



NEWS

INSTITUTE OF PHYSICS AND AEROSPACE SCIENCES OF THE UNIVERSITY OF VIGO

IFCAE participates in a European project to improve the sustainability and resilience of EU transport and logistics networks

A total of eight countries, including Spain through the Port Authority of Vigo, CEMOSA and a group of researchers from the School of Aeronautical and Space Engineering and the Institute of Physics and Aerospace Sciences (IFCAE), have taken part in an international project aimed at strengthening the logistics and supplies network of the European Union to alleviate various global contingencies, such as the global COVID-19 pandemic or the war in Ukraine.

The project in question is called SARIL and was launched in June 2023, with a planned duration of three years, during which time the eight member nations will carry out various proposals for interruptions in the transportation chain, which can cause serial obstructions, with consequent delays in the deliveries of goods, some of them urgently needed such as medicines and food. The project includes a budget of four million euros, of which 282,000 were allocated to the University of Vigo, and has a total of three scenarios in different geographical areas. The first is regional in scope and focuses on situations at the local level, such as floods and similar weather events that have negative effects on transportation, in addition to cyber attacks. The second scenario contemplates contingencies of a state nature, and again considers climatological phenomena such as forest fires, while the third

and last focuses on the entire Europe and has to do with war conflicts and pandemics. The team from the University of Vigo is led by Higinio González and includes, among others, Raquel Ortega, Fernando Veiga, Gonzalo Durán, Eduardo Ríos and Enrique Aldao. Its intervention focuses on the study of various geospatial algorithms in order to predict disturbances caused by weather. The combination of this data with other forest management and weather prediction algorithms will help to understand in the future how a climate event can affect transport and how to accelerate its recovery.



Map with the three scenarios.



Enrique Aldao Pensado, Eduardo Ríos Otero, Gonzalo Durán Piñeiro, Higinio González Jorge, Fernando Veiga López and Raquel Ortega Hita.

IFCAE directs a European project of the POCTEP Program

At the IFCAE has been settled the reference point for the development of a project between the School of Aerospace Engineering of the University of Minho, in Guimarães (Portugal), and the Rozas Airborne Research Center, in Madrid. With this project, called AeroGanp, the aim is to give a boost to research in the aerospace sector within the scope of the Euroregion, this being one of the three projects that the University of Vigo will lead within the framework of the call for POCTEP program of the European Union, a cross-border initiative within Interreg VI Spain-Portugal. The financing will be 291,925 euros, of which almost 219,000 will be subsidized with Feder funds, with the UVigo proposal as the leader in terms of budget. The consortium led by IFCAE has a total of twelve partners, including the three Galician universities, along with those of Minho and Porto, and several technology centers such as ITG, Gradiant, Inesctec and CEIIA.



Rozas Airborne Research Center

Strengthening ties with the University of Minho

On November 22, the “UMinho & UVigo Research Forum” was held at the Gualtar Campus, Braga. Promoted by the research vice-chancellors of both institutions, the aim is to promote cross-border collaboration between these neighboring universities in different areas of knowledge. Arno Formella and Ángel Paredes, members of the IFCAE, gave brief illustrative presentations on work in the areas of Artificial Intelligence and Aerospace Engineering, respectively. IFCAE currently collaborates with the University of Minho in two international projects, the AEROGANP of the POCTEP program and the SARIL of the HORIZON program.



Arno Formella.



University of Minho.



Gustavo Alexandre Rodrigues Dias (University of Minho) and Ángel Paredes Galán (University of Vigo).

Birth of the Aerolab research group



Higinio González.

Under the name Aerolab (Aerospace & Transportation Systems Laboratory), a new group of researchers was formed on the Ourense campus with the aim of establishing itself as a model in the field of logistics engineering, with a prominent focus in air systems. With Higinio González as principal investigator, the objectives are within the scope of aerospace and transportation systems, considering a great variety of aspects such as advanced mobility, logistics networks, maintenance and resilience of infrastructure, intelligent transportation systems and geoinformation.

Aerolab stands as a multi-disciplinary group made up of researchers from various areas of knowledge (physics, aerospace engineering, systems engineering and computer science), all of them members of the IFCAE and participants in five research projects funded with up to 800,000 euros from the State Agency for Research and Horizon Europe: Higinio González, Fernando Veiga, Eduardo Valvís, Gonzalo Durán, Enrique Aldao, Gabriel Fontenla, Eduardo Ríos and Raquel Ortega.



Members of the Aerolab research group.

Communicate your Science

The University of Vigo held the “Communicate your Science” course on November 27 and 28, an activity focused on enhancing the dissemination capacity of UVigo researchers. The three trainers of the course were Mónica Valderrama, vice-rector of Communication; Benito Vázquez, researcher and disseminator; and Daniel Rey, director of the Marine Research Center. The activity could be carried out thanks to the financing obtained from the Spanish Foundation for Science and Technology (FECYT), an organization that in 2023 tripled its contribution to the known as the Round Trip Science Plan, this being the third time that UVigo obtains this subsidy. The 2023-2024 scientific dissemination calendar started with training activities and will end with a contest for YouTubers. Regarding the activities carried out, one of the most notable is the science fair that is held on April and which in past editions had the support of the Provincial Council of Pontevedra. Furthermore, UVigo has a catalog of talks at institutes that makes it possible for researchers to go to a center and present their activities to students.



Benito Vázquez, Mónica Valderrama and Daniel Rey.

Presentation of AeroGanp at the Galician Innovation Agency

The venue of the Galician Innovation Agency (Gain) hosted the presentation of the AeroGanp project, led by Humberto Michinel, director of the School of Aeronautical and Space Engineering and member of the Institute of Physics and Aerospace Sciences. The event included María Belén Rubio, vice-rector for Research, Transfer and Innovation at UVigo; Patricia Argerey, director of Gain; and Eugénio Manuel Faria Campos, vice-rector for Research and Innovation at the University of Minho. After the presentation ceremony, held in Spanish and Portuguese, four workshops took place where ideas were exchanged in fruitful feedback between researchers from both countries, who at the end of the day fraternized at a lunch held at the event headquarters.



Presentation of the AeroGanp project.



The participants at the end of the presentation.



Galician Innovation Agency.