

CERENA was marked with Very Good by FCT



The report from the [FCT's Evaluation Panel](#) (that visit CERENA's facilities last October, 7th) was made available last December, 22. The Conclusions on that report were quite encouraging our work: *"Overall, this Unit is very good. The Unit is producing high quality research outputs that not only contribute to the advancement of fundamental scientific knowledge but are also of relevance to and being exploited by industry. Research is organised into three thematic strands of Oil and gas, Evaluation and valorization of resources, and Natural and technical hazards, which provide the basis for a good alignment with Portuguese and international industry. The Unit is successful in winning external funding from sources including the EU and industry as well as the FCT, with the core FCT funding over the period 2008-12 representing approximately 14% of the Unit's total budget over this period. The Unit has recently undergone some internal structural changes that are still bedding down, but the management team are aware of this and are developing a strategy for accelerating the process. Their strategy in terms of international industry engagement is aligned with promoting Portuguese industry interests overseas, and is to be commended. The requested funding for the period 2015-20 is reasonable in view of their past and proposed levels of activity, and should represent very good value for money"*

Susana Vilanova – New CERENA researcher



CERENA's researcher Susana Vilanova was awarded with a new position at the competitive FCT-Investigador call with a project entitled "Development of self-consistent models for probabilistic seismic hazard analysis in stable continental regions: application to Western Iberia". The project aims at developing a holistic assessment of probabilistic seismic hazard assessment at long return periods and was considered innovative at the worldwide level by the evaluation panel.

Field Campaign in Antarctica – project HISURF3



Two CERENA members, Pedro Pina and Lourenço Bandeira, are again making the preparations for new field campaign in Antarctica in the next austral summer (Dec-Feb 2015), in the frame of the project HISURF3. This campaign will be developed in 3 peninsulas of 2 islands of the South Shetlands: Barton and Fildes in King George Is. and Hurd in Livingston Is.

The main [activities](#) to develop are related to the acquisition of remotely sensed imagery with UAVs (or drones), contributing to the international effort of monitoring the ice-free surfaces of Antarctica. The preparatory activities and the future journal of the campaign can be followed at [PROPOLAR portal](#) and at [SIC NOTÍCIAS site](#), which will be accompanying some activities in the field.

CERENA's researchers on board at the Itinerant University of the Sea



The Itinerant University of the Sea (IUS) is an established project, since 2006, co-sponsored by three public higher education institutions: University of Porto, Portugal, the Portuguese Naval School and the University of Oviedo, Spain.

The main objective of the IUS is to provide higher education students, with a unique sea ambience experience, combined with diversified

pedagogical practices, comprehending a hands-on training component within multidisciplinary curricula.

The 2014 Campaign for the IUS, pursues the objectives above mentioned and in the current year holds as main theme "The Iberian Peninsula from coast to coast – promoting the Marine Ecosystems".

For this year IUS Campaign, on board sail three CERENA's researchers (Joaquim Góis, José Soeiro and Miguel Tato Diogo), that through lectures and seminars on board, will try to raise awareness for multiple sea-related issues: Marine Georesources, Risks and Safety at sea, Geopositioning, Scientific Diving amid other emerging topics. More information on the [website](#).

Papers Published

- J.M. MARQUES, C. MATOS, P.M. CARREIRA, J. ESPINHA MARQUES, J. TEIXEIRA, H.I. CHAMINÉ (2014) **Assessment of mixing between shallow and thermal waters using geochemical and environmental isotope tracers (N Portugal): a review and reinterpretation.** Environ. Earth Sci., 72 (7): 2557-2567
- FREITAS, L., AFONSO, M.J., DEVY-VARETA, N., MARQUES, J.M., GOMES, A., CHAMINÉ H.I. (2014) **Coupling hydroponymy and GIS cartography: a case study of hydro-historical issues in urban groundwater systems,** Porto, NW Portugal. Geographical Research, 52(2): 182-197.
- Pedro M. Castro, Djéide Rodrigues, and Henrique A. Matos "**Cyclic Scheduling of Pulp Digesters with Integrated Heating Tasks**" Ind. Eng. Chem. Res., 2014, 53 (44), pp 17098–17111 DOI: 10.1021/ie403822z
- Guerreiro, C., Gomes, J.F.P., Carvalho, P., Santos, T., Miranda, R., Albuquerque "**Characterisation of airborne particles generated from MAG welding process**" P., Inhalation Toxicology, 26(6), 345-352 (2014) DOI: 10.3109/08958378.2014.897400
- Gomes, J.F.P., Miranda, R. "**Emission of airborne ultrafine particles during welding of steel plates**" Ciência e Tecnologia de Materiais, 26(1), 1-8 (2014) DOI: 10.1016/j.ctmat.2014.09.001

First 2015's CERENA Seminar

"THE OIL INDUSTRY- AN EXCELLENT GLOBAL CAREER OPPORTUNITY"

January 8th, at 14:30 in PA1 Technical Amphitheater (Alameda) by **Alan S. Phelps**

A practical and concise overview of the Petroleum Industry, touching on mainly the well drilling processes and also careers and areas of opportunity for engineers. The main objective is to raise the profile of this industry for Engineers graduating in Portugal as being an interesting, challenging and rewarding profession