Dean EEUM 2013-2016

Dean of the EEUM for 2013-2016 took office
Campus of Azurém, 3rd May

The new Dean's team of the EEUM took office on the 3rd of May. The new Dean of the EEUM is Professor João Luís Marques Pereira Monteiro and the Vice Deans are Professors António Gomes Correia, Rosa Maria Castro Fernandes Vasconcelos and Guilherme Augusto Borges Pereira. The ceremony was conducted by the Rector of the University of Minho, Professor António M. Cunha.

"The School of Engineering is a comprehensive School for Education and Research, involving diverse scientific and pedagogical areas, which constitute the framework of a broad spectrum of engineering as a scientific area. The main motto is the consolidation of all areas which, in the 37 years of age of the EEUM, have reached national and international recognition", states the new Dean.

Highlight

UMinho celebrates cooperation agreement with Brisa Innovation and Technology and welcomes meeting of the Transport Ecosystem Workgroup
Campus of Azurém, 23rd April

The UMinho and Brisa Innovation and Technology have signed a cooperation agreement, which defines as its main goal to join the synergies of each entity, valuing their own strategies in their areas of activity. The cooperation will be developed through initiatives which bring industry closer to the academia, boosting the exchange of ideas, knowledge and experience, cooperating in common initiatives and also encompassing internships for students of several Engineering and Applied Sciences areas. The Rector of the UMinho, Professor António M. Cunha, and the Chief Executive Officer of Brisa Innovation and Technology, Eng. Jorge Sales Gomes, signed the agreement protocol in a public ceremony.

Following the signature ceremony, the monthly meeting of the Transport Ecosystem Workgroup of the ITS Portugal Association took place. To open the meeting, the former Dean of the EEUM, Professor Paulo Pereira, presented the competences of the EEUM in the framework of the activity of the Transport Ecosystem.

The ITS Portugal Association was created bearing in mind the promotion of Intelligent Transport Systems and Services. The Transport Ecosystem constitutes a forum to boost the capacity of creating value in Portugal, contributing to the sustainability of the national economy. This Workgroup gathers members from a very representative group of public and private entities, namely very relevant national companies and institutions from the national scientific and technological system.

Awards

Researcher from Centre Algoritmi wins Microsoft Imagine Cup Portugal

Ana Ferraz, holding an MSc in Bioinformatics and currently PhD student in Electronics and Computer Engineering at the EEUM, won the national final of the Imagine Cup, the largest worldwide technology competition for higher education students. The researcher of the Centre Algoritmi of the EEUM surpassed more than 200 competitors and will now represent Portugal in the world final of the competition, in Saint Petersburg (Russia), from the 8th to 11th July. The winning project, named "For a Better World", consists of a portable device which allows determining the blood group in less than five minutes by using image processing techniques. The instrument is fast, low cost, simple and easy to transport, being therefore very useful in medical emergency situations, reducing the risks of incompatibility and human error, namely in blood transfusions. The results can also be easily shared with hospitals and laboratories.

PhD thesis granted Honourable Mention

Luís Jorge Lima Ferrás, researcher from the Institute of Polymers and Composites (IPC) of the EEUM, has been granted an Honourable Mention, approved unanimously, during the competition "Best PhD Thesis in Applied and Computational Mechanics" organised by the APMTAC – Portuguese Association for Theoretical, Applied and Computational Mechanics. The awarded thesis, entitled "Theoretical and numerical studies of slip flows" was developed in the framework of the PhD Programme in Polymer Science and Engineering. The project was co-ordinated by Professors João Miguel Nóbrega (IPC) and Fernando Tavares Pinho (Centro de Estudos de Fenómenos de Transporte da Faculdade de Engenharia da Universidade do Porto).
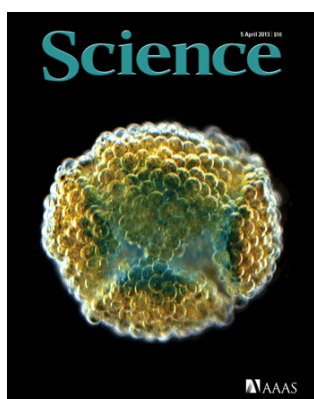
3B's researchers finalists of the European Inventor Award
Amsterdam, The Netherlands, 28th May

The project "Process of expanding cork through microwave radiation", which involves researchers from the Research Group on Biomaterials, Biodegradables and Biomimetics (3B's) of the EEUM, from the company Corticeira Amorim, from the Polytechnic Institute of Lisbon and from the Technical University of Lisbon, has applied to the European Inventor Award with a patent. The award is granted by the European Patent Office. The national research project allows increasing the volume of cork through microwave radiation, in a low cost and ecological process. The research project which originated this patent has been developed during the six years in which Professor Rui Reis, Director of the 3B's, directed the DNAPC – Department of New Applications/Products in/with Cork – of the company Corticeira Amorim SGPS. The project combined previous research results with a strategic investment on developing methodologies for expanding the volume of cork whilst maintaining its main properties.
The patent is considered "an example of excellency" of the co-operation between universities and industry. The Portuguese technology is running against other 14 candidates and is included in the top three projects of the "Industry" category. The European Inventor Award will be granted on the 28th May.

CEB publishes article on SCIENCE

Alfons Stams, invited researcher of the Centre for Biological Engineering (CEB) of the EEUM and professor at the Wageningen University (The Netherlands), has recently published an article on Science Journal.

The paper, entitled "Archaeal perchlorate reduction at high temperature", counts on the participation of other researchers from the UMinho, the UWageningen and Shell Global Solutions.

Perchlorate is manufactured for the use in rocket fuels and fireworks, but it also occurs naturally on Earth and on Mars. Microorganisms, mainly proteobacteria, that use perchlorate as electron acceptor have been described. These bacteria degrade perchlorate first to chlorite, which is then dismutated to chloride and molecular oxygen. The authors found that Archaeoglobus fulgidus, a hyperthermophilic sulfate-reducing archaeon, is able to use perchlorate as terminal electron acceptor. The proposed pathway of perchlorate reduction in A. fulgidus relies on an interplay of abiotic and biotic redox reactions involving inorganic sulfur compounds. Based on these findings the authors speculate that the diversity of perchlorate-reducing microorganisms is much broader than estimated so far.

Innovative payment method through Smartphones application

The UMinho, in co-operation with several companies, banking entities and mobile phone operators, has created an app for Smartphones which allows the customer to process payments without using credit cards or money. The project entitled "MobiPag – National Initiative for Mobile Payments" aims at developing a solution for the dematerialization of payments in the form of communication through personal mobile phones. The mobile phones work as payment terminals operable with several national economic and mobile communications agents.

A national pilot demonstration of the mobile payment system is being developed, which will be able to work both national and internationally. Rui João Peixoto José, professor from the Department of Information Systems (DSI) and researcher of the Centre Algoritmi of the EEUM, is the lead researcher of the project.

Bridging Book app redefines the concept of reading

The engageLab, a laboratory located at the Centre for Computer Graphics (CCG) of the UMinho and an ad-hoc Research Group of Centre Algoritmi, has developed the app "Bridging Book", altering the concept of reading and matching two different reading supports. By using this application, the reader can now read the same book in paper or virtual support, as both are complementary. Through a smartphone or tablet, the reader can now access multimedia content whilst going through the paper pages of the book. The paper version of the book is placed side by side with the device and the content is synchronised. When the reader moves the paper book pages, the content on the screen follows the content on paper. The main goal is to create a dynamic paper content through interactive dynamic content. The synchronisation is achieved through small magnetic pieces which are embedded in the paper book pages and are detected by the application.

Underwear for Urinary Incontinence

Urinary incontinence is a problem which affects around 600 thousand Portuguese citizens, especially women. The company Impetus, in partnership with researchers from the UMinho, created a collection of underwear for patients of this condition. As the disease influences the well-being, the hygiene and daily activities, as well as the self-esteem of patients, the main goal of the product is to improve the well-being and self-esteem of the affected patients. Raul Fangueiro, professor from the Department of Civil Engineering (DEC) of the EEUM and researcher from the Centre for Science and Textile Engineering (2C2T) of the EEUM, is the head researcher of this project.

Applications

More...