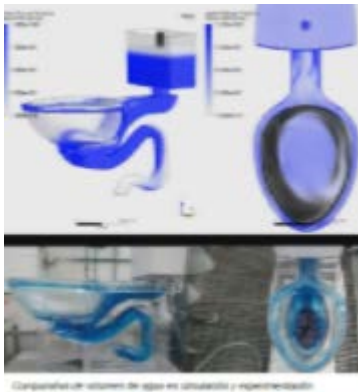




CIT UPC CENTERS



SIMULATION OF FLUID DYNAMICS IN SIPHONIC TOILETS

The Centre for Industrial Diagnostics and Fluid Dynamics ([CDIF UPC](#)) has collaborated with [Roca](#) to validate a model of fluid dynamics simulation for toilets. The project had two objectives. The first was to demonstrate that simulation is a valid model with results similar to those obtained by experimentation. The second was to use a toilet that is already on the market to analyse and compare alternative siphon geometries that would improve the features of a standard toilet, using previously defined parameters (biphasic behaviour of the flow -water and air-, depression variations, jet flow volume, turbulence model, length of the process, among others). This numerical simulation model leads to considerable cost savings in the siphon design stage.



PRESENTATION OF THE NEXOS PROJECT RESULTS IN LONDON

On 15–17 March, “[Oceanology International 2016](#)” took place in London; the biggest oceanographic instrumentation event worldwide, which was attended by over 8,400 professionals from 82 countries. The Technological Development Centre of Remote Acquisition and Data Processing Systems ([SARTI UPC](#)) presented the results of the [NeXOS](#) project on acoustic sensors for studying the different noises generated by the ocean, and optics designed to determine the composition of the water. NeXOS is a European Project to develop new integrated multifunctional sensor systems that are cost-effective, innovative and compact, for an ecosystem approach to fisheries. The project involves 21 partners from 6 European countries, and will end in September 2017.

4th EDITION OF THE GRAPH-TA WORKSHOP

The Data Management group ([DAMA UPC](#)), together with the [LARCA](#) group at the UPC, organized the fourth edition of the [Workshop Graph-TA](#), which brings together



researchers to present and discuss the latest results in graph research. The workshop was attended by international experts from the fields of databases and information management technologies, pattern recognition and algorithmics, as well as representatives of organizations who use graphs to model their applications and represent information. The keynote speech this year was given by Dr. Peter Boncz, from the database architecture research group at the [Vrije Universiteit Amsterdam](#). He was the architect of well-known systems such as [MonetDB](#), and has participated in the creation of several spin-off companies for technology transfer from the University.

CIT UPC ACTIVITIES

KICK-OFF MEETING FOR THE SCIENCE2SOCIETY PROJECT

The kick-off meeting of the Science2Society European project was held in Leuven (Belgium) on 8 March. CIT UPC took part as a notable member. The project will look at good practices for technology transfer between universities, companies and society, and materials will be created so that those involved can improve these processes. On the basis of seven practical cases, the real experiences of science and industry professionals will be combined with theoretical frameworks, and will then be analysed to identify potential improvements, using methods such as design thinking, process reengineering, or change management. Finally, the results will be disseminated to obtain the greatest impact and make these good practices available to all stakeholders at European level. The project has 18 members, including major companies such as [FIAT](#), [Atos](#) and [CA Technologies](#) and leading research entities in Europe such as [KU Leuven](#), [Karlsruhe Institute of Technology](#), [Aalto University](#) and [Fraunhofer](#).



WORKSHOP OPEN INDUSTRIAL DAY: "COMPOSITES IN THE AUTOMOTIVE INDUSTRY"

The [SEAT-UPC Chair](#) organized a workshop on 10 March entitled "*Composites in the automotive industry*". The aim was to reflect on the applications of composites in the automotive world. Innovations in the mechanical and thermal properties of these materials were presented, along with modelling and test capacities, the process of manufacture, expected costs, and how all of these aspects meet the needs of the sector. In addition, new concepts such as hybrid and ultra-thin composites were introduced. Dr. Pedro Díez opened the session, and participants included Dr. Pedro Camanho, from the [University of Porto](#), who is a member of the Council for the European Society for Composite Materials ([ESCM](#)) and the Engineering Panel of the European Research Council ([ERC](#)).



The SEAT-UPC Chair is directed by Dr. Pedro Díez and CIT UPC is responsible for its technical coordination.

THIS MONTH ON THE CIT UPC BLOG...

ENERGY HACKERS ARE ON THEIR WAY

The power generation costs of photovoltaic systems have dropped in recent years and are still falling. Lazard, a consultancy, calculated that at the end of 2014 in the USA the Levelized Cost of Energy (LCOE) was 180-265\$/MWh for domestic installations and 126-177\$/MWh for installations in businesses and industry. [...] [+Read more.](#)



CALENDAR



Apr
13-14



Apr
25-28

acusti.cat
1r Congrés Català d'Acústica.
28+29/04/2016-Sabadell

Apr
28-29

INFORMATION OF INTEREST

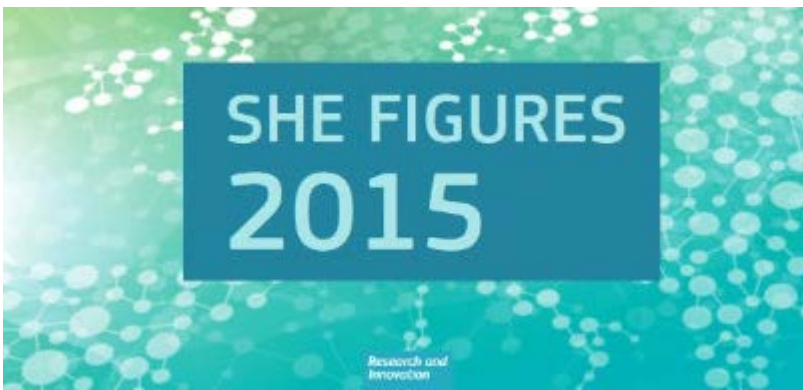
SHE FIGURES 2015 REPORT

The European Commission has published the initial results of [She Figures 2015: Gender in Research and Innovation](#) on the state of gender equality in the European research and innovation area. The study provides data on the proportion of female researchers in leading academic positions (that are very low in general terms), and the representation of women in decision-making positions, either at the head of universities or as members and directors of research committees at national level (in 14 countries, women held less than 40% of these positions). Despite these indicators, there are signs of progress among higher education graduates, although the proportion of women in engineering, manufacture and construction remains low (28%).

DID YOU KNOW...

FIRST VOICE TRANSLATOR FOR THE EUROPEAN PARLIAMENT

The Center for Language and Speech Technologies and Applications (TALP UPC), together with the TC-STAR consortium, created the first prototype of a voice translator for the European Parliament in 2006. This could be used for automatic translation between the official languages of Spanish and English, without the need for a simultaneous interpreter. This was the first translation project in which real voice data were used instead of laboratory data. Tests were carried out to assess the comprehension and retrieval of information provided by the system, and the results were similar to those obtained using professional interpreters.



CALL FOR REINDUSTRIALIZATION AND STRENGTHENING OF INDUSTRIAL COMPETITIVENESS

The Ministry of Industry, Energy and Tourism has announced a call for [Reindustrialization and Strengthening of Industrial Competitiveness](#). The aim is to encourage the establishment of new industrial facilities (either due to relocation, newly created industries or an increase in production capacity), and promote industrial competitiveness (improve or alter existing production lines). In total, a total of 757.5 million euros will be awarded to the private business sector in loans with a 10-year repayment period, an interest rate between 1.7 and 4%, and a three-year grace period. The call will open on 18 April and close on 1 June.



FOURTH CALL FOR THE INDUSTRIAL DOCTORATES PLAN

The Government of Catalonia has announced the [fourth call for the Industrial Doctorates Plan](#). A new feature this year is the provision of grants for foundations, non-profit and public sector organizations, to extend the call to research and innovation in the social sciences, arts and humanities. In addition, a new mode has been introduced for collaboration with companies whose headquarters are located in any country in the European Union.

The Industrial Doctorates Plan is designed to promote the development of strategic research projects within companies, where doctoral students will continue with their research training in collaboration with the university, leading to the preparation of a doctoral thesis.



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