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Awards

Project DACHOR wins "Ser Capaz" award

Project DACHOR – Integrated Design and Control of Hybrid Active Orthoses, which involves the EEUM and other institutions, has been awarded with the 1st place of the "Ser Capaz" Research and Technology Award, promoted by "Associação Salvador". The project aims at developing an innovative powered Ankle-Foot Orthosis (AFO) to aid individuals with reduced mobility and neuromuscular disabilities of the locomotion apparatus. DACHOR is a MIT-Portugal programme project, in which Paulo Flores, professor at the Department of Mechanical Engineering (DEM) and researcher at the Centre for Mechanical and Materials Technology (CT2M) of the EEUM, participates, along with other researchers from the IST (Instituto Superior – Portugal) and the Massachusetts Institute of Technology (MIT – EUA).
"We believe that this project will improve the life quality of people with reduced mobility and will also help them to fit in in the society", states Professor Paulo Flores.

News

Activities' Report 2011 and Activities' Plan 2012

The EEUM's Activities' Report 2011 and Activities' Plan 2012 were both approved by the School Council of the EEUM, in the meeting of 25th January.
The Activities' Report 2011 evidently witnesses the commitment of the EEUM's entire academic community regarding their activities related to the several mission dimensions throughout 2011.
With the Activities' Plan 2012, the EEUM dares to pass beyond the current situation, assuming that its competences will allow a better performance and the creation of a new cycle, despite all the difficulties arising at national and international level.

More...

New sensor for aneurism intervention


Sensor monitoriza no pós-operatório

The Department of Industrial Electronics (DEI) of the EEUM, in partnership with the MIT-Portugal Programme, the Faculty of Engineering of the University of Porto (FEUP) and the Instituto Superior Técnico (IST), is developing a new sensor which will assist Endovascular Aneurysm Repair (EVAR) interventions.
"The advantages of the project are the low cost technology and the flexibility and thinness of the sensor", refers the project co-ordinator Luís Alexandre Rocha, professor at DEI. The Portuguese Foundation for Science and Technology (FCT) has decided to fund the project. The sensor will now evolve considering the industrial electronics of the product, with a new instrumentation of circuits, namely the development of polymers, using nanocomposites.

Sense4me presents innovation for ulcer prevention

The main goal of the Sense4me project is to create mattresses, pillows and covers which are able to monitor the pressure, temperature and humidity of the patient's body areas which are in permanent contact with support surfaces.
"The control of these parameters may issue an alert, when necessary, and this will allow the user to move, by himself or aided by others, which will in turn prevent ulcer development", states Miguel Carvalho, project co-ordinator and professor at the Department of Textile Engineering (DET) of the EEUM.
The innovation will have a large human and financial impact, as at the moment there are no effective or trustworthy solutions for this problem available in the market. Besides preventing ulcers, this technology will be beneficial for the health system as a whole, as it will allow to reduce pressure ulcer treatment costs, as well as to optimise nurses' time management and performance.

C-TAC develops Hi-Routes application

The Centre for Territory, Environment and Construction (C-TAC) of the EEUM is currently developing the project Hi-Routes. The programme has been designed to allow people walking or riding bicycles to find alternatives to shorter circuits. "This model calculates the shorter circuit, but presents also more than one alternative. The optimisation criteria are related to network geometry. In order to move from one place to another, the distance is not always the most important element. There are other factors to consider, such as noise and pollution", explains Paulo Ribeiro, researcher at the C-TAC and Professor at the Department of Civil Engineering (DEC) of the EEUM.

Roman temple in Évora undergoes structural analysis

Built two thousand years ago, the Roman temple in Évora is currently under a structural analysis, for the first time, with modern 21st century equipment. The purpose of this intervention is to diagnose the temple's condition and propose rehabilitation and conservation plans.
The Department of Civil Engineering (DEC) of the EEUM is leading the project, developed under the framework of the European Master course in Structural Analysis of Monuments and Historical Constructions, in partnership with the Regional Culture Directorate of Alentejo (DRCAlen) and the Évora Municipality.
Professor Daniel Oliveira (DEC) explains that, on the 19th and 20th January, the team has analysed the structure's properties, using advanced equipment, in order to diagnose its condition, namely concerning seismic risk.

EEUM co-ordinates intensive course for european students at Efacec

The EEUM co-ordinates the first edition of the intensive course Innovation and Creativity for Complex Engineering Systems (ICCES 2012),which involves researchers from the company Efacec and nine European universities. The course is taking place at the company's facilities (Matosinhos and Maia, Portugal), and aims at presenting multidisciplinary teams of students with real industrial problems, so that the students may suggest innovative solutions and propose research plans.
The intensive course is co-ordinated by João Miguel Fernandes, Professor at the Department of Informatics (DI) and researcher at the Algoritmi research centre of the EEUM.

ENGINews is a publication of all members of the EEUM.
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