

THE MONTHLY LIST

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STEP BY STEP TOWARDS THE CHAMPIONS LEAGUE

With over 75 doctoral researchers, LIST represents a real talent pool for future researchers, developers and industry specialists. Thanks to its constantly increasing importance for the economy, the institute is today an internationally attractive employer, whose researchers work in a number of sought-after niche areas at a world-class level.

Research, development and innovation are of vital importance for a country's competitive standing. Therefore, the Luxembourg government has made substantial financial resources available to promote research. Among others, these are managed by the Luxembourg National Research Fund (FNR), the main financial backer for young researchers in Luxembourg. Training and teaching at university level is provided initially at the University of Luxembourg, where fundamental research is also carried out. In the area of applied research, which translates scientific knowledge to the needs of industry, the Luxembourg Institute of Science and Technology (LIST) is a nationally and increasingly even internationally respected institution.

As a Research and Technology Organization (RTO), whose mission lies in technology transfer, LIST stands for partnerships both in industry and with public institutions. LIST sees its function in the acquisition of new scientific knowledge and its development catering to the needs of private enterprises and the common good.

By 2023, about half the doctoral researchers at LIST will work in two so-called Doctoral Training Units (DTU), as well as in the framework of the FNR's Industrial Partnership Block Grant Project. Three team leaders at LIST presented their respective research projects to the Luxembourgish Wort in an informal discussion:

Headed by Dr Laurent Pfister, the Hydro-CSI water project regroups 14 doctoral candidates and aims at developing technological tools that make it possible to have reliable predictions concerning the rise and course of water. The 50-million-euro, 5-year-long project between LIST and Goodyear, Luxembourg's most expensive research project ever, counting 28 PhD researchers by 2018, was presented by Dr Sylvie Fromentin. The project aims to develop new standards for the international tyre industry by optimizing tyre materials. In contrast to the European Hydro-CSI project and the public-private partnership with Goodyear, Massena is a 100% Luxembourgish joint undertaking between LIST and the University of Luxembourg. It is led by Dr Emmanuel Defay and Prof. Siebentritt from the University of Luxembourg with the aim to develop new materials for autonomous sensors and their energy recuperation used in smartphones, automobile industry and modern computers. (published in German in the Luxembourgish Wort on 27/10/2017)

Picture from left to right: Project coordinator Dr. Sylvie Fromentin and DTU leaders Dr Laurent Pfister and Dr Emmanuel Defay (Luxembourg Institute of Science and Technology)

OTHER HIGHLIGHTS



Industry

TETRAPAK, GOODYEAR, ARCELOMITTAL AND PAUL WURTH TESTIFY TO LIST'S EXPERTISE IN DATA ANALYTICS

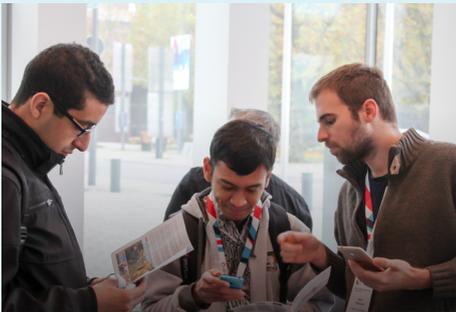
On 24 October 2017, LIST showcased its work in data-driven value creation for companies, in a workshop on Industry 4.0 organised by FEDIL and Luxinnovation at the Chamber of Commerce in Luxembourg. The event focused on data analytics in concrete industrial applications, and gathered around 30 participants including representatives from LIST's collaborative research partners ArcelorMittal, Tetra Pak, Paul-Wurth and Goodyear.

In a hands-on workshop, the partners presented case studies of their projects with LIST, showing how data analytics helps them transform and improve manufacturing processes, cost structures and overall productivity. The workshop was led by Prof Jorge Sanz from LIST, Luxembourg's prime expert in business analytics, who commented on the respective projects with their challenges and outcomes. [Learn more on www.list.lu](http://www.list.lu)

Scientific excellence

LIST'S RESEARCHER DR CHRISTIAN PENNY HONORED AT FNR AWARDS 2017

Dr Christian Penny, Research and Technology Associate in environmental microbiology at LIST, has been awarded the 'Outstanding Promotion of Science to the Public Award' for the activity: "What do we bring home from school?", at the FNR Awards 2017 that took place on Friday 27 October 2017 in Belval (LU). Dr Penny's main public outreach activity, carried out together with Camila Hurst, a student from the European School in Luxembourg City, focused on analyzing the diversity of bacteria and the related health risks in a school environment. From the research, the team found out how bacteria spread in public spaces, and they also discovered what kind of surfaces are usually more contaminated with potentially harmful microorganisms. [Learn more on www.list.lu](http://www.list.lu)



Smart cities

A MOBILE APP FOR EXPERIENCING CULTURAL HERITAGE

On 26 October 2017, LIST organized the seminar "When ICT meets Cultural Heritage" at the Belval Innovation Campus (LU) in the framework of its activities in IT for Innovative Services (ITIS) as part of the European research project CrossCult. At the seminar, the beta version of a smart city application was presented which aims at disseminating cultural heritage thanks to new technologies, and at helping people better understand, reflect and discuss national and European culture and history. The event brought together Luxembourgish institutions linked to tourism and culture, such as the Luxembourg City Tourism Office, the National Center of Audiovisual Arts, the Fonds Belval and national museums, expressing their interest for the new application. [Learn more on www.list.lu](http://www.list.lu)

Event

REGISTER NOW! AT THE LIAB AWARD GALA, LIST PRESENTS HOW AVOCADOS COULD HELP FIGHT CANCER

On the 23 November 2017, LIST will host its first International Award in Bioinnovation (LIAB Award) at the Halle des poches à fonte in Belval (LU). The award ceremony will honour international ground-breaking research in the domains of bioavailability of nutrients, nutrient transport and nutrient effectiveness on a cellular level. Paul Spagnuolo, the winner of the LIAB Award 2017, has discovered avocado-derived lipids can selectively target and eliminate leukemia stem cells. This research has received international attention and represents a major scientific and medical advance. The event is for invited guests only. Recipients of the Monthly LIST can attend by writing an email to: liab-award@list.lu



WHERE TOMORROW BEGINS

Located in the heart of Belval's Research & Innovation Campus, LIST can ideally connect its over 600 specialists in materials, environment and IT, including its many PhD students, through a broad range of joint research projects, programmes and partnerships with virtually all of Luxembourg's other major research players. At Belval, the University of Luxembourg, LIH, LISER, Technoport, Luxinnovation and the Luxembourg National Research Fund are all literally within arm's reach.

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