

# **ENGINews**

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#### **Rector of the UMinho takes office**





#### **UMinho**



#### Rector of the UMinho takes office

Largo do Paço, Braga, 18<sup>th</sup> November

The new Rector of the UMinho took office on the 18th November. Professor António Cunha was re-elected as Rector of the UMinho after a first four-year term between October 2009 and October 2013. Professor António Cunha started his academic career at the UMinho, in the Department of Polymer Engineering (DEP) of the EEUM, in 1984. He was nominated Full Professor of the DEB in 2003. Professor António M. Cunha was also President of the EEUM from 2005 to 2007 and also from 2008 to 2010.

The new Rector's Team counts on three more professors of the EEUM. José Mendes, Full Professor of the Department of Civil Engineering (DEC) of the EEUM, was nominated Vice-Rector for the Valorization of Knowledge and Special Projects.

Rui Reis, Full Professor of the Department of Polymer Engineering (DEP) and director of the Research Group on Biomaterials, Biodegradables and Biomimetics (3B's) of the EEUM, was nominated Vice-Rector for Research. Paulo Ramísio, Assistant Professor of the Department of Civil Engineering (DEC) of the EEUM, was nominated Pro-Rector for Infrastructures and Sustainability.

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# UMinho is a new Honorary Member of the Portuguese Board of Engineers

Sintra, 23<sup>rd</sup> November



The University of Minho became an Honorary Member of the Portuguese Board of Engineers during a commemorative ceremony included in the celebrations of the National Day of the Engineer. The Rector of the UMinho, Professor António Cunha and the Vice-Dean of the EEUM, Professor Rosa Vasconcelos, participated in this ceremony. The honour was due to the effort and capability demonstrated by the UMinho in supporting a quality education in Engineering, based on innovation, in encouraging education in connection with society and industry, and also in boosting the creation of new enterprises, namely spin-offs and start-ups. In the words of the President of the Board of Engineers, Eng. Carlos Matias Ramos, the award was a recognition of the UMinho's work during a difficult time regarding the social and economic context, with high demands on innovation and creativity, which has in turn compelled the University, namely its School of Engineering, to create strong added value for industry and to be present in the production chain.

#### **Awards**

## Polymers of the UMinho receive Honourable Mention of the COTEC Innovation Award

Lisbon, 27th November



During the 10<sup>th</sup> National Innovation Meeting COTEC 2013, the SME Innovation COTEC-BPI 2013 Awards were presented. This year, the Higher Education institutions which invested in strategies for boosting entrepreneurship and cooperation with industry have also been awarded. The COTEC presented five awards, two main awards and three honourable mentions. The UMinho received an Honourable Mention in the competition "Knowledge Valorisation and Fostering Entrepreneurship" for the collaboration with the company Iberomoldes. The joint projects developed by the UMinho and Iberomoldes have contributed to innovation in the plastic moulding industry and have also created the foundation for the Master Course in Polymer Engineering.

# Researchers of the CEB selected for the 25 Best Inventions of the Year (TIME)

The alcoholic coffee created by Solange Mussatto and Armando Sampaio.



researchers of the Centre for Biological Engineering (CEB) of the EEUM, was considered one of the 25 Best Inventions of the Year by TIMES magazine. The invention is described in the research paper "Production, chemical characterization, and sensory profile of a novel spirit elaborated from spent coffee ground", written by the researchers Armando Sampaio, Giuliano Dragone, Mar Vilanova de la Torre, José Oliveira, José António Teixeira and Solange Mussatto, published in the scientific journal LWT - Food Science and Technology. Produced from used grounds, the transparent drink has an alcoholic content of around 40%, maintaining the taste and aroma of coffee

TIME Magazine...

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## Research developed by engageLab wins World Technology Awards

New York, 14th to 15th November



The team of researchers from the engageLab, constituted by Cristina Sylla and Sérgio Gonçalves (Algoritmi Research Centre), Pedro Branco (professor at the Department of Information Systems – DSI) and Clara Coutinho (professor at the Education Institute of the UMinho), won the WTA – World Technology Awards 2013 in the Entertainment category, with the project "t-words". The "t-words" interface, which may help fighting children's literacy problems, was the first finalist project from a Portuguese university in this worldwide initiative which awards "projects creating the 21² century and that will probably be the most important in their own areas in a long term". The "t-words" allows children to explore sounds, words and phrases while having fun. The technology is constituted by physical blocks which can be recorded and combined in order to produce different sound combinations. The younger may therefore participate in different activities, such as rhyming or exploring the sounds of words and phrases, while drawing on the block's surface, creating visual and sound short stories.

#### Professor from DPS wins Best Poster Award at 1st CISPEE2013

Oporto, 30th October to 1st November



Anabela C. Alves, professor from the Department of Production Systems (DPS) of the EEUM, won the Best Poster Award with the research paper "Lean Engineering education: bridging-the-gap between academy and industry", cowritten by Franz-Josef Kahlen (University of Cape Town, South Africa), Shannon Flumerfelt (University of Oakland, USA) and Anna-Bella Siriban-Manalang (University de La Salle, Phillippines) during the 1st International Conference of the Portuguese Society for Education in Engineering (CISPEE2013). The research paper presents *Lean Engineering Education* as a learning approach which aligns Education in Engineering with the needs of the industry and society, promoting the required skills to support a professional engineering practice, both presently and for the future.

#### PhD Student wins Idea Puzzle Award 2013

Oklahoma, USA, 26th October



Ana Cardoso, PhD student of Information Systems and Technologies, under the supervision of Professor João Álvaro Carvalho, professor from the Department of Information Systems (DSI) of the EEUM, won the Idea Puzzle Award 2013 with the research project entitled "A study of the dynamics of civil movements enabled by information and communication technology."

The Idea Puzzle Award grants 1000,00€ to the author of the best doctoral research design created with the Idea Puzzle® software. The Award was created in 2012 for the acknowledgement of scientific rigor as well as economic and social relevance of doctoral research. It is a partnership between Deloitte, Beta Capital and Idea Puzzle, a Portuguese start-up which helps PhD students throughout the world to design and present their scientific research.

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#### Researchers from CEB create gel for chronic wounds



The researchers Ana Oliveira, Carla Carvalho, Hugo Oliveira and Sanna Sillankorva, from the Centre of Biological Engineering (CEB) of the EEUM, are working on a product for the treatment of chronic wounds, based on a gel for topical application which will eliminate 90% of infectious bacteria. The alternative product MAGniPHI results from the CEB's research works and acquired know-how throughout the past ten years. The researchers have developed a fast-acting product which is effective on bacteria resistant to existing drugs. This product also stands out due to its organic characteristics as it contains no toxicity. The goal is to create a protein-based, non-toxic, antibacterial gel which is able to eliminate 90% of the colonized bacteria in chronic wounds which affect a large number of people of specific target groups such as elder, diabetic and obese people.

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#### Timber buildings highly resistant to seismic activity



Timber buildings have an excellent resistance to earthquakes. This conclusion was drawn from an European study involving the universities of Minho, Trento (Italy) and Graz (Austria), the National Laboratory for Civil Engineering (LNEC) and five top enterprises in the timber construction sector: Rusticasa (Portugal), Rubner (Germany), Legnocase (Italy), Storaenso (Finland) and Kaufmann (Austria). The project "Seismic performance of multi-storey timber buildings" is the largest research ever in the field and which considers the several timber construction systems. Four three-storey timber houses were evaluated at the LNEC's seismic test facilities, each with a different type of construction. "Never before a timber seismic test was performed with such depth and different variations, in 2-D", refers Jorge Branco, professor at the Department of Civil Engineering (DEC) and researcher at the Institute for Sustainability and Innovation in Structural Engineering (ISISE) of the EEUM, one of the project's researchers. The director of the ISISE, Professor Paulo Lourenço, also participated in this project.

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#### Former student creates online platform to reveal chords



José Pedro Magalhães, former student of Informatics and Systems Engineering of the EEUM, created a software platform which converts any music (mp3 file or YouTube link, for example) into its chords. The platform Chordify, which he co-funded, is a unique worldwide solution, as it is online, free, automatic and very intuitive, already attracting around 50.000 users per day. José Pedro Magalhães' software explores the most sophisticated resources of Haskell language (and its extensions), which the researcher started developing at the UMinho, consolidated in his PhD at the University of Utreque (The Netherlands) and keeps researching at the Oxford University (England).

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### **Applications**

## **Doctoral Programmes EEUM**

3<sup>rd</sup> edition\* and 1<sup>st</sup> edition\*\*:
6<sup>th</sup> to 17<sup>th</sup> January 2014

- \* Courses starting February 2014
- \*\* Courses starting September 2014



**ENGINews** is a publication of all members of the EEUM. Please send your news to divulgacao@eng.uminho.pt

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Thank you for your understanding.