



Re-UNITA

# RESEARCH Newsletter

## Editorial

The inaugural issue of the Re-UNITA Newsletter is out!

Published in this electronic format and with a monthly periodicity, the Newsletter will highlight the research undertaken within the UNITA and Re-UNITA community, namely on the three central topics of Cultural Heritage, Circular Economy and Renewable Energies. In this and forthcoming issues we will have contributions of the alliance's University members covering all these thematic areas.

This first issue highlights the UBI's Ef&RelDC@HomO research project on Renewable Energies. It investigates the efficient and reliable direct current electricity distribution at home and offices, aiming to significantly increase the energy efficiency in buildings and, simultaneously, accomplish the ambitious objectives defined by European Directives, concerning energy policy. On Circular Economy, and from UPPA, comes the "AWASOME" project. The proposed research envisages recycling plastic packaging and composites into high-performance materials, aligned with the environmental challenge of developing thermoplastic composites and their processing. The USMB's highlight on Cultural Heritage shows their interdisciplinary approach in interaction with indigenous communities and reexamining the notion of universality associated with heritage (Alpine palafittic habitats, the Chauvet cave, ...).

The Newsletter also is coloured by the sections dedicated to female researchers (UPPA, Emilie Guyard interview) and Ph.D. student of the month (USMB, Cynthia Farha winner of the local Three Minutes Thesis competition).

Finally, March is a month rich in several commemorative dates, to mention the Women International Day (8<sup>th</sup>), the International Day of Forests (21<sup>th</sup>) and the World Water Day (22<sup>th</sup>). The Re-UNITA research, directly or indirectly, reports to these important worldwide celebrations, and could make the difference for a fairer and more sustainable world.

I hope you enjoy reading about UNITA/Re-UNITA researchers and their respective research fields!

*Silvia Socorro*  
Vice-Rector for Research  
University of Beira Interior

## Cultural Heritage



The discovery of the Chauvet cave paintings, the oldest in the world, has changed the history of art and the values previously attributed to rock art (photo@edytem)

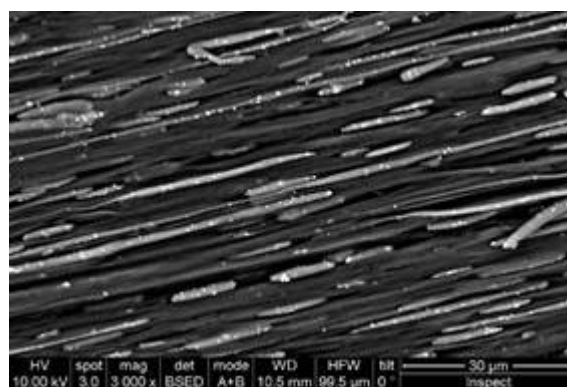
### Plural Dimensions and the different ways of valuing Cultural Heritage

Defining the value of a cultural heritage is upstream of the processes of patrimonialisation and valorisation. But how define this value? Around its exceptionality, conservation, vulnerability, holistic dimension? Research on Alpine palafittic habitats, the Chauvet cave, Alpine or more distant rock sites underline its plural dimensions. The interdisciplinary approach developed at the USMB in interaction with indigenous communities reexamines the notion of universality associated with heritage.

<https://www.univ-smb.fr/2019/06/03/lexperience-patrimoniale-lors-de-la-visite-de-la-replique-de-la-grotte-chauvet-expliquee-par-edyttem/>

<https://www.univ-smb.fr/2021/05/03/les-humains-a-lorigine-des-fresques-de-la-grotte-chauvet-pouvaient-admirer-le-pont-darc-en-ardeche/>

## Circular Economy



Microscopie électronique à balayage de mélanges microfibrillés PET opaque/PP

### Recycling of plastic packaging and composites into high performance materials

A team of polymerists from IPREM, UPPA is developing a research axis around polymer recycling. We have first been working on the recycling of waste of opaque PET packaging: in the framework of a cross-border cooperation program with Spain, we have developed all-polymer composites by microfibrillation of blends with another recycled plastic. We also work on the recycling of thermoplastic composites. Our objective is to develop methods that preserve the length of the fibers, allowing to target high added value applications.

For more information:

<https://revalpet.org/>

<https://iprem.univ-pau.fr/en/projects/chairs-of-excellence/awesome.html>

## Renewable Energies



### Project Ef&RelDC@HomO - Efficient and Reliable DC Electricity Distribution at Home and Offices

The adoption of DC electric energy distribution systems has proven to be an excellent opportunity to improve the energy efficiency in buildings and, simultaneously, to accomplish the ambitious objectives defined by European Directives, concerning energy policy.

The main objectives and results linked to the project comprise the broad promotion of DC technology in residential buildings and offices, along with the development of efficient and reliable solutions for the individual components that play a vital role in the DC electric energy distribution system.

Project website:

<http://cise.ubi.pt/dcmicrogrids/index.html>

## PhD student of the month



Cynthia, you are PhD student at USMB in the LEPMI laboratory. Tell us about your research!

I work on solar energy and study the maturation and degradation mechanisms of carbon-based perovskite solar cells. I make several characterizations in order to better understand what is happening within the cells and how improve their performance.

If you want to know more about my research, you can watch my presentation at the Three Minutes Thesis competition, during which I won the local final at USMB.

To see Cynthia Farha's performance, click on the following link and go to 1h37:  
<https://www.youtube.com/watch?v=uinSRb3CE88>

Photo credit: Alice Treuvey - Université Savoie Mont Blanc

## Woman researcher of the month



Emilie GUYARD, Laboratory ALTER, Université de Pau et des Pays de l'Adour

Emilie Guyard obtained a PhD *Etudes Hispaniques* in 2002, at the *Université de Bourgogne* (France).

She's currently *Maître de Conférences* at the Université de Pau et des Pays de l'Adour, in the ALTER laboratory. After having worked on speculative fiction literature, and on the work of the Galician writer Gonzalo Torrente Ballester, her research now focuses on the crime fiction. She's obtained the *Habilitation à Diriger des Recherches* in December 2018, thanks to an original study entitled *Carlos Salem: le polar déjanté ou la quête de sens*.

[Read the interview »](#)

## Highlights

**An UBI's Medicine ALUMNI is the first Portuguese to be part of an American Society of Surgeons**

David Ângelo, a former student at the Faculty of Health Sciences of the University of Beira Interior, is the first Portuguese medical doctor to officially join the American Society of Temporomandibular Joint Surgeons (ASTMJS), as a recognition of the excellent work and contributions that have been made in the fields of surgery and research.

Dr. Ângelo participated in the American Society's annual meeting, which took place from March 3<sup>rd</sup> to 5<sup>th</sup>, in the city of San Diego (USA).

For more information, please read [the news in Portuguese](#)

**U\*Night - The UNITA European Researchers' Night: another success for the UNITA constellation!**

The UNITA Universitas Montium has taken another step towards the success of the Alliance: the submission of the U\*Night Project - a joint proposal for the European Researchers's Night, which is a large European event for the promotion of research careers, focused in particular on pupils, students and their families.

The U\*Night Project will involve researchers from 5 Countries in a variety of activities, with the aim of enhancing the European dimension while giving value to local experiences, especially in rural, semi-rural and mountainous areas.

[Read more about this project!](#)

**Find more than 600 research projects carried out in UNITA universities with the cartography.**

The cartography is a database gathering research projects from UNITA member universities.

Two project calls have been launched to select the research projects carried out in the 3 thematic areas: cultural heritage, circular economy and renewable energies.

You can easily find a large number of projects carried out within the Alliance, with the main related information and contacts, in order to facilitate further collaborations.

[Click here to access!](#)  
[Video presentation](#)