is a unique networking opportunity that will take place in a historic and singular building in Porto, Portugal - the **Palácio da Bolsa**. The neoclassical palace is a landmark of the city's architectural beauty. It is located in R. Infante D. Henrique, in the historic center of Porto, designated a **UNESCO World Heritage Site**.

## **CULTURAL PROGRAM**

This program proposes a contemporary perspective on the element of fire, as a mediator between humankind and the universe, using as a starting point the mythological narratives, which over the centuries have inspired intellectuals and artists. It also intends to transform the current narratives around fire, as a purely destructive element, and extend this urgent discussion to the Arts and Humanities, in order to mobilize different audiences for the common mission of fire prevention and sustainable fire management.

AND BENEATH IT ALL FLOWS LIQUID FIRE - JULIAN CHARRIÈRE [2019] 16<sup>th</sup> - 19<sup>th</sup>, May 9:00 AM to 7:00 PM Salão Nobre, Alfândega do Porto

Video installation where the omnipresence of fire and its absurd coexistence with opposing elements, such as water or ice, is discussed. Charrière reverses the traditional iconography of the fountain as a source of life, presenting it as a fountain in flames to demonstrate the paradox of its existence.





### FIRE & OF THE LIGTHEN LAND RITA CASTRO NEVES AND DANIEL MOREIRA [2018] 16<sup>th</sup> - 19<sup>th</sup> May 9:00 AM to 7:00 PM Salão Nobre, Alfândega do Porto

Of the Lighten Land presents a landscape and its opposite, to think about the destruction of the territory and human behaviour, rekindling old wounds. Fire presents an animation where two charred sticks are controlled by two hands in a gestural choreography, which aims to understand the fires of an enigmatic visual alphabet.







### FIRE SCIENCE: FROM CHEMISTRY TO LANDSCAPE MANAGEMENT 17<sup>th</sup> May 2:30 PM D. Maria Room, Alfândega do Porto

Presentation of this important research by Francisco Castro Rego (UL), Penelope Morgan (UO), Paulo Fernandes (UTMAD) and Chad Hofman (CSU).



# Fernandes Trad Hoffman Fire Science Chemistry to the Management

stro Rego

PYROCENE: CONVERSATION AROUND FIRE 18<sup>th</sup> May 6:00 PM Infante Room, Alfândega do Porto

On the occasion of the release of the Portuguese edition of The Pyrocene by Stephen Pyne (Ziguarte Livros), the author, Viriato Soromenho Marques and Carlos Vaz Marques will discuss the evolution of man's relationship with fire from the perspective of history and philosophy in order to broaden the debate and help transform current narratives about fire as a purely destructive element.

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The organization of the 8<sup>th</sup> IWFC would like to thank all our sponsors and exhibitors for their support and participation. See below the list of companies who will bring innovative cutting-edge products and solutions to the conference.

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Conair	11	
Corporate Carbon	12.1	
Dryad	14	OUTDOOR AREA
Ebupi	07	GROUND FLOOR
Esri	17	
Extincêndios	27	COMPANY
Firehawk	34	Iturri
Fire Neural Network	30	Vallfirest
Guarany	29	Jacinto Marques de Oliveira
Hydra-nt International	23.2	
Instituto para a Conservação da	13	
Natureza e Florestas (ICNF)		
Inforest	09 + 10	
Iturri	31	
Jacinto Marques de Oliveira	36	
Korea-Indonesia Forest	24	
Cooperation Center (KIFC)		
MDPI	04	
Mercedes Textiles	26	
Oroel	05	
Overwatch	33	
Pegasus	35	
Perimeter	25	
Preventech	23.1	
Sei Industries	02	
SIM4SAFETY	15	
REN	38	
10 Tanker	21	
Technosylva	32	
The Emergency Program	16	
TracPlus	20	

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GROUND FLOOR

**STAND** 01 18 23.3 19 22.2 08

> 40 41

42

COMPANY	STAND
CoLAB ForestWISE	52
Ministerial Conference on the Protection of Forests in Europe (FOREST EUROPE)	51
International Association of Wildland Fire (IAWF)	53
2 <sup>nd</sup> FLOOR	
COMPANY	
National Authority for Emergency and Civil Protection (ANEPC)	55
Republican National Guard (GNR)	56
Portuguese Air Force (FAP)	57
Organization for Economic Co-operation and Development (OECD)	



































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120 **NOTES** 

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