



HÉLIO SPIR 2021  
29<sup>th</sup> to 30<sup>th</sup> June 2021



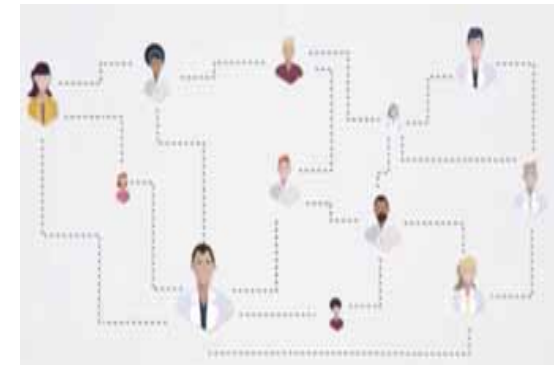
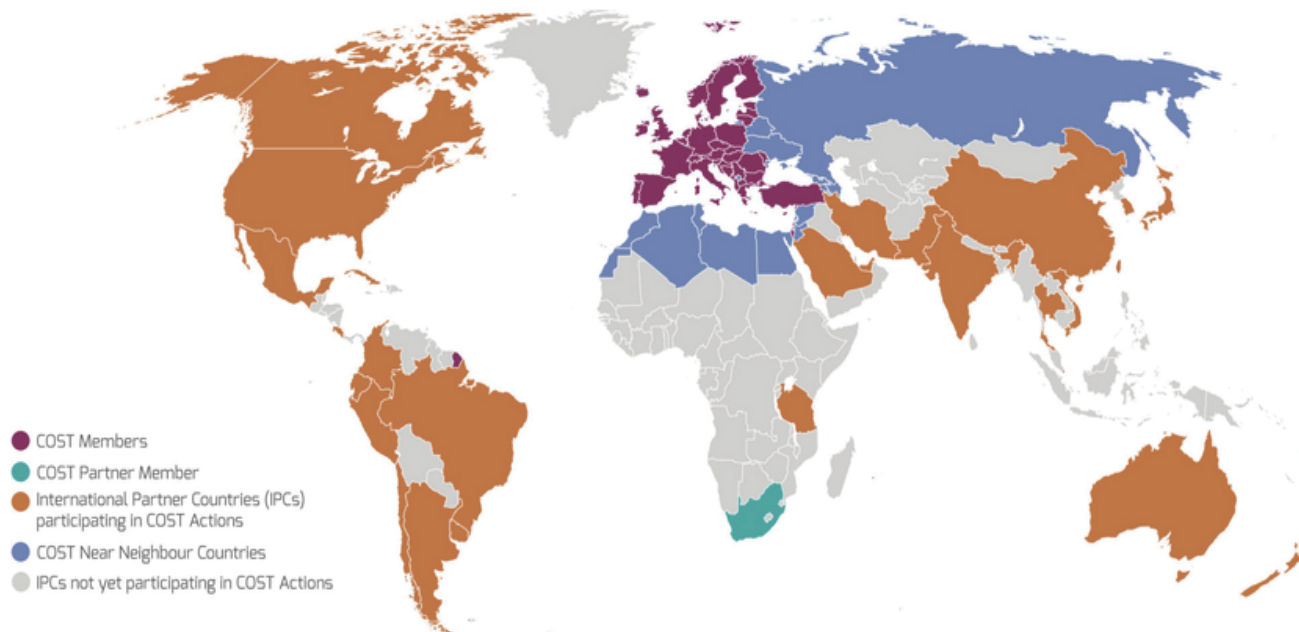
European Network for assuring  
food integrity using non-  
destructive spectral sensors



Prof. Dra. Lola Pérez-Marín  
Faculty of Agricultural And Forestry Engineering  
(ETSIAM), University of Cordoba (SPAIN)  
[dcperez@uco.es](mailto:dcperez@uco.es)

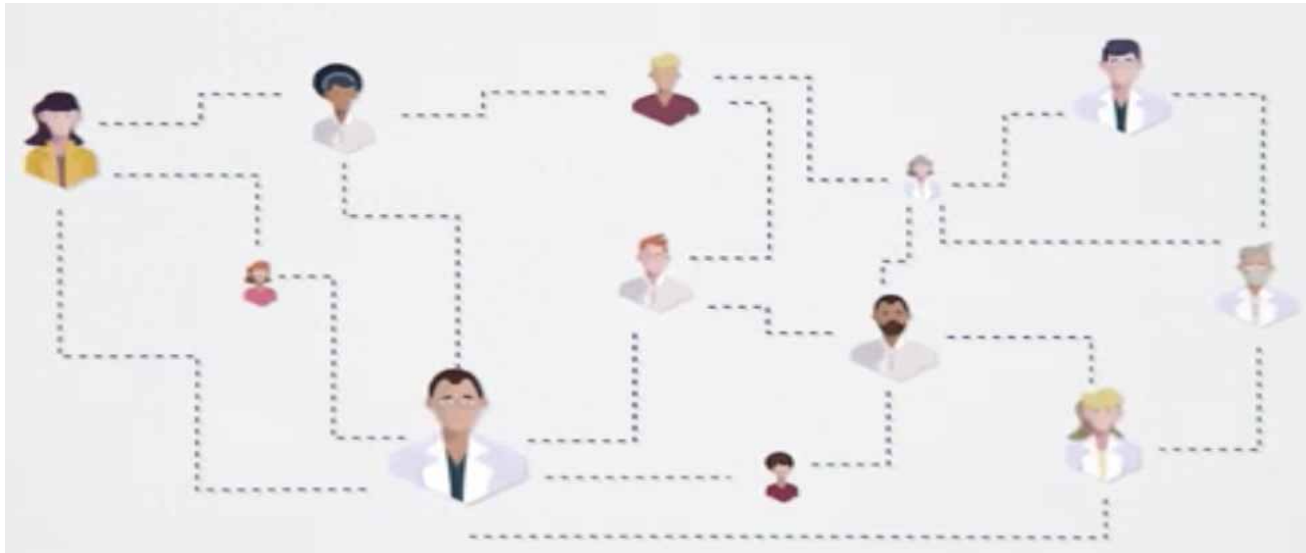
# WHAT IS A COST ACTION?

- Open and inclusive networks of excellence in all scientific domains.
- NOT A RESEARCH PROJECT
- To boost connected, interdisciplinary and collaborative sciences.
- To involve all relevant stakeholders: academia, industry, public and private sectors.



# WHICH ACTIVITIES ARE FUNDED BY COST

- MEETINGS
- WORKSHOPS
- CONFERENCES
- TRAINING SCHOOLS
- SHORT-TERM SCIENTIFIC VISITS
- DISSEMINATION ACTIVITIES





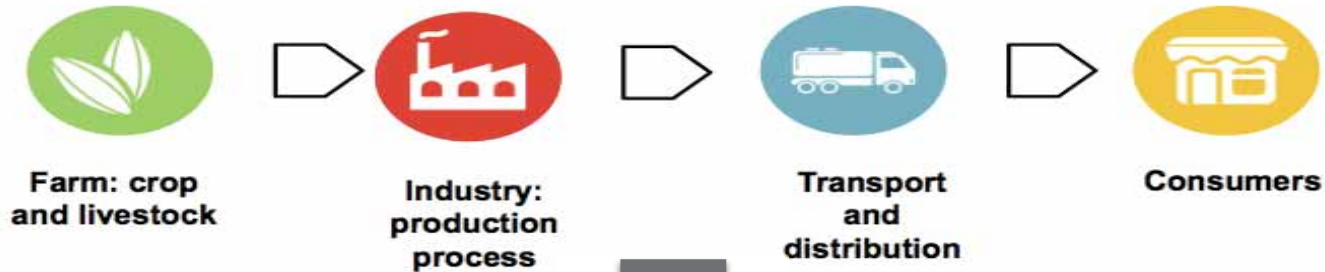
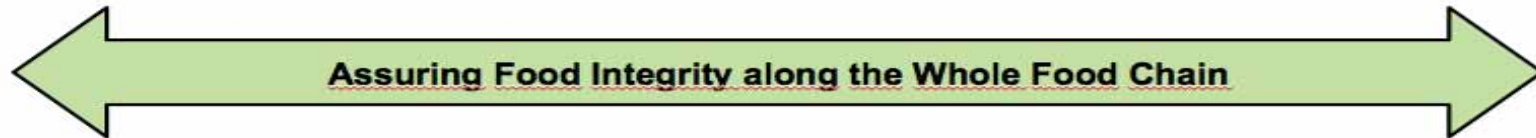
## WHAT CONSUMERS DEMAND NOW?

A food supply system that produces **SAFE** food, **NUTRITIOUS** food, and also **AUTHENTIC** food, free of any fraudulent activity

## WHY THE FOOD INDUSTRY NEEDS TO CONTROL PRODUCTS AND PROCESSES ?

- Detection of frauds
- Specific Regulations
- Implementation of Good Manufacturing Practices and Guarantee labels
- Self-control of the production

# TRENDS AND INNOVATION IN PRODUCT CONTROL



## SPECTRAL SENSORS

- ✓ Fast
- ✓ Precise
- ✓ Easy to use
- ✓ Versatile
- ✓ Non contaminant
- ✓ Non destructive
- ✓ Low cost
- ✓ Better sampling
- ✓ Digital signal: IoT device



## MAIN OBJECTIVE

Creation of a **lively and multidisciplinary network** to generate and disseminate knowledge about **non-destructive spectral sensors** and their application for the real-time *in situ* control of critical quality, safety, authenticity and performance attributes of raw and in-process food materials, **involving the entire food chain.**

SENSORFINT will enable to reduce the gap between the academia and the industry, boosting the implementation of spectral sensors within the food industry and improving European food industry competitiveness.

**PERIOD 2020-2024**

# ACTION WORKPLAN

## Management Committee Chair & Vice-chair

**WG1.** NDSS for the innovation in process control and labelling in the European food industry

**WG2.** Innovation related to the integration of several NDSS signals for critical issues in food integrity.

**WG3.** Novel mathematical algorithms and methods for processing NDSS in real time.

**WG4.** Use of ICT (Information and Communication Technologies) in building decision support systems for the industrial implementation of NDSS.

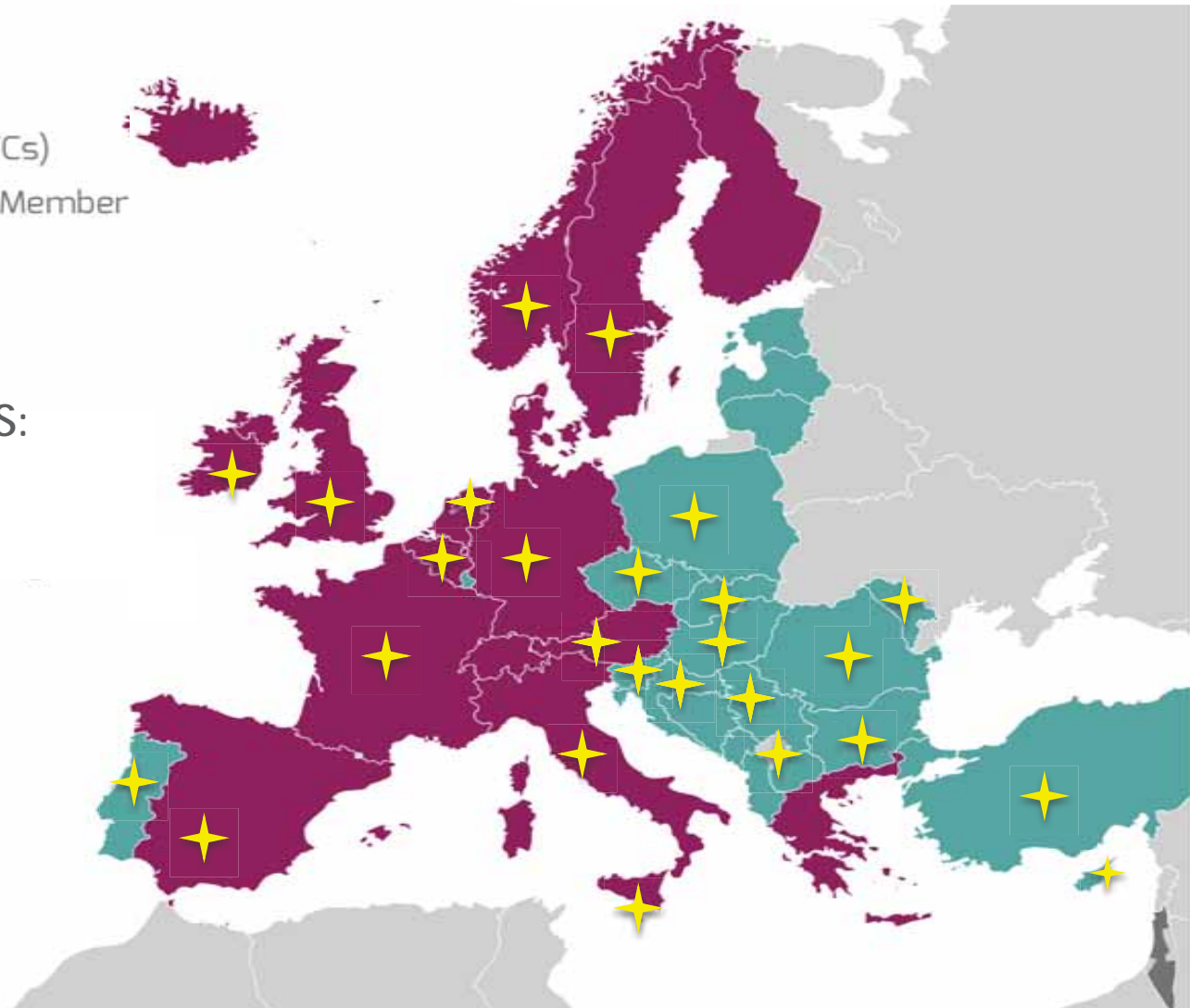
**WG5.** Dissemination and exploitation.

# PARTNERS: THE CURRENT NETWORK

- COST Members
- COST Members (ITCs)
- COST Cooperating Member

## INTERNATIONAL PARTNERS:

- ✧ The USA
- ✧ South Africa
- ✧ Australia
- ✧ IAEA-FAO







# HOW TO PARTICIPATE, HOW TO JOIN NOW

## 1. As participant of one or more WG.

In this case, you have to contact us in order we include you in our mailing list with the rest of participants, and we will update you with all the ACTION news, activities, etc.

## 2. MC member is now covered for most of the countries

## 1. SHORT TERM SCIENTIFIC MISSION (STSM)

Exchange mobilities for one week to three months

**NEW CALL IN NOVEMBER**

Candidate Origin Country	Host Institution
Turkey	University of Cordoba (Spain)
Spain	University of Modena and Reggio Emilia (Italy)
Italy	University of Lille (France)
North Macedonia	Universidade Catolica Portuguesa (Portugal)
Greece	University of Modena and Reggio Emilia (Italy)
UK	IVIA (Spain)
Turkey	École Polytechnique Fédérale de Lausanne (EPFL)
Cyprus	Faculty of Sciences School of Chemistry, Thessaloniki (Greece)
Spain	Bruker, Ettlingen, Germany



# ACTIVITIES until 30<sup>th</sup> Oct 2021

## 2. INTERNATIONAL WORKSHOP IN PORTO (Portugal)

30<sup>th</sup> Sep-1<sup>st</sup> Oct 2021 <https://www.porto.ucp.pt/pt/sensorFINT2021>

Universidade Católica Portuguesa - Porto

1<sup>st</sup> SENSORFINT INTERNATIONAL WORKSHOP  
SMART SPECTRAL SENSORS FOR AGRI-FOOD QUALITY AND PROCESS CONTROL  
30.09.2021 - 01.10.2021  
PORTO, PORTUGAL

CATOLICA FACULTY OF BIOTECHNOLOGY  
PORTO

SENSOR FINT 2021 TOPICS SPEAKERS PROGRAMME COMMITTEES VENUE SUBMISSION/REGISTRATION CONTACTS SENSOR FINT Action

On behalf of the Organizing Committee, it is with great pleasure that we invite you to attend to the 1st sensorFINT International Workshop of the COST Action 19145 "European Network for assuring food integrity using non-destructive spectral sensors" dedicated to "Smart Spectral Sensors for Agri-Food Quality and Process Control", hosted by the Faculty of Biotechnology of Universidade Católica Portuguesa, at Porto, on **30th September and 1st October 2021**.

The workshop framework is devoted to the increasing need for the food industry to provide information on their products in order to satisfy quality standards and to protect their products from food fraud.

The workshop, the first for the Action will be dedicated to a general overview of non destructive spectral sensors situation and challenges applied to the agrifood chain.

Recent developments in technology, and advances in big data analytics, provide the opportunity for step-changes that can transform the role of food integrity assurance from one of just strictly conformance to one that addresses a wide range of business critical concerns, including quality, safety and authenticity solutions. Non-destructive Spectroscopic Sensors (NDSS), enable rapid, non- destructive and environmentally-safe assessment of multiple parameters in a variety of food products.



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### PROGRAM (KEYNOTE TALKS and INDUSTRY CASES)

- On-Site Quality Control and Protection against Product Counterfeiting by Handheld Near-Infrared Spectrometers: Anytime, Anywhere by Anyone. **Prof. HEINZ W. SIESLER (Germany)**
- *Line-scan multimodal spectral imaging for food safety and quality application. **Dr. Moon Kim (USDA, EEUU)***
- Balancing between robustness and accuracy, challenges and examples for NIR/MIR calibration. Martin Lagerholm
- Modern developments of FT-NIR and miniaturized MEMS based systems Andreas Niemoeller
- Barilla: Hazelnut and apple products traceability through NIRS approach. Michele Suman
- Investigating how wavelength ranges affect calibration performance in portable NIR equipment. Rocío D. García



## TO GET MORE INFORMATION

- ACTION WEBSITE: [www.sensorfint.eu](http://www.sensorfint.eu)

- Social Media:



- Memorandum of Understanding (Mou): proposal approved  
[https://e-services.cost.eu/files/domain\\_files/CA/Action\\_CA19145/mou/CA19145-e.pdf](https://e-services.cost.eu/files/domain_files/CA/Action_CA19145/mou/CA19145-e.pdf)
- Management Committee and Core Group  
<https://www.cost.eu/actions/CA19145/#tabs|Name:management-committee>



**THANKS FOR YOUR ATTENTION**

Email [dcperez@uco.es](mailto:dcperez@uco.es)