



**OUR 2019
HIGHLIGHTS**



MAJOR ACHIEVEMENTS



DECISIVE REINFORCEMENT OF THE MULTI-INSTITUTIONAL BASE MODEL

The University of Trás-os-Montes e Alto Douro and the University of Minho became associates of INESC TEC in 2019, reinforcing the institute's ability to provide a cohesive and collaborative ecosystem to researchers from multiple Higher Education Institutions, while strengthening the ties between academia and society.

A DECADE OF CONTINUOUS GROWTH

In 2019 INESC TEC consolidated a decade of continuous expansion, contributing to the competitiveness of the economy and benefiting society. The balance between different funding sources at the institute was successfully maintained in the portfolio of 338 R&D projects, underlying a turnover of about 18 M€, with an annual growth of 3%.

LEADING PARTICIPATION IN EUROPEAN R&D

INESC TEC consolidated in 2019 as one of the top five Portuguese organisations in net contribution and participation in Horizon 2020. With 34% of project funding coming from European projects, during the year the institute further strengthened its involvement in the European Knowledge and Innovation Communities, coordinated and saw approved several large European project proposals, it was actively involved in the creation of INESC Brussels Hub, the joint representation of the five INESC institutes near the European Institutions.

A 17% INCREASE IN THE NUMBER OF ARTICLES IN INDEXED JOURNALS

In 2019 the numbers of indexed journal and conference papers reached 369 and 410, respectively. The total number of papers increased 17% and the number of papers published in first quartile (Q1) journals (according to SCOPUS) increased 3%, in line with a higher focus on indexed journal publications.

SOLID KNOWLEDGE TRANSFER POSITION

INESC TEC was among the top five Portuguese applicants to European patents in 2019. The institute also filed 16 national applications in geographies such as the U.S., Canada, Japan, China, South Korea, and Australia, strengthening the internationalization of its patent portfolio. Four patents were also granted, in the U.S., Japan, China, and Europe. Two spin-offs, Keyruptive Technologies (Software security/Fintech) and Insignals Neurotech (Medtech), were launched, and three others gave major steps in their initial developments: iLoF (Medtech, digital health), UNEXMIN Georobotics (Geological consulting), and WeSENS (Medtech). A successful exit in LTP Labs was also accomplished in 2019. Throughout the year, more than 200 highly qualified human resources (26 PhDs) were transferred to the labour market. Revenues from R&D services and consulting remained strong, at approximately 3 M€.



KEY ACTOR IN PUBLIC POLICY

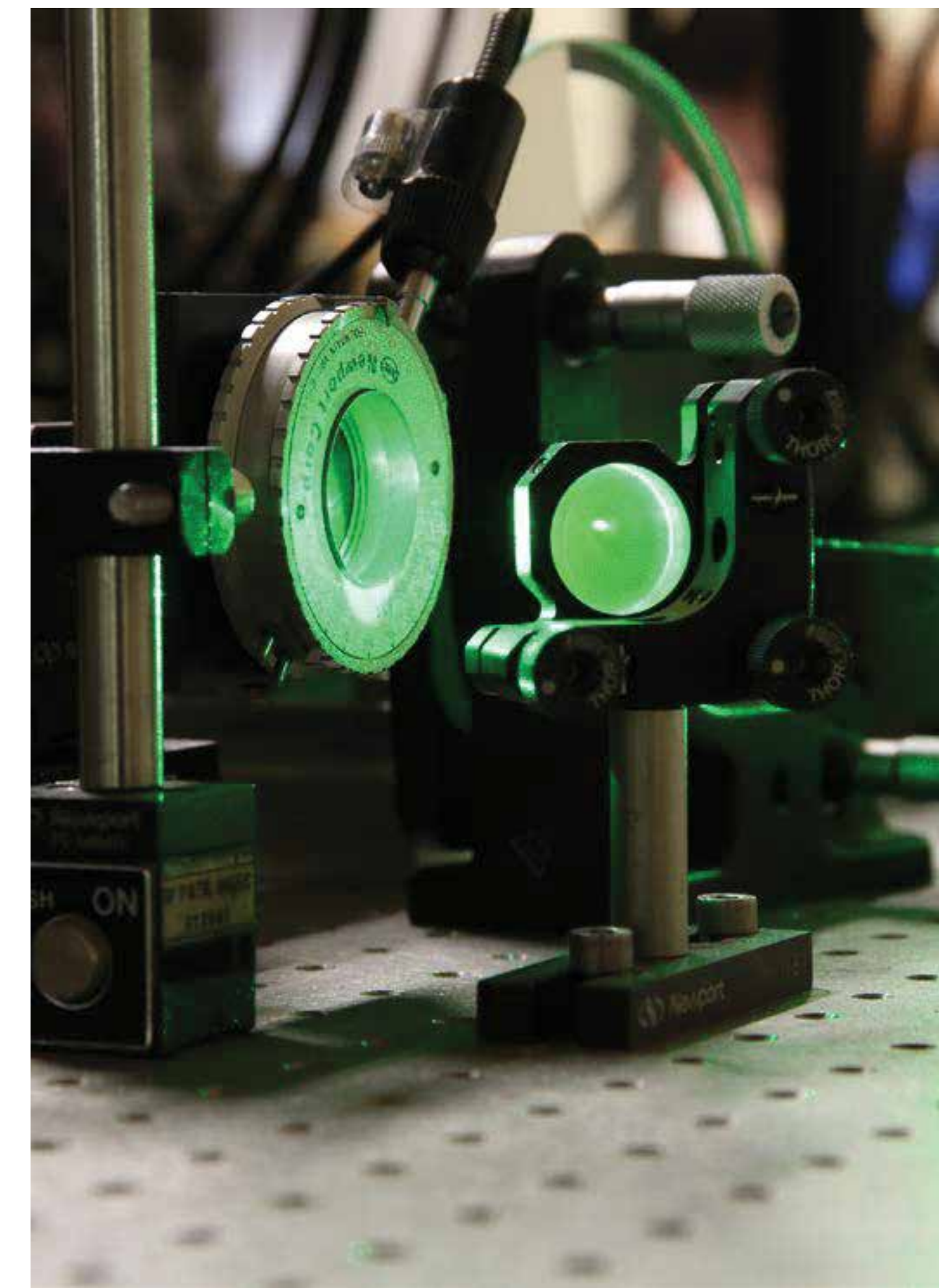
The institute was actively involved during 2019 in providing contributions to administrative simplification in the area of Science and Technology at a national level and was actively involved in the update of the regional and national smart specialisation strategies in the institute's areas of expertise. INESC TEC also formally joined or helped establish five national Collaborative Laboratories (CoLABs): B2E (Blue Economy), BUILT (Future Built Environment), CSESI Hub (Smart Energy Services Innovation), VG CoLAB (Vasco da Gama - Energy Storage) and Vortex (Cyber-Physical Systems and Cyber Security), in addition to the initial leadership of ForesWise (Forest and Fire Integrated Management), and active participation in Vines&Wines.

ONE OF THE LEADING PORTUGUESE ORGANISATIONS IN SCIENTIFIC EMPLOYMENT

Hosting over 700 integrated researchers, 341 with a Ph.D. degree, at the end of 2019, INESC TEC's core research team continued to change significantly along the year. In particular, in line with the national policies for scientific employment, the number of R&D employees increased 19% to 121 researchers holding work contracts.

A STEP OF STRATEGIC IMPORTANCE IN BRIDGING ACADEMIA AND INDUSTRY

In 2019 INESC TEC opened "iiLab - Industry and Innovation Lab", an infrastructure aimed at facilitating the diffusion of state-of-the-art advanced production technologies through research demonstration, experimentation and advanced training.

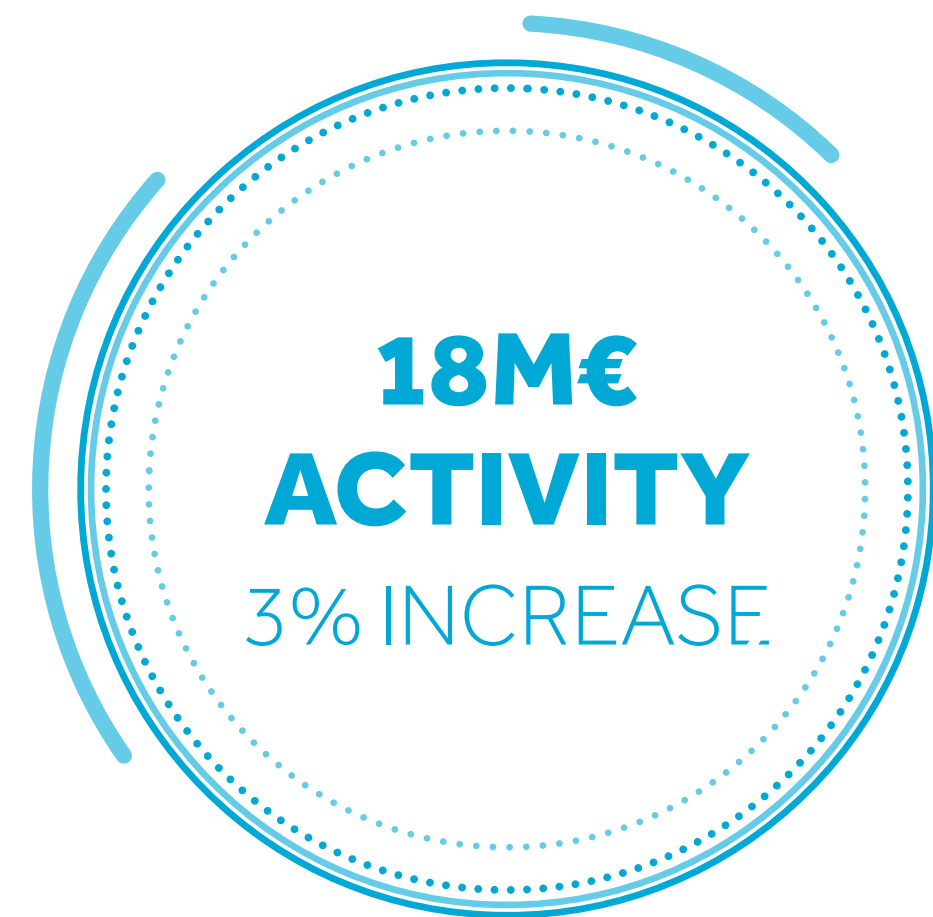




2019 ACTIVITY OVERVIEW



DELIVERING SCIENCE AND INNOVATION

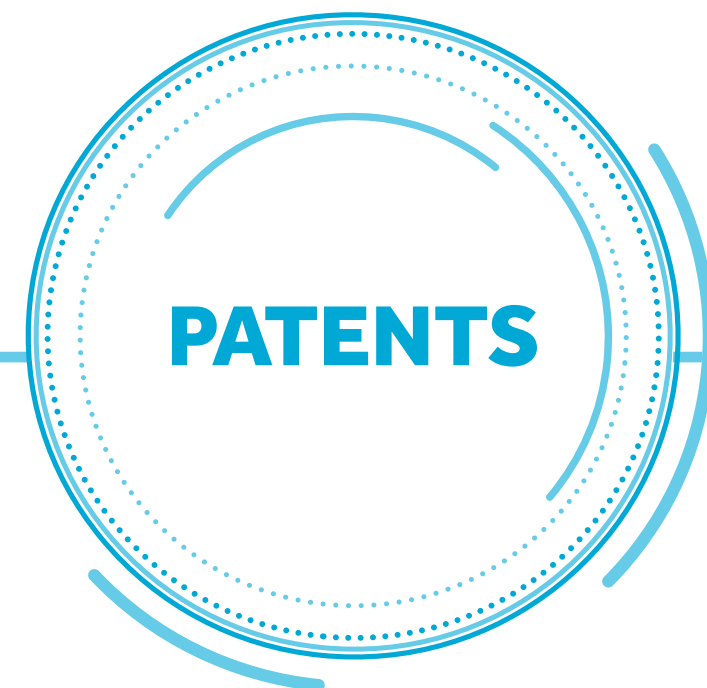


k€

9 437	National Programmes
4 743	EU Programmes
3 300	R&D Services
486	Other Revenues



- 369** Indexed Journals Papers
- 410** Indexed Conference Articles
- 33** Concluded PhD Theses - Supervised



- 28** Patent Applications
- 4** Patents Granted
 - 1st** Patent in China
 - 1st** Software Patent



- ### ACTIVE PROJECTS BY FUNDING SOURCE
- 105** National R&D Programmes
 - 68** EU Programmes
 - 134** R&D Services & Consulting
 - 31** Other Funding Programs



- 54** Conferences, workshops and scientific sessions
organised by the R&D Centres
- 19** Advanced Training Courses Organised
- 75** Editorial Roles in Journals
- 75** Organisation of conferences
in organizing committee or chairing technical committees
- 330** International Events
*with members of INESC TEC partaking
in programme committees*
- 66** Participation in Fairs and Events

2019 ACTIVE SPIN-OFFS

Keyruptive Technologies

Mobile app solution for secure cloud storage and management of digital assets such as crypto currency, using patent pending technology that enables the distribution of trust among multiple entities.

Sectors: Software security / Fintech

<10 jobs created

Ubirider

Develop solutions to make urban mobility smarter and to improve travellers' overall experience. Pick is a universal app which integrates any mobility service for multimodal trip planning and mobile payment of fares.

Sectors: Digital mobility

<20 jobs created

WeSENS

in development

Corporate solutions for security and quantified occupational health approaches to promote worker wellbeing and improve performance, based on a wearable & IoT platform for hazardous professionals' vitals and work environment monitoring.

Sectors: Medtech

iLoF

in development

Leverage machine learning to drastically reduce the cost and time of drug discovery, using a patented photonics and Artificial Intelligence system to identify unique features of various gold-standard biomarkers, capturing their signature on a cloud-based library.

Sectors: Medtech, Digital health

<10 jobs created



Insignals Neurotech

Wearable wireless devices to precisely measure wrist rigidity, helping surgeons place brain implants more accurately during surgery on patients with Parkinson's, epilepsy, and other neural conditions.

Sectors: Medtech

<10 jobs created

MitMyNid

Marketplace to search and compare transport and logistics services with simple or multimodal door-to-door solutions. Intelligent Routing System to search and combine logistics services (air, rail, road, sea) to provide optimized solutions.

Sectors: IT for transport and logistics

<10 jobs created

LTP Labs*

Advanced analytics and business consultancy in Marketing, Sales, Operations and Supply Chain, based on digital platforms.

Sectors: Business consultancy

<50 jobs created

*Successful exit in 2019.

UNEXMIN Georobotics Ltd.

in development

Underwater mine exploration robotic system for commercial mine surveying, exploration and geoscientific purposes.

Sectors: Geological consulting

<10 jobs created



EVENTS AND VISITS



INESC TEC AUTUMN FORUM

"Digital (R)evolution in Agri-Food and Forestry"

Regular and thematic event organised by INESC TEC | 200 participants
The 2019 edition was co-organized by INIAV – National Institute for Agrarian and Veterinarian Research

The 5th edition of the Autumn Forum was dedicated to the "Digital (R)evolution in Agri-Food and Forestry". The event gathered nearly 200 participants and several experts and policy makers, in order to promote a debate and come up with ideas capable of addressing the challenges faced by the agri-food and forestry sectors. Maria do Céu Albuquerque, the Minister for Agriculture, and Manuel Heitor, the Minister for Science, Technology and Higher Education, attended the 2019 edition of the event.



SHOWCASING OUR ECOSYSTEM



Deputy Director-General of DG CONNECT

Khalil Rouhana, Deputy Director-General of the European Commission Department DG CONNECT (Communications Networks, Content and Technology), visited INESC TEC and got to know several projects on Energy and Smart Grids and Artificial Intelligence.



Chief of Staff of the Navy

Admiral Mendes Calado, Chief of Staff of the Navy (CEMA), and other members of his delegation visited INESC TEC, in order to establish a relationship between said institution and some of the most recent projects developed in the oceans field.



Ministry of Science of Angola

Domingos da Silva Neto, Secretary of State for Higher Education, Science and Innovation of Angola, visited INESC TEC during the presentation of the roadmap of the Science Week between Portugal and Angola.



Ambassador of the Republic of China

The Ambassador of the People's Republic of China in Portugal visited INESC TEC's MASSIVE Laboratory, an infrastructure that focuses on studying the stimulation of the five senses in Virtual Reality applications. Credits: UTAD



Secretary of State for Energy

The main purpose of this visit was to understand the technical capacity of INESC TEC, namely concerning the support to the implementation of the National Energy-Climate Plan (PNEC2030) and the Roadmap for Carbon Neutrality.



Government of the State of Espirito Santo

The key-objective was to formalise a cooperation agreement for scientific development, technological innovation, entrepreneurship and collaborative work.

SHARING KNOWLEDGE: TRAINING AND PARTNERSHIP



Programa Verão no Campus 2019

The Computation Without Borders, an activity integrated in the Summer on the Campus 2019 programme and organised in collaboration with INESC TEC's High-Assurance Software Laboratory, had the participation of 28 secondary school students and took place in University of Minho.



Encontro Ciência 2019

Encontro Ciência is the annual meeting of Portuguese researchers that aims at promoting a broad debate on the main topics and challenges of the scientific agenda beyond the world of research.



Semana Profissão Engenheiro da FEUP

INESC TEC participated in another edition of SPE (Engineering Week), an annual exhibition organised by Faculty of Engineering of the University of Porto (FEUP).



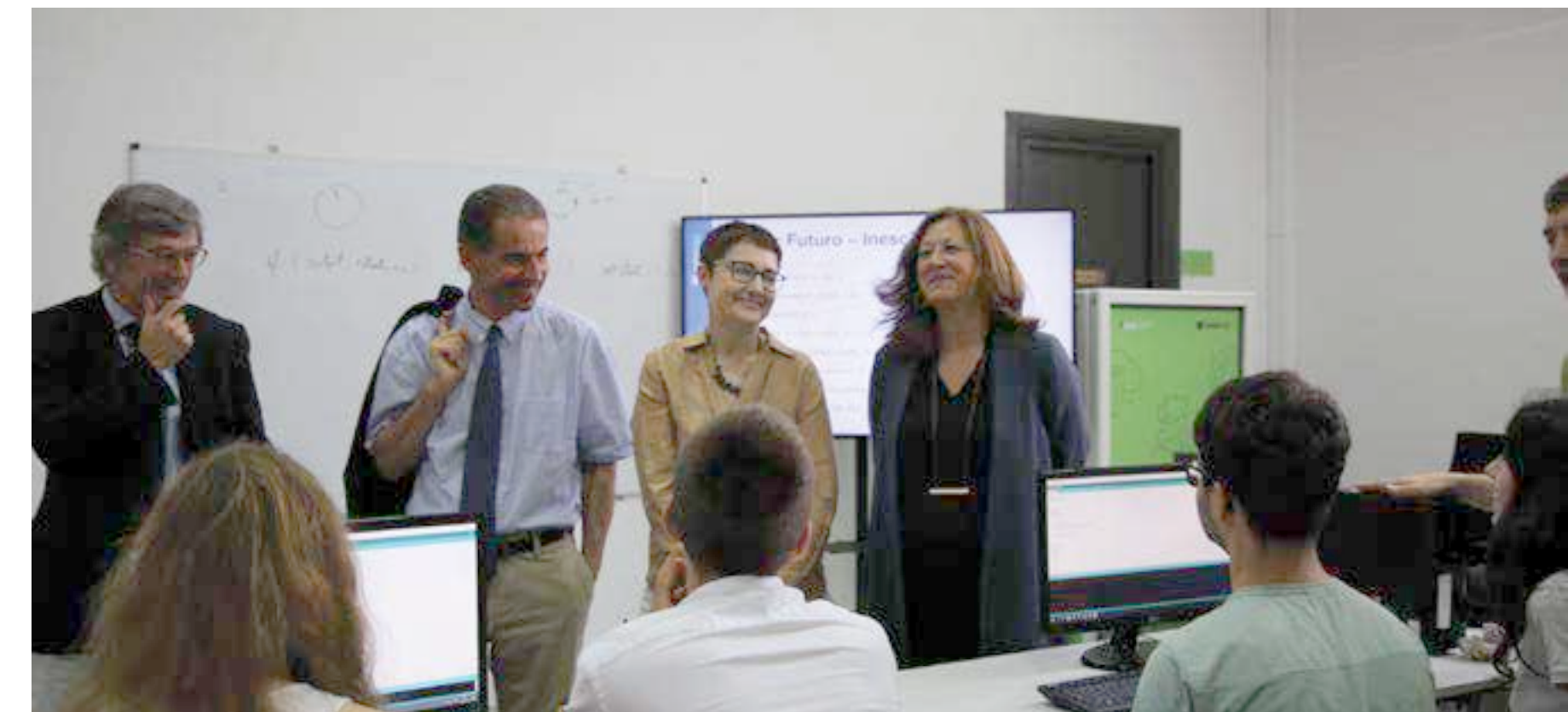
European Researcher's Night

During this annual European Commission initiative, INESC TEC presented an European project UNEXMIN – Exploration and mapping of flooded mines with robots.



Mostra UP

In this event, targeting younger students, INESC TEC presented three demonstrators: "Conta-me Histórias", BEACONING and a wireless power transfer project.



Ciência Viva

In the context of the initiative "Ciência Viva nos Laboratórios - Ocupação Científica de Jovens nas Férias", a new studentship in AI was created. INESC TEC was selected to host the kick-off event of this nationwide initiative – with the presence of the Minister of Science, Technology and Higher Education.

TOGETHER FOR TEAM BUILDING AND NETWORKING



INESC TEC On the Move - Team Building Activities

12 June | City Park | 90 Participants

INESC TEC brought its collaborators to the Porto City Park in order to participate in another team building activity.



INESC TEC on Foot – Hiking activities

11 May 11 | Serra da Lousã | 50 Participants

Lousã was the destination of the third edition of "INESC TEC on foot", an internal initiative that promotes the organisation of hikes across the country.



Strategic Meeting

13 September | Fundação António Cupertino de Miranda | 230 Participants

The success stories of INESC TEC were highlighted in the Strategic Meeting 2019, an event organised to reflect and discuss the institution future.



«Holidays 2019» - Photo Competition

September | 18 Candidates



Welcome Session for new collaborators

13 sessions/year | 140 participants



Roasted Chestnuts Party

13 November | INESC TEC | 150 participants



Multicultural Party and awards-giving ceremony

17 December | INESC TEC | 200 participants