QUIETER NEONATAL INTENSIVE CARE UNITS

The Language and Speech Technologies and Applications Centre (TALP UPC), in collaboration with the Hospital Sant Joan de Déu (HSJD), has taken part in a study of noise generated in Neonatal Intensive Care Units (NICU). Some noises could affect the neural development of premature infants, depending on their intensity and probably also on the type of sound. In NICUs, there are three main kinds of noises: voices and other vocalizations (for example crying); alarms on monitoring equipment, and other sounds such as those produced by oxygenation, ventilation or the telephone. Some of these noises could increase newborns’ stress and have a negative impact on their rest and sleep. Other noises, such as parents’ voices, could have the opposite effect.

In the study, audio signals were recorded in the NICU at the HSJD. They were then classified and processed using automatic learning techniques to develop systems for detecting specific sounds, such as alarms and vocalizations. The results were correlated with physiological variables to observe the effects of sounds on the registered newborns. The data should contribute to the design of spaces, equipment and protocols that significantly reduce the exposure of newborns to damaging sounds.

COLLABORATION WITH SEAT TO DEVELOP THE PARKFINDER APP

inLab FIB UPC has collaborated with SEAT to develop the Parkfinder prototype, a mobile application that can be integrated with the Infotainment system of SEAT vehicles that have MirrorLink installed. The app can be used to find parking places, using information provided by the iCity platform developed in a European smart city project.

Using a standard application program interface for various cities, users can consult data in real-time, such as the availability of parking places (for example, in the green
and blue zones). Once a user has selected a destination, the prototype communicates with the car’s navigation system to provide real-time information on the estimated time of arrival and approximate distance to the selected zone. To ensure that it is safe to use the app when driving, a user interface has been developed that meets the requirements of Distracted Driving Laws.

The prototype has been tested successfully in the Les Corts neighbourhood of Barcelona, and was presented as an example of an iCity project at the last Smart City Expo World Congress 2015.

**PRESENTATION OF INITIAL RESULTS OF THE FLEXICAST PROJECT**

In Vic (Barcelona), the first results were presented of Flexicast, a European project in the Seventh Framework Project, led by the Hydraulic and Pneumatic Systems Laboratory (LABSON UPC). The aim of the project is to introduce technological innovation in smelting processes, based on a new method that integrates the different stages in the processes of producing cast iron. Particularly notable initial results of the DEMO activity, which accounts for 50% of the total budget, were the design, construction and operation of a flexible cell for smelting and casting, and automatization of different production stages.

The results were presented in Roda de Ter, in the headquarters of the Grup Roquet, which is responsible for validating at industrial level all of the methods and prototypes that are developed. The event was attended by the fourteen project participants.

**SYMPOSIUM "CHALLENGES IN URBAN MOBILITY"**

On 16 November, “CHALLENGES IN URBAN MOBILITY” was held; a symposium organized by the Universitat Politècnica de Catalunya (UPC) and the Technische Universität de Braunschweig. The event was sponsored by CARNET and the NFF and attended by over 100 people. CARNET is a strategic project promoted by the UPC, Volkswagen Research and SEAT to develop collaborative projects related to future urban mobility. Industrial partners in the project include Altran, Applus Idiada, Ficosa, RACC and Rücker Lypsa.
In addition to experts from the UPC and TU Braunschweig, participants in the symposium included international experts from KTH Stockholm, Aalborg University, TU Clausthal Technical University Prague, TU Crete, representatives of companies such as the Volkswagen Group, Airbus, Scania, the Royal Automobile Club Catalonia (RACC), and institutions such as Fraunhofer IESE, and the German Aerospace Centre DLR. New proposals were presented in the areas of connectivity, mobility concepts and services, and urban planning related to the global challenge of improving mobility in our cities.

THE UPC AT THE SMART CITY EXPO WORLD CONGRESS 2015

The UPC, through its Technology Center, took part in this year’s edition of the Smart City Expo World Congress, where it presented smart city technologies developed at the University. On the stand, information was also available on advances in robotic solutions for smart cities, obtained in the Echord++ project, and on the course offerings of the UPC School in this field. Dr. Jaume Barceló (from inLab FIB UPC) and Dr. Roberto Villafañila (CITCEA UPC) participated in activities in Speaker’s Corner on urban mobility, and solutions for public space and infrastructure, respectively.

Dr. Pau Fonseca from inLab FIB UPC was a speaker at the Congress, with a talk on sustainable cities and innovative urban planning. Rosa Maria Martín and Dr. Manel Medina, who are also both from inLab FIB UPC, chaired talks on new technologies for social well-being and the creation of technologically safe cities, respectively.

CIT UPC AT THE SCIENCE | BUSINESS ANNUAL SUMMIT

CIT UPC attended the Science|Business Annual Summit 2015, held in Barcelona on 20 November. The meeting was attended by important academic, industry and political representatives, to discuss how to stimulate and promote technology innovation in Europe. At the summit, a declaration was made that highlights the importance of research and innovation to face climate change and obtain sustainable growth.

El Dr. Josep Lluís Larriba, director of DAMA UPC, took part with a talk entitled “The future of urban mobility”, as part of the presentation of new ideas to attain sustainable growth.
RECOGNITION OF "ENTREPRENEUR OF THE YEAR" FOR DAMA UPC

The Data Management Group (DAMA UPC) was recognized as entrepreneur of the year 2015 at the Academic Ceremony of the Barcelona School of Informatics (FIB), held on 26 November. During the event, which was attended by over 400 people, graduates from academic year 2014-2015 were presented with their degree certificates, and staff with over 25 years of dedication, the best academic record, and the best bachelor’s degree final project were recognized as well.

WILL WE BE LEFT BEHIND?

There are three pillars of university activity: teaching, research and technology transfer. Of these, the third is probably the least known and generally the least valued and least promoted by public bodies and the university structure itself. [...] +Read more.

THE UPC, AMONG THE 30 BEST UNIVERSITIES IN THE WORLD THAT ARE UNDER 50 YEARS OLD

On 24 November, the ranking QS Top 50 under 50 was published, with the Universitat Politècnica de Catalunya (UPC) situated among the 100 best universities in the world that are under 50 years old. The current position of the University is at number 28: up 15 places on last year’s edition. In addition, the UPC remained the top Spanish technical university. The higher position of the UPC in the Top 50 under 50 corresponds with its general improvement in the last edition of the ranking, as it moved from 337th to 299th position.

IMPACT OF NOISE AND VIBRATIONS FROM THE TRAMBAX

The Laboratory of Acoustics and Mechanical Engineering (LEAM UPC) carried out a study of the impact of the noise and vibrations caused by the Trambaix at the Pont d’Esplugues station, in Esplugues de Llobregat (Barcelona). The study was commissioned by the Esplugues City Council in 2004, the year that the tram was opened.
MOBILITY GRANTS: 2015-16 CALL

The Barcelona Economic Society of Friends of the Country and the Barcelona Foundation of Friends of the Country, in collaboration with Don Javier Godó, Count of Godó, and the La Caixa Foundation, is awarding grants to teaching and research staff, as well as doctoral students associated with universities and research centres (CREA) from Catalonia, to spend three months abroad in research centres and universities, in order to promote the development of research and teaching in Catalán universities. The call will be open until 18 December.
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