

Frontiers in E3
11th CE3C Annual Meeting

shifting tides: building a healthy future in an unstable world

10-12 OCTOBER 2025

UNIVERSITY OF THE AZORES, PONTA DELGADA

Welcome to the 11th Frontiers in E3, CE3C's Annual Meeting!

As we gather in the Azores—an archipelago shaped by the forces of nature and resilience—we are reminded of the delicate balance between humanity and the environment. The theme of this year's conference, "Shifting Tides: Building a Healthy Future in an Unstable World," calls us to reflect, connect, and collaborate in addressing the urgent challenges facing our planet.

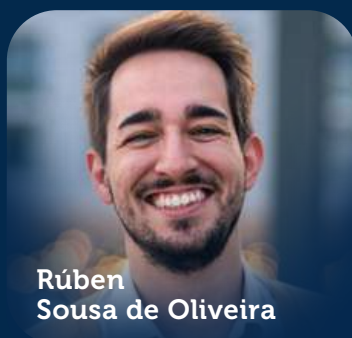
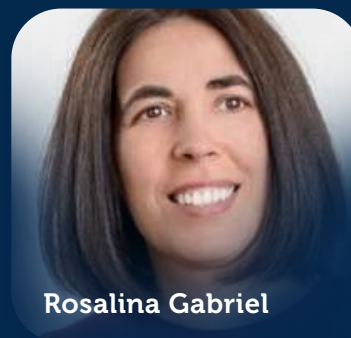
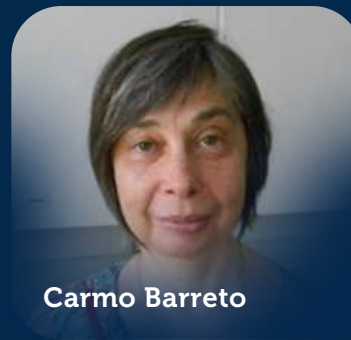
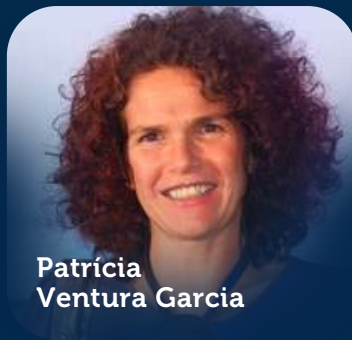
In this time of rapid environmental, societal, and climatic change, the need for innovative, cross-disciplinary research has never been greater. These tides are not merely metaphors—they are real, rising, and reshaping the landscapes of science and society.

This meeting is an opportunity to share knowledge, strengthen our partnerships, and inspire one another to shape resilient and sustainable solutions. In the spirit of the Azores—where land meets sea and science meets innovation—we invite you to explore, challenge, and co-create pathways to a healthier and more resilient world.

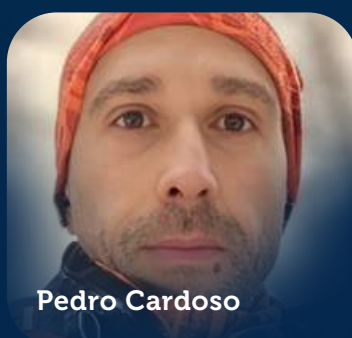
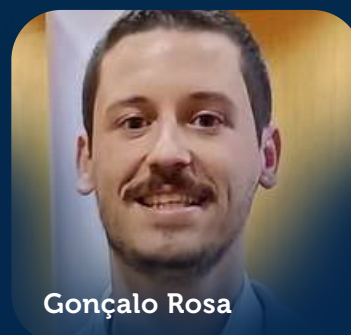
Thank you for being part of this vital journey
— we're thrilled to have you here!

The organising committee

Organising committee



Scientific committee



short programme

10 october, friday

- 09h00 Check-in
- 09h30 Opening session
- 10h00 **Keynote** Julio Benevides
- 11h00 ☕ + Poster session
- 11h30 Short talks
- 12h30 🍴 Lunch
- 13h30 **Spotlight session**
- 14h10 ⏸ Short break
- 14h20 Flash talks
- 15h20 ⏸ Short break
- 15h40 Short talks
- 16h40 ☕ + Poster session
- 17h30 **End of day 1**
Evening to enjoy Ponta Delgada
and each other's company

11 october, saturday

- 09h00 **Keynote** Raphael K. Didham
- 10h00 Short talks
- 11h00 ☕ + Poster session
- 11h30 Flash talks
- 12h00 Short talks
- 12h45 🍴 Lunch
- 14h00 **Spotlight session**
- 14h40 ⏸ Short break
- 14h50 Participatory Budget talks
- 16h00 ☕
- 16h30 **Ana Neto & Meeting awards**
- 16h45 **Closing session**
- 17h00 **End of day 2**
Evening to enjoy Ponta Delgada
and each other's company
- 20h00 **Meeting dinner**

programme



**Vote in your favourite
poster, flash and short talk!**

**All those with the code
highlighted are eligible.**

10 october, friday

09h00 Check-in

09h30 Opening session

Rosalina Gabriel | Azorean Biodiversity Group Leader, CE3C - Centre for Ecology, Evolution and Environmental Changes, University of the Azores (UAc)

Sara Magalhães | CE3C Coordinator, University of Lisbon

Luís Filipe Dias e Silva | Director of the Faculty of Science and Technology, UAc

Rute Gregório | Regional Director for Science, Innovation and Development, Regional Government of the Azores

Susana Mira Leal | Rector of the University of the Azores

10h00 Keynote session

Chair: Patrícia Ventura Garcia

Zoonotic disease prevention in a changing world: the PREZODE Initiative

Julio Benavides

Institut de Recherche pour le Développement, CNRS, University of Montpellier, France

11h00 ☕ + Poster session

11h30 Short talks

Chair: Cristina Antunes

Environmental heterogeneity changes the genomic signature of adaptation to cadmium

Marta Ferreira, *Adaptation to Complex Environments*

st1

Nature-based solutions for floods and droughts in Europe: a grey literature perspective

Rafaela Marques, *Plant Functional Ecology*

st2

Setting up eco-hydrological models for the mitigating hydrological extremes

Miguel Rodrigues, *Plant Functional Ecology*

st3

Medicinal uses of plants in the municipality of Balombo, Benguela province, Angola

Luís Cruz, *Tropical Plants and Systems*

st4

Multifunctionality of termite mounds in African savannas: more than just a pile of soil
Sergio Chozas, *Plant Functional Ecology*

st5

12h30

 **Lunch**

 Q&A, 10'

13h30

Spotlight session

Chair: Margarida Matos

Evolution of developmental bias explains divergent patterns of phenotypic evolutionary rates in two nematode clades

João Picão Osório, *Genotype to Phenotype of the Immune Response*

sp1

Effect of deleterious mutations on neutral genetic diversity in geographically structured populations

Pierre Lesturgie, *Evolutionary Genomics and Bioinformatics*

sp2

14h10

 **Short break**

 Q&A, 10'

14h20

Flash talks

Chair: Pedro Pinho

Histological evidence of hypothyroidism in mice chronically exposed to conventional farming

Nádia Coelho, *Environmental Health on Islands*

ft1

The secrets within: a metagenomic study on the gut microbiota of *Rana temporaria* across a latitudinal gradient

Daniela Deodato, *Freshwater and Invasion Biology*

ft2

Barriers to coexistence, highways to conflict: where is the Iberian lynx heading in the Guadiana Valley?

Rúben Sousa de Oliveira, *Conservation Ecology & Society / Tropical and Mediterranean Biodiversity*

ft3

Invasive plants as potential biofungicides

Wilson Tavares, *Natural Products and Applications*

ft4

Quick guides on climate hazards: bridging the science-practice gap

Carolina Vieira, *Climate Risk Management*

ft5

 Q&A, 15'

GrowLIFE: strengthening local food systems

Leonor Rodrigues (representing Carlota Sanches), *Evolutionary Agroecology*

ft6

Potential role of tourism in cetacean research

João Barreiros, *Island Biodiversity, Biogeography & Conservation*

ft7

Impact Chain as a tool for participative climate risk assessment

Tiago Capela Lourenço (representing Bishwajit Roy), *Climate Risk Management*

ft8

Facing heat extremes: lessons learned from 15 years of climate change adaptation in Portugal

Francisca Simões (representing Inês Marques), *Climate Risk Management*

ft9

Understanding sustainability transitions: the shift from plastic to paper in the packaging industry

Francisca Simões, *Climate Risk Management*

ft10

Detrimental impact of a heatwave on male reproductive behaviour and fertility

Afonso de Magalhães, *Local Adaptation in Drosophila*

ft11

15h20

|| Short break

Q&A, 10'

15h40

Short talks

Chair: Sara Magalhães

Maternal effects mediate the interactive effect of temperature and population structure on spider mite sex ratio and body size

Sofia Costa, *Evolutionary Agroecology*

st6

Poisoned prey: bioaccumulation of anticoagulant rodenticides in genetically susceptible wild rats as defined by Vkorc1 genotyping

Sofia Gabriel, *Ecophysiology of Small Mammals*

st7

Using eDNA to validate the success of a *Xenopus laevis* eradication program

Manuel Sampaio, *Freshwater and Invasion Biology*

st8

Seasonal and sexual dimorphism in immunity in a thermal plasticity model

David Duneau, *Ecological Evolutionary Developmental Biology*

st9

Phenotypic and genotypic evidence of physiological and ecological costs of tomato defence suppression in the spider mite *Tetranychus evansi*

Mariya Kozak, *Adapt. to Complex Environments | Evo. Host-Parasite Interactions | Evo. Agroecology*

st10

16h40

☕ + Poster session

Q&A, 10'

17h30

End of day 1

Evening to enjoy Ponta Delgada and each other's company

11 october, saturday

09h00

Keynote session

Chair: Paulo Borges

Functional consequences of insect declines

Raphael K. Didham

School of Biological Sciences, The University of Western Australia, Australia

10h00

Short talks

Chair: Cristina Branquinho

Assessing biodiversity erosion: a long-term perspective from the azorean SLAM project

Paulo Borges, *Island Biodiversity, Biogeography & Conservation*

st11

Up from the bottom: consistent vertical distance-decay in arthropod assemblage similarity across native and exotic forests in Terceira island (Azores)

Sébastien Lhoumeau, *Island Biodiversity, Biogeography & Conservation*

st12

Vertical stratification and niche shifts between juvenile and adult spiders in Oceanic Laurissilva Forests

Ricardo Costa, *Island Biodiversity, Biogeography & Conservation*

st13

The role of functional traits in structuring fish assemblages across the Macaronesia archipelagos

Luis Barcelos, *Island Biodiversity, Biogeography & Conservation*

st14

Azores passerines: from the protection of endangered species to increasing our knowledge on their phylogeography and host-parasite networks

Ricardo Jorge Lopes, *Behavioural Ecology and Conservation*

st15

11h00



+ Poster session



Q&A, 10'

11h30

Flash talks

Chair: Vítor Sousa

Performance and behavioural responses of *Bufo spinosus* to temperature-diet interactions

Sara Bento, *Freshwater and Invasion Biology*

ft12

Holding water in a drying landscape: ponds as nature-based solutions to sustain ecological functions in Mediterranean systems

Cristina Antunes (representing Ana Pereira), *Plant Functional Ecology*

ft13

Patterns of activity and giving-up density of small mammals in urban and rural communities

Guilherme Aparício, *Ecophysiology of Small Mammals*

ft14

Toxic legacy: the hidden impact of anticoagulant rodenticides on Portuguese raptors

Ana Carromeu-Santos, *Ecophysiology of Small Mammals*

ft15

The spread of non-native Lepidoptera: unifying data for global action

Henrique Couto, *Freshwater and Invasion Biology*

ft16



Q&A, 10'

12h00

Short talks

Chair: Cristina Máguas

AquaNbS in cities. Difference and drivers of macroinvertebrates' functional space in ponds and streams

Vladimíra Dekan Carreira, *Urban Ecology*

st16

All together now: GRIT a global database to centralize insect traits information

Mariana Mora, *Machine Learning in Ecology*

st17

Teabag Method: A promising indicator for evaluating ecosystem services in African agroecosystems

Helena Serrano, *System Ecology*

st18

12h45



Lunch



Q&A, 15'

Last change to vote in your favourite short, flash and poster talk!

14h00 Spotlight session

Chair: Rui Rebelo

**Why do functionally dissimilar exotic coexist with Azorean endemic species?
A Darwin's conundrum investigation**

Guilherme Oyarzabal, *Island Biodiversity, Biogeography & Conservation*

Expert-based assessment of movement resistance costs across European land cover types: a collaborative tool for landscape connectivity conservation

Fernando Ascensão, *Urban Ecology*

sp3

sp4

14h40 Short break

 Q&A, 10'

14h50 CE3C Participatory Budget talks

Chair: David Horta Lopes

**Modeling ecological succession and time of surface exposure
in extreme environments: the case of Pyrenees**

Mariana Ramos, *System Ecology* | CE3C PB winner 2024

Sowing the seeds of resilience: transforming the white crowberry into a thriving crop

João Jacinto, *Plant Functional Ecology* | CE3C PB winner 2024

Origin of polymorphism - chemotypes in the Azores thyme *Thymus caespititus*

Joel Laia, *Plant Functional Ecology / Wildlife Genetics* | CE3C PB winner 2024

pb1

pb2

pb3

 Q&A, 10'

**The potential of acoustics for biodiversity monitoring in
small island developing states: the case of Cabo Verde**

Nadito J. P. Barbosa, *Behavioural Ecology and Conservation* | CE3C PB winner 2025

**Mangrove restoration in Mozambique: an integrated approach between
ecological functions, carbon storage and livelihood alternatives**

Fátima Inácio da Costa, *Tropical Plants and Systems* | CE3C PB winner 2025

**Nesting under pressure: a multi-island study to anthropogenic
threats on Cory's shearwater (*Calonectris borealis*)**

Laurine Parmentier, *Island Biodiversity, Biogeography & Conservation* | CE3C PB winner 2025

pb4

pb5

pb6

16h00

 Q&A, 10'

16h30 Ana Neto & Meeting awards

16h45 Closing session

17h30 End of day 2

Evening to enjoy Ponta Delgada and each other's company

20h00 Meeting dinner

Restaurante São Pedro, Clube Naval de Ponta Delgada

Frontiers in E3 | 11th CE3C Annual Meeting
10-12 October, Ponta Delgada, Azores

**shifting tides: building a healthy
future in an unstable world**

11 october, saturday

20h00

Dinner at Restaurante São Pedro, Clube Naval de Ponta Delgada

Av. João Bosco Mota Amaral,
9500 - 250 Ponta Delgada



posters

**Dietary exposure to chemical contaminants in the Azores:
a risk assessment approach based on local food consumption**

Ana Teresa Sarmento, *Agroforestry Ecology*

p1

**Influence of refuge availability on the oviposition strategy of
anachroetic and non-anachroetic aphidophagous ladybirds**

António Onofre Soares, *Agroforestry Ecology*

p2

**Development and reproductive investment of anachoretic
and non-anachoretic aphidophagous ladybirds**

António Onofre Soares, *Agroforestry Ecology*

p3

**Diet preferences in *Rana temporaria* tadpoles are modulated by
local adaptation and warming, with consequences on performance**

Bernardo Silva da Guia, *Freshwater and Invasion Biology*

p4

Diversity patterns of macroinvertebrates in Mediterranean intermittent streams

Catarina Mendes Fernandes, *Freshwater and Invasion Biology*

p5

**Assessing CTmax in *Ampullaceana balthica*:
the roles of temperature, diet, and population origin**

Clara Zimmermann, *Freshwater and Invasion Biology*

p6

Exploring the drivers of the vegetation dynamics in Cangandala National Park, Angola

Domingos Francisco, *Tropical Plants and Systems*

p7

**Climate-driven divergence in feeding strategies:
a latitudinal study on *Ampullaceana balthica***

Duarte Pedroso Nunes, *Freshwater and Invasion Biology*

p8

**Bioactivity-guided optimization of *Gunnera tinctoria* (Molina)
mirbel extraction to enhance its pharmaceutical potential**

Gonçalo Pereira da Rosa, *Natural Products and Applications*

p9

**Contrasting structure of insular and continental prey-predator
trophic networks from the Azores and mainland Portugal**

Hugo Calado, *Agroforestry Ecology*

p10

Predictability in coevolution under hierarchical competition

Inês Fragata, *Adaptation to Complex Environments*

p11

**Differences in aquatic macroinvertebrate pond communities:
A comparison between Portugal and Sweden**

João Caramelo, *Freshwater and Invasion Biology*

p12

How does the evolution of direct and indirect interactions affect ecosystem resilience?

Juan López Adánez, *Adaptation to Complex Environments*

p13

**Biodiversity monitoring in island ecosystems (BioMonI):
studies conducted in the Azores**

Leila Nunes Morgado, *Island Biodiversity, Biogeography & Conservation*

p14

Unveiling arthropod collection data of subterranean habitats of the Azores, stored at the University of Azores

Luís Carlos da Fonseca Crespo, *Island Biodiversity, Biogeography & Conservation*

p15

Antioxidant, anti-metabolic disorders and anticholinesterase potential of *Laurus azorica* leaf extracts

Maria Francisca Lucas, *Natural Products and Applications*

p16

Application of reference genome and genomic data to the conservation of *Corema album*

Manuela Sim-Sim, *Natural History Collections & Systematics*

p17

In vitro antiaging effects of extracts from *Laurus azorica* leaves

Mariana Moniz Viveiros, *Natural Products and Applications*

p18

NET-REWIRING. Food web rewiring under climate warming: integrating life history traits with topological network characteristics

Pedro Peixe e Sousa, *Freshwater and Invasion Biology*

p19

Laminin-211 loss disrupts myoblast commitment, fusion, and maturation in LAMA2-Congenital Muscular Dystrophy

Pedro Gameiro dos Santos, *Extracellular Matrix in Development and Disease*

p20

Effects of simulated heatwaves and dietary fat content on food and water intake in the wood mice (*Apodemus sylvaticus*)

Pierina Yengle, *Ecophysiology of Small Mammals*

p21

Adapt, adjust or move: can the spider mites *Tetranychus cinnabarinus* do it all in response to heat?

Raquel Gaspar, *Evolutionary Agroecology*

p22

Designing inclusive biodiversity observation networks: the BioMust4All approach

Rosalina Gabriel, *Island Biodiversity, Biogeography & Conservation*

p23

Lost in translation: Trade-offs between traits associated with density-dependent and density-independent environments do not scale to demographic parameters

Sara Magalhães, *Evolution of Host-Parasite Interactions*

p24

Anaerobic digestion role in climate resilience in Azores

Ricardo Coelho, *Climate Risk Management*

p25

Yield projections for future climate in Azores using AquaCrop

Tomás Calheiros, *Climate Risk Management*

p26



12 october, sunday

09h30 - 17h30

Field trip

09h30 **Departure from the University towards Furnas via North coast**

Meeting point: North Gate of the Ponta Delgada campus

10h00 **Visit to the Gorreana Tea Factory**

10h45 **Visit to Furnas Lake and the fumarole fields**

Including a picnic-style lunch; participants should bring their own

15h00 **Return to Ponta Delgada via South coast, with a stop at Lagoa do Fogo**

Stop at Lagoa do Fogo depending on weather conditions

17h30 **Arrival at the University of the Azores**



Gorreana Tea Factory

Founded in 1883, Gorreana is the oldest tea plantation in Europe still in operation and has been run by the same family for several generations. It produces green and black tea using traditional, pesticide-free and chemical-free methods, taking advantage of the region's humid climate and fertile soil. During the visit, you will be able to explore the tea fields, observe the traditional production process, and taste their unique teas.



Furnas Lake (located in the Furnas Volcano crater)

One of the most fascinating places on São Miguel Island, combining natural beauty with unique geothermal activity. Surrounded by lush vegetation and peaceful walking trails, the lake is famous for its fumarole fields and boiling caldrons that release hot, sulphurous steam directly from the ground, creating an almost surreal landscape. During the visit, you will be able to explore the fumarole fields used to cook the traditional cozido das Furnas – a stew slowly prepared in holes dug into the earth – observe the bubbling caldrons, and walk along the lake's shores.



Lagoa do Fogo (Lake of Fire)

Located in the heart of São Miguel Island, Lagoa do Fogo is one of the archipelago's most breathtaking natural treasures. Nestled in a volcanic crater at around 600 metres above sea level, the lake dazzles with its wild, unspoiled beauty, surrounded by green slopes and endemic vegetation. We will stop at the Lagoa do Fogo Viewpoint and the Pico da Barrosa Viewpoint, both offering stunning panoramic views over the lake and crater.



ce3c

centre for ecology, evolution
and environmental changes