



stayCERENA – May 2025

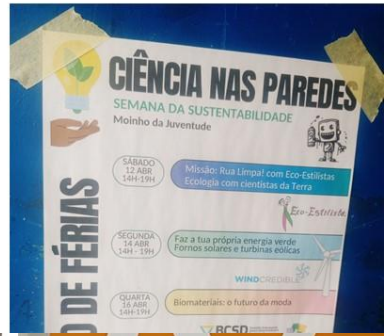
April in a nutshell



- April 4th-5th 2025 | CERENA-FEUP researchers, professors and students participated in the Fórum Nacional Clubes Ciência Viva na Escola 2025, held at the Alfândega do Porto. [Read more.](#)
- April 5th 2025 | CERENA-IST members participated to Dia Aberto do Técnico, a science outreach event that counted with nearly 2700 visitors. [Read more.](#)
- April 10th 2025 | The first CERENA Workshop about Scientific Lab Equipment took place at IST. [Sílvia Carvalho](#) introduced the technique and practical applications of the [Multi-Scale Imaging Laboratory](#) (MIL).
- April 11th 2025 | CERENA Researchers Join the 19th ULS Almada-Seixal Medical Conference to showcase MIL applications for medical technology. [Read more.](#)

- April 12th 2025 | [Danilo Bretagna](#) and [Housam Sherif](#) contributed with their science to the Easter Week camp of [Science On The Walls](#), a joint initiative of Chapalimaud Foundation and [Associação Cultural Moinho da Juventude](#).
- April 14th to 18th 2025 | Sixth edition of “Ciência nas Férias” took place at the Department of Mineral and Energy Resources Engineering (DER). [Read more](#).
- April 24th 2025 | This month’s CERENA Seminar, [Teresa Nogueira](#) presented her interesting research about **“Total Plastic Recycling: Contribution to a Circular Economy”**
- April 26th 2025 | CNN INOVAÇÃO episode showcased CERENA on Portuguese TV.







Activities of the month of April

Our people



João Senra – PhD in Earth Resources



Meet [João](#), a PhD student from CERENA and DER, and an example of the idea that there is no single correct path rather, it unfolds as we move forward. After graduating in Geological Engineering from FCT-NOVA in Almada, João moved to Instituto Superior Técnico, driven by his interest in Mining Engineering and ornamental stone. From internships in mineral trade to research grants at ASSIMAGRA, João's work has spanned mineral resources, rock mechanics, the impact of wildfires, and, more recently, archaeology and conservation. Now based between CERENA-IST and Côa Park, and

Meet [João](#), a PhD student from CERENA and DER, and an example of the idea that there is no single correct path rather, it unfolds as we move forward. After graduating in Geological Engineering from FCT-NOVA in Almada, João moved to Instituto Superior Técnico, driven by his interest in Mining Engineering and ornamental stone. From internships in mineral trade to research grants at ASSIMAGRA, João's work has spanned mineral resources, rock mechanics, the impact of wildfires, and, more recently, archaeology and conservation. Now based between CERENA-IST and Côa Park, and

supervised by [Maria Amélia Dionísio](#) and [Gustavo Paneiro](#), his PhD project lies at the intersection of geology, cultural heritage, and engineering.

The most challenging part of this journey, João says, is bridging the more interpretative, arts-oriented field of archaeology with the precision of engineering. "Communication between these two realms is definitely challenging—but also rewarding," he adds.

What work are you doing at the moment?

J: "I'm starting the experimental phase of my PhD. I'm working with black schist samples from Côa Park, running physical, mechanical, and thermal tests to understand how these rocks react to fire. The goal is to assess the risk and support the park's conservation efforts."

What results do you expect from your work?

J: "In the short term, I want to establish the testing methodology and get measurable results—numbers that tell us how the rocks behave. Eventually, I hope to develop a fire impact analysis and a conservation plan for the park."

What would you like to do when you finish your PhD?

J: "I'm not sure yet. I enjoy research and education, but I'm also realistic about financial stability. I'm open to different paths, whether continuing in academia, returning to logistics or consulting in mining. I've learned that sometimes the path becomes clearer as you walk it."

CERENA Featured in CNN INOVAÇÃO



Our research center was featured on the TV program **CNN Inovação**, on April 26th, on CNN Portugal. This episode is part of a series that aims to highlight innovative solutions and creative ideas in the fields of science and technology. The program showcases projects and initiatives that promote innovation in different relevant fields across the country.

The filming and recording took place in late 2024 at our Lisbon and Porto facilities, with the precious contributions of our researchers [Moisés Pinto](#), [Maria de Lurdes Dinis](#), and [Manuel Ribeiro](#). It was hard to condense the multidisciplinary initiatives and research activities of the entire center into a 4-minute segment is challenging,

but [Bubble Creative Studio](#) did their best in capturing the essence of CERENA's recent highlights and the significance of our center in a the society.

The episode is now available on the [CNN Portugal website](#) and on our social media channels ([LinkedIn](#), [YouTube](#) and [Instagram](#))!

How to use the forms

Short reminder on how to use the internal forms:

- Log in CERENA website with your institutional credentials, then go to the restricted area:

The screenshot shows the CERENA website's login interface. At the top, a navigation bar includes links for ABOUT US, RESEARCH & INNOVATION, SOCIETY & EDUCATION, NEWS & EVENTS, and PUBLICATIONS. A red arrow labeled '1' points to the user profile icon in the top right corner. Below the navigation bar is a large orange banner with a carousel of images. The login form consists of two input fields: 'Email address*' with the text 'francescoturco@tecnico.ulisboa.pt' and 'Password*' with masked characters. A red arrow labeled '2' points to the 'LOG IN' button. Below the password field, there is a link for 'Forgot your password? Create a new one here.' and a note about account issues with a red arrow labeled '3' pointing to it. To the right of the login form is a 'Restricted Area Report' sidebar with a tree structure of links. A red arrow labeled '4' points to the 'Forms' link in this sidebar. At the bottom, a secondary navigation bar includes links for RESTRICTED AREA, CONTENT REPORTS, and MEMBERS REPORTS.

- If you are not automatically logged in (for example if you are using an incognito windows), you have to log in your Microsoft account again, with your institutional credentials




Sign in

Email or phone

[Can't access your account?](#)

- Fill the form you desire:



Acquisition Processes


Fill in this form to start a new procurement process.

To start a procurement process you need an invoice with the following requirements:

- 1) VAT from the provider;
- 2) Execution in number of days;
- 3) Financing project;
- 3) Validity of the tender (minimum of 66 days or no deadline);
- 4) Terms and method of payment.

Please address question to: ines.duarte@tecnico.ulisboa.pt

- When the form is submitted, you can save your response:



Your response was submitted.

Important thing you can do next

[Save my response to edit](#)

[Submit another response](#)

Dates to diary



- May 8th-10th 2025 | [CERENA Annual Meeting '25](#) at INATEL Foz do Arelho
- May 13th 2025 | CERENA Seminar by Dr. Romain David **“All About Ears!”**. More info [here](#).
- May 14th 15th 16th 2025 | Workshop Where Science and Technology Meet Art – Instituto Superior Técnico. Info and registration [here](#).

- May 15th 2025 | ISRM Workshop on Soft Rocks – FEUP. More info [here](#).
- May 15th 2025 | CERENA Workshop Equipment in Research: X-Ray Diffraction and X-Ray Fluorescence – Instituto Superior Técnico. More info [here](#).
- May 20th 2025 | Pint of Science Braga: [O que os olhos não vêem... mas a terra sente | Portugal](#)
- May 21st-25th 2025 | [Oeiras Valley Science Festival - Taguspark](#)
- May 29th 2025 | CERENA Seminar by Roberta Lobarihas “**Vulnerability of Portuguese natural stone to high temperatures**”
- June 1st-3rd 2025 | [MATERIAIS 2025](#) - Congress of the Portuguese Materials Society

Health and Wellbeing



Living surrounded by concrete, cars, traffic and urban noise, and spending less time in nature can be bad for our health. [Scientific studies](#) show that it is difficult to recover from stress and mental fatigue in an urban built space, while spending time in nature helps reduce stress, depression, and anxiety.

Spending time in nature and natural light boosts mental clarity, focus, and mood. A short walk outside can break mental blocks we may have when writing a paper or a proposal, it enhances our problem-solving ability and reduces stress.

With the opening of the good season, make sure to regularly exposed to green spaces and natural light, have your lunch break outdoors if possible, and take breaks from the screen or the lab! Your concentration, sleep and general mood might improve 😊

Know more [here](#).

Pearson DG, Craig T. [The great outdoors? Exploring the mental health benefits of natural environments](#). Front Psychol. 2014 Oct 21;5:1178. doi: 10.3389/fpsyg.2014.01178. PMID: 25374550; PMCID: PMC4204431.

Pre-Award Section

HORIZON EUROPE 2025 | The European Commission released the drafts of the 2025 WPs last week.

You can find full information on the 2025 work programme official EU page [here](#) and in the ISTID file [here](#) (organized for clarity)

If you want to learn more about Horizon Europe, you can always register to attend the official [Horizon Europe info days](#) and attend the PA Office session next Friday at the CERENA annual meeting

Looking forward to seeing you there

Publications



Pereira, J. L., & Azevedo, L. (2025). [Electrical resistivity tomography inversion combining deep variational autoencoder and stochastic adaptive sampling](#). *Geophysics*, 90(2), E41-E50.

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Ramos, T. B., Horta, A., Azevedo, L., Castanheira, N., Farzamian, M., Gonçalves, M. C., & Martins, J. C. (2025). [National-scale assessment of salt-affected areas in Portugal: Learning from legacy data to establish a framework for comprehensive monitoring and management](#). *CATENA*, 250, 108773.

Gomes, J. G., Sammarchi, S., Yang, Q., Yang, T., Chong, C. T., Sousa, A. M., ... & Li, J. (2025). [Maximising Sustainability: Planning and Optimization Strategies for Achieving 100% Renewable Energy Communities in Remote Islands-A Case Study of Corvo Island, Portugal](#). *Energy*, 134802.

Gonçalves, D., Hofmann, F., Wipf, S., Urso, R. G., Bocková, J., Meinert, C., ... & Martins, Z. (2025). [The Photochemistry of Amino Acids Produced on the Polar Cryovolcanic Regions of Titan](#). *ACS Earth and Space Chemistry*, 9(3), 715-728.

Sousa, A. M., Branco, R., Morais, P. V., Pereira, M. F., Amaro, A. M., & Piedade, A. P. (2025). [Evaluation of the interface of metallic-coated biodegradable polymeric stents with prokaryotic and eukaryotic cells](#). *Bioactive Materials*, 46, 55-81.

TavallaieNejad, A., Vila, M. C., Paneiro, G., & Baptista, J. S. (2025). [A Systematic Review of Machine Learning Algorithms for Soil Pollutant Detection Using Satellite Imagery](#). *Remote Sensing*, 17(7), 1207.

Silva, D. B., & Marques, A. C. (2025). [TiO₂-based photocatalytic degradation of microplastics in water: Current status, challenges and future perspectives](#). *Journal of Water Process Engineering*, 72, 107465.

Contact us

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 CERENA [Restricted Area](#): here you can find forms, regulations, institutional graphical material and tips.

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