

IRTA

“ WE SHARE OUR SCIENCE
TO FEED THE FUTURE ”

hr
HR EXCELLENCE IN RESEARCH



**CALL FOR RESEARCH CANDIDATES
TO SUBMIT PROPOSALS
TO THE TECNIO SPRING INDUSTRY GRANT**

About the Grant “TECNIOSPRING”

Develop your professional career in applied research and benefit from top training in technology transfer.

Tecniospring INDUSTRY, ACCIÓ's international talent programme, boosts technology transfer processes by offering R&D companies and centres 2-year employment contracts to host a researcher.

With a budget of 11 MEUR and co-financed by the H2020 Marie Skłodowska-Curie actions of the European Union, Tecniospring INDUSTRY plans to award 72 fellowships for the 2019-2024 period.

About IRTA

IRTA is a research institute owned by the Government of Catalonia ascribed to the Department of Agriculture and Livestock. It is regulated by Law 04/2009, passed by the Catalan Parliament on 15 April 2009, and it is ruled by private regulations. IRTA is one of the CERCA centers of excellence of the Catalan Research System.

IRTA's purpose is to contribute to the **modernization, competitiveness and sustainable development of agriculture**, food and aquaculture sectors, the supply of healthy and quality foods for consumers and, generally, improving the welfare and prosperity of the society.



mission

To contribute to the modernization, improvement and promotion of competitiveness and sustainable development in the Agriculture, Food and Aquaculture sectors, providing safe, quality foods to the final consumer and generally contributing to the global improvement of human welfare.



vision

To become the scientific reference and a force for innovation, and technology transfer. We aim to be the strategic partner of the food industry.agro-foodsector.



values

1. Commitment
2. Creativity
3. Learning
4. Innovation
5. Leadership
6. Respect
7. Service Vocation

Photonics Systems For Food Processing And Quality Control

FOOD TECHNOLOGY

To solve the problems and face the challenges of the food industries, mainly in meat, dairy, fish, fruit and cereals.

ROLE PROFILE

IRTA is currently seeking an experienced researcher, with initiative and leadership ability. Experience on spectral systems and the development and construction of optical sensors will be appreciated, as well as good knowledge on programming on different platforms (for Python, C++, R, pc, PLCs, web, cloud, mobile) for the development and implementation of applications on different platforms.

The position is subordinated to a TECNOSPRING Industry grant (<http://catalonia.com/innovate-in-catalonia/tecniospringplus/>).

DUTIES AND RESPONSIBILITIES

This project aims at developing spectrometer systems tailored to different target food products and to the agro-food companies use, as well as other stakeholders (on-line, handheld miniaturised solutions,...), focussed mainly in the food processing and quality control. To achieve this objective, the researcher is expected to follow this work plan:

[1] Study the interaction between the spectra (vis/NIR/dielectric,...) and the target food products.

The food product to be processed will be selected in collaboration with the companies that already have participated in some similar projects and others that are willing to participate in the project.

[2] Design, development and construction of a spectrometer to be ready for commercialization.

Development of a spectrometer prototype considering the spectral range, state of the food (solid or liquid), particle size and physical properties. Construction and testing of the prototype.

[3] Design, development and construction of a system that allows the communication of the spectrometer to the user through the cloud, as well as other media depending on the end-user.

The spectral data has to be sent to the cloud. A data analysis engine for the calibration of the spectrometer has to run on the cloud. The software and/or applications for the interfaces (smartphones, PLCs, pc,..) that communicate with the spectrometer and with the cloud has to be developed. A final software version ready for commercial use must be available.

[4] Deployment of a spectrometer system in the industry

The system will be deployed at semi-industrial/industrial scale in cooperation with a food company.

REQUIRED EXPERIENCE AND QUALIFICATIONS

[1] Experienced researchers are researchers of any nationality that have a PhD (and two years of post-doct experience), or four to eight years of full-time equivalent research experience. Researchers must not have resided or carried out their main activity in the country of their host organization for more than 12 months in 3 years immediately prior to the deadline for the submission of applications. Exceptions will be made for candidates with justified career breaks

[2] English or Spanish speaking

TERMS OF APPOINTMENT

Experienced researchers will benefit from 2-year employment contracts including:

- Gross income: about 58.500 € per year.
- Research costs: Up to 15.240 € per year.
- Mobility costs: Up to 1.960 € per year.

Please, send an e-mail to Dr Josep Comaposada (josep.comaposada@irta.cat) attaching your CV and a motivation letter before the **November 10, 2020 (included)**.