



Re-UNITA

# RESEARCH Newsletter

## Editorial

The European Commission has declared 2023 as the European Year of Skills at European Union level, with the aim of reinforcing the EU skills strategy to help citizens access quality jobs, with a focus on digital and green skills. Throughout this year, relevant stakeholders, be they public authorities, social partners, employers or educational institutions, will work together to promote skills development in the most effective way for citizens.

A relevant example of this was the [32nd EURASHE](#) annual conference, hosted by the Polytechnic University of Bucharest in June 2023, which addressed the theme "Skills for European - Mobilising Higher Education for the Green and Digital Transitions", WUT being part of this event.

For many years, the West University of Timisoara (WUT) has made it a priority to ensure the development of future skills for its students. Therefore, students of all bachelor's degree programmes at WUT are required to take a series of subjects that contribute to preparing them for the "future of work":

- complementary subjects forming transversal skills - each student will take at least 3 subjects from other fields of study than the one they are studying, in order to develop transversal skills;
- Entrepreneurship skills - we encourage student involvement in entrepreneurial initiatives through a specific discipline;
- Career counselling and guidance - from the first semester of university studies it supports students to develop their own career plan.

WUT, including through its involvement in the UNITA European Alliance, aims to provide its students with the most appropriate and innovative training methods to help them become the best version of themselves.

*Madalin Bunoiu*

*Vice-Rector responsible for Academic Strategy and Student Relations*

## Cultural Heritage



Application of new digital technologies for documentation, conservation and recreation of historical-architectural Heritage at risk of disappearance. Patrimonial digitization of iglesia de Santo Tomás de Villanueva "La Mantería"

Researchers:

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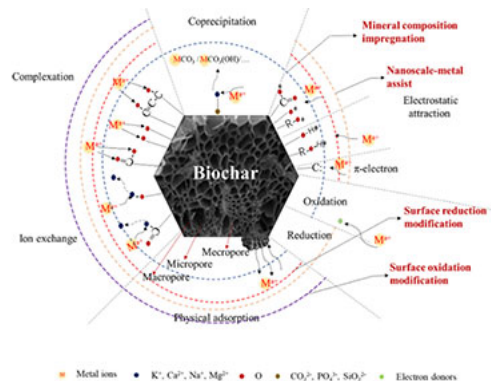
Aurelio Vallespín Muniesa

<https://sideral.unizar.es/sideral/CV/aurelio-vallespin-muniesa>

The aim of this Educational Innovation Project is to tackle in a novel way one of the most complex fields when carrying out building projects: architectural, artistic and cultural heritage.

The teaching of new digital technologies applied to the documentation, conservation and recreation of historical-artistic elements and sites such as the church of Santo Tomás de Villanueva in Zaragoza, as well as the exceptional mural paintings that are housed inside, offer the students of the Construction Representations module a unique opportunity to participate in a teaching innovation project in which the technology and resources of the Building and Civil Engineering department are applied in-situ in an exceptional location.

## Circular Economy



### BIOCHAR, A VALUABLE ALLY

More and more studies are being conducted on biochar, a carbon-rich material easily derived from livestock and agricultural waste products. It is capable of capturing atmospheric CO<sub>2</sub> and proves to be a valuable ally in the fight against climate change, increases agricultural production yields and can remediate soils and waters polluted by heavy metals. This is precisely what the research conducted by Marco Ginepro and Ph.D. student Giulia Costamagna focuses on, carried out hand in hand with the transfer of knowledge to the land.

The aim of the study is to use different types of biochar obtained from residual biomass, produced at different pyrolysis temperatures, for the removal of heavy metals in waters potentially contaminated, especially with heavy metals.

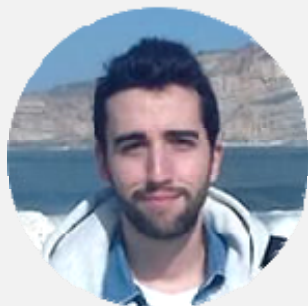
Read the article [here](#)

## Renewable Energies



West University of Timisoara is currently a partner in the PN-III-P2-2.1-PED-2021-0544 nationally funded project. The project deals with the smart management of islanded microgrids that include renewable energy sources and a storage system. The UVT team involved in the project is part of the Solar Energy Research Group - SERG (<http://solar.physics.uvt.ro>), led by Dr. Marius Paulescu (<http://physics.uvt.ro/~marius>). The research carried out by the WUT team is focused on intra-hour and day-ahead forecasting of solar resources and PV power production, a field in which the team has extensive experience.

## PhD student of the month



### Enrique Escorihuela

PhD Student - Physical Chemistry Department, University of Zaragoza.

Researcher at the University of Zaragoza and the Institute of Nanoscience and Materials of Aragón (INMA), his thesis project is focused on the development of supramolecular nanostructured materials for their application in molecular electronics. Different types of organic compounds are arranged into arrays as millions of functional unimolecular electronic devices and characterized at the Advanced Microscopy Laboratory of Zaragoza (LMA) by spectroscopic means or scanning probe microscopies. The topic of the project was selected as a finalist of the contest #HiloTesis with the thread: "Can we fabricate computers with chemistry?"

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## Woman researcher of the month



### Francesca Gambarini

ERC STARTING (HORIZON EUROPE)

Associate Professor at the Department of Psychology, University of Turin, where she teaches neuropsychology and psychobiology. Among her research topics, she has been mainly concerned with the neurocognitive mechanisms of motor and body awareness under normal and pathological conditions. With the ERC-Starting Grant project "MyFirstBody," she aims to study these aspects also in ontogenetic development, in fetuses, infants and children. Its experimental approach involves neuroimaging techniques and psychophysiological measures

Web site: <https://manibuslab.wixsite.com/manibus>

## Highlights

**STEAM disciplines in Romania: needs, examples of good practice, recommendations.**

The workshop PromoScience - from citizen science to free access to European research infrastructures had as its starting point the urgent need to attract young people to study technical subjects, natural sciences, and, above all, an integrated approach to them (STEAM).

The workshop represents a first step in the creation of a network of science communicators, a much need resources in Romanian ecosystem. Moreover, the network will support the authorities in identifying remedial measures, as well as researchers who need support in research projects.

<https://www.diaspora-stiintifica.ro/workshopuri/promostiinta-de-la-citizen-science-la-accesul-liber-in-infrastructuri-de-cercetare-europene>

**Centre for Corpus Related Digital Approaches to Humanities:** <https://codhus.projects.uvt.ro/>

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101035810.