Re-UNITA RESEARCH Newsletter

#15
May
2023

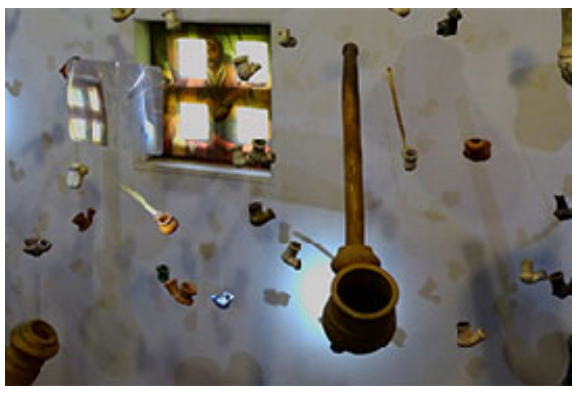
Editorial

Our European societies are facing a number of challenges linked to environmental, industrial and societal transitions. These transitions bring complex interactions into play, requiring a cross-disciplinary approach to understand them and define sustainable solutions. Against this backdrop, the USMB, with funding from the French Ministry of Higher Education and Research's Excellence program (ANR-22-EXES-0017), will be setting up an *Institute for Transitions* to bring together its academic community and partners, including socio-economic ones. This Institute will support interdisciplinary research on transitions, and there is no doubt that UNITA will be a formidable lever for deploying collaborative research that meets the challenges at hand.

Mareva Sabatier
Vice-Rector for Research

Claire Salmon
Vice-Rector in charge of Interdisciplinarity and Director of the Institute for Transitions

Cultural Heritage



Protecting Ukrainian Cultural Heritage at the University of Turin.

The University of Turin has taken action at various levels to support Ukrainian students and researchers. Since before the total war broke out, UniTo has been hosting researchers working to expand knowledge about tangible and intangible cultural heritage in Ukraine. UniTo is also the host institution for the T4Culture doctoral program. Under this program, several projects aimed at studying and documenting cultural heritage are conducted.
These activities are in cooperation with Ukrainian institutions, which struggle to keep their collections and facilities protected, to continue conducting research, and to stay in touch with the international scientific community. The materials studied are carefully documented, which makes it possible to preserve their knowledge in case their physical integrity is compromised.

Read the full article on:
https://frida.unito.it/wn_pages/contenuti.php/441_studio-del-passato-dellumanit/676_proteggere-il-patrimonio-culturale-ucraino-alluniversit-di-torino/

https://tech4culture.unito.it/mission/

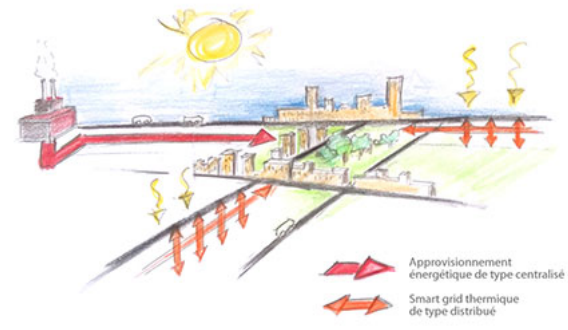
Circular Economy

Green Month at UVT

As part of the "Green Month at UVT" program, on May 26, a unique workshop entitled **"Good practices of circular economy within the Vrancart S.A. Group"** was held in the urban garden of UVT, which aimed to familiarize the UVT community and the general public with existing initiatives in the circular economy in our region.
The event was organised by FEAA UVT, Green UVT Sustainability Centre, UNITA Circular Economy Research & Innovation Hub and Eco Club Timisoara, together with the Vrancart SA Group.
The Western University of Timișoara organized, between May 6 and June 5, 2023, the second edition of the "Green Month at UVT" program, an event that brings together conferences, debates and workshops on sustainable development and environmental protection.

https://www.uvt.ro/en/blog/luna-verde-la-uvt-dezbateri-si-actiuni-pe-tema-dezvoltarii-durabile/
https://www.vrancart.ro/en/about-us.html

Renewable Energies



Renewable Energies Research Project

Launched in 2019, the Dromotherm project led by the LOCIE laboratory at USMB is a road-building smart-grid demonstrator, which valorizes the thermal energy of the road throughout the year to heat nearby buildings. By capturing solar energy and storing it during the summer, the road can become a producer of renewable energy. The first data will be collected in the summer of 2022.

Contact: benoit.stutz@univ-smb.fr

PhD student of the month

Salato Emanuele, PhD student in Pure and Applied Mathematics (XXXVIII cycle)
University of Turin
Department of Mathematics
Tutor: Prof. Davide Zucco (cotutela in Chambery will be carried out under the supervision of Professor Dorin Bucur)

Best shapes for sustainability: buckling load of a clamped plate
Shape optimization is a rapidly growing field of research that has gained significant interest in recent years. This is also due to its importance in various applications, including engineering, architecture, and biology.
By seeking, for example, to identify the most eficiente the shape of a clamped plate that can withstand the buckling load it is possible to improve its performance, minimize its environmental impact, and increase its longevity. This can result in significant cost savings, as well as benefits for the environment and society as a whole.

Woman researcher of the month

Eva Kaslik (eva.kaslik@e-uvt.ro)

Eva Kaslik obtained a PhD in Mathematics in 2006, jointly awarded from Université Paris Nord (France) and West University of Timisoara (Romania). Presently, she holds a Professor position at West University of Timisoara, and serves as the director of the Mathematics Department of the Institute for Advanced Environmental Research at WUT. She received the Habilitation in Mathematics in 2015 and is currently supervising five PhD students at the Doctoral School of Mathematics. Her current research focuses on applied mathematics, with a particular focus on mathematical modelling in the neurosciences.

https://www.researchgate.net/profile/Eva-Kaslik

Highlights

Infrastructure of the Month : The Mastersizer 3000
The Mastersizer 3000 uses the technique of laser diffraction to measure the particle size and particle size distribution of materials. It does this by measuring the intensity of light scattered as a laser beam passes through a dispersed particulate sample. This data is then analyzed to calculate the size of the particles that created the scattering pattern. It delivers measurements from 10 nm to 3.5 mm using a single optical measurement path, making it suitable for an extremely wide range of applications.
You can find the Mastersizer 3000 at USMB, and have some information at this link https://reunitaresearchinfrastructure.i3a.es/en/node/43
Researchers interested in using this infrastructure can benefit from a grant. More information and contact details at this link : https://reunitaresearchinfrastructure.i3a.es/en/faqs

Cooperação Bilateral Portugal-França 2023: concurso conjunto ao abrigo do Programa PESSOA
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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.