



3rd SensorFINT FINAL International Conference
29-31 May 2024, Cordoba, Spain



CONFERENCE PROGRAM

Day 1: Wednesday 29.05.2024

08:30		Registration / Attendance list
09:00	Welcome: Prof. M^a José Polo (Scientific Policies Vice-chancellor, UCO) & Prof. Lola Pérez Marín (SensorFINT Chair)	
Session 1: NDSS for food quality control and authentication along the entire supply chain Chairs: Prof. Marena Manley (Stellenbosch University, South Africa) & Dr. Jens P. Wold (Nofima, Norway)		
09:15	Daniel Cozzolino #Keynote 1	NIR in the agri-food industries: what have we learned and where are we going?
10:00	Vilde Vraalstad	Get to know your spectrometer, and how it compares to other spectrometers on the market
10:15	Christian Huck	Celebrating the 25 th Anniversary of NIR Spectroscopy at the University of Innsbruck, Austria: Contributions to material-, bio-, medicinal plant and food analysis
10:30	Maria Tarapoulouzi	The Development of Determining Milk Species' Origin in Halloumi Cheese: A Journey from MIR to NIR Measurements.
10:45	Mar Garrido	Enhancing olive oil quality assurance using portable NIRS instruments
11:00 11:30		Coffee break
11:30	Ana Soldado	The effect of sampling on Miniaturized Near-Infrared Spectroscopy: forage analysis
11:45	<i>Gold Sponsor Time: SafetySpect</i>	
12:00	Myrsini Chroni	Exploring alternative test methods for the classification of saffron (<i>Crocus sativus</i> L.) according to ISO 3632: preliminary results with a miniaturized Near-Infrared (NIR) spectroscopic sensor
12:15	<i>Silver Sponsors Time: Bruker, Si-Ware, Viavi</i>	
12:35	Antoine Deryck	Individual authentication of cocoa beans using Vis-NIR spectroscopy



12:50	Sebahattin Serhat Turgut	Spectral Assessment of Adulteration in Ground Pistachio
13:05 14:30	Lunch & Visit to Poster Exhibition	
Session 2: Sensor fusion for reaching complex issues in food integrity Chairs: Prof. Mecit Oztop (Middle East Technical University, Turkey) & Prof. Radmila Pajovic (University of Montenegro, Montenegro)		
14:30	Byoung-Kwan CHO #Keynote 2	Spectral imaging application for quality and safety measurement for agricultural materials
15:15	Miguel Vega-Castellote	Detection of peanut fragments in chopped almonds using hyperspectral imaging technology
15:30	Esteban Roca Nasser	Grain-based authentication of bread with hyperspectral imaging for quality control
15:45	Saeyns Wouter	Laser spectroscopy for monitoring pome fruit respiration
16:00 16:15		Coffee break
16:15	Elena Fulladosa	Hyperspectral imaging as a non-invasive tool to evaluate pathogen's growth behaviour: effect of image pre-processing.
16:30	Belmin Lisicic	Optical detection of mold growth on apples
16:45	Áine Ní Fhuaráin	Preliminary comparison between using Mid-Infrared (MIR) and Raman spectroscopy with chemometrics to predict the gel onset of raw bovine milk samples.
17:00 19:00	MC meeting (only for MC members)	VISIT TO THE SENSOR LAB UCO (CAMPUS RABANALES)
20:15	ICE-BREAKER	

Day 2: Thursday 30.05.2024

08:45		Attendance list
Session 3: Data management tools for processing and modelling nondestructive spectral sensor signals Chairs: Prof. Marina Cocchi (UNIMORE, Italy) & Dr. Jean-Michel Roger (INRAE, France)		
09:00	Federico Marini #Keynote 3	Present and future trends in chemometrics for spectral data
9:45	Krzysztof Bec	A multispectral NIR/UV-Vis approach to discrimination between subvarieties of arabica coffee: variable selection, non-linear classifiers, artificial neural networks and data fusion
10:00	Tassos Koidis	AI-boosted artificial spectral pipeline augments chemometric models and improves performance in real world applications
10:15	Hilmi Eriklioğlu	Beet & Cane Sugar Classification by Using NIR Spectroscopy and Chemometrics
10:30	Uladzislau Blazhko	Breaking Spurious and Systematic Correlations by Augmenting Datasets
10:45 11:30		Coffee break & Poster session
11:30	Lorenzo Strani	Exploring Apple Diversity: Non-destructive Spectroscopic Analysis and Chemometric Insights
11:45	Dário Passos	Exploring CNN architectures for dry matter prediction on a multi fruit NIR data set
12:00	Puneet Mishra	Implementing pre-trained open AI models for near-infrared spectroscopy applications
12:15	Arnaud Molle	Targeted iPLS for the prediction of cheese-making traits from individual milk FTIR spectra
12:30	Salvador Castillo Gironés	Detection of invisible damages in plums with deep learning
12:50 14:00	Lunch & Visit to Poster Exhibition	

Session 4: STSM results Chairs: Dr. Elena Fulladosa (IRTA, Spain) & Dr. Ana M^a Jiménez (University of Granada)		
14:00	C. Pretorius	Investigating the Effect of Refining Time on Dark Chocolate Particle Size using NIR Spectroscopy
14:10	Gonçalo Guedes	A Hyperspectral Inspection System to Classify Corks Surface Treatments Homogeneity
14:20	Yangyue Chen	Can Near-Infrared Spectroscopy (NIRS) Be Used for Rapid Discrimination of Fresh Eggs with Different Infection Statuses?
14:30	Zaqlul Iqbal	Comparative study of Raman and Near Infrared (NIR) spectroscopy to detect Pork Adulteration in Meatballs
14:40	Candela Melendreras	Development of Chemometric strategies for quality Control in Breast Milk
14:50	Miriam Muñoz Lapeira	Discrimination of Normal and Wooden Breast Chicken Fillets Using NIR, fluorescence, and Raman Spectroscopy
15:00	Ahmed Menevseoglu	Non-destructive and rapid discrimination of carob adulteration in cocoa powders using NIR and MIR spectroscopy
15:10	N. Douglas	Effect of different Temper Regimes on the Polymorphic Behaviour of Dark Chocolate using Near-infrared (NIR) spectral data
15:20	Claudia Beleites	Adjustable Lab Sample Divider
15:30 15:50		Coffee break
15:50 17:30	<p style="text-align: center;">INDUSTRIAL ROUND TABLE</p> <p>Moderators: Prof. Lola Pérez Marín (SensorFINT Chair) & Prof. Tom Fearn (SensorFINT Vice-Chair).</p> <p>Participants:</p> <ul style="list-style-type: none"> • Fartash Vasefi, SafetySpect • André Kok, Bruker Optics • Javier Echevarría, Kaura Coproducts • José María Penco, AEMO (Olive Municipalities Spanish Association) • Sergio Martín, ANICE (Spanish National Association of Meat Industries) • Andrés Martín, COVAP (Food Cooperative in Pedroches Valley, Cordoba) • Luis Serrano, Olimarker Company • Javier Lallana Romero, Trouw Nutrition 	
20:00	<p style="text-align: center;">SENSORFINT GALA DINNER</p> <p style="text-align: center;">Place: Círculo de la Amistad Social Club</p> <p style="text-align: center;">Dress code: long trousers for men is required</p>	

Day 3: Friday 31.05.2024

09:00		Attendance list
<p>Session 5: Innovation and future trends in the use of NDSS and its industrial implementation: AI, sampling, non-targeted approaches, decision support system, digital labelling, interoperability</p> <p>Chairs: Prof. Wouter Saeys (KU Leuven, Belgium) & Prof. Christian Huck (Leopold-Franzens University, Austria)</p>		
09:15	Vincent Baeten #Keynote 4	Advances and challenges for NDSS in food and agriculture: this is just the beginning!
10:00	Dario Benedini	Multiway approach to milk coagulation using MicroNIR
10:15	Cristina Alamprese	FT-NIR spectroscopy for fermentation monitoring of purslane-fortified yogurt
10:30	Tomasz Czaja	NIR Spectroscopy: Searching for optimal crops for the green food transition
10:45	Jens Petter Wold	Rapid and non-destructive quantification of meat content in the legs of live red king crab (<i>Camtschaticus paralithodes</i>) by near-infrared spectroscopy
11:00 11:30		Coffee break
11:30	Nikos Chorianopoulos	Non-destructive spectroscopic-based instruments; their implementation in food sector in tandem with artificial intelligent tools and Blockchain technologies
11:45	José Antonio Entrenas	Improving NIR models performance in the Rendering industry through database enhancement
12:00	Krzysztof Rutkowski	The usefulness of VIS/NIR techniques for maturity and quality assessment of selected fruit species – resume of 18 years experiments and future perspective
12:15	Justyna Grabska	Comparison and evaluation of miniaturized NIR sensors for on-site discrimination of microplastics in soil
12:30	Glen Fox	Improving quality in breweries with real-time Raman NIR technology

12:45	Søren Balling Engelsen	Process Analytical Technology with NIRS as a Key Ingredient Helps Facilitate a Sustainable Food Production
13:00 13:30	Closing	
13:30 14:30	Lunch	
15:30	Visit to the Mezquita & Cordoba Tour	