DEPARTMENT OF FOOD, AGRICULTURE AND ENVIRONMENT

UNIVERSITY OF PISA

## ONE DAY WORKSHOP

## May 5, 2023

**Aula Magna polo Piagge, Via Giacomo Matteotti, 11, 56124 Pisa PI
(https://www.unipi.it/index.php/unipieventi/Luogo/313-aula-magna-polo-piagge)**

**PISA**

## VIOLoC Project

presents:

## OUTSTANDING SENSORS CHALLENGE BEVERAGE and FOOD FUTURE

Organizer: Fabio Mencarelli

Moderator: Chiara Sanmartin

The rapid innovation in the ICT is facing agriculture and challenges the ability and the knowledge of researchers and stakeholders. In this Workshop we'll touch innovative sensors for postharvest (fresh or processed matrices) application of macro, micro and nanosensors, and the polyphenol case in grape and olive.

**All the presentations will be published in an open access Special Issue of the Journal of the Science of Food and Agriculture**

## FIELD CASE

9 – 9:25 Giovanni Rallo, UNIPISA, ITALY - Feedback and/or feedforward control systems for soil-plant water status management: an insight on setting and calibration issues

## FOOD CASES

9:25 – 9:50 Stefano Farris, UNIMILANO, ITALY - Nano-modified electrodes for the determination of contaminants from food packaging materials

9:50 – 10:15 Stefano Veronesi, CNR NANO, PISA, ITALY - 3D-graphene grown on nano-porous backbone, a novel material for food sensing applications

**10:15 – 10:40 beer break (craft beers from Dept and Polsinelli)**

10:40 – 11:05 Bart Nicolai, UNILEUVEN, BELGIUM - 3-D visualisation of food microstructure by X-ray CT at multiple spatial scales

11:05 – 11:30 Corrado Di Natale, UNIROMA2, ITALY – Gas sensors for wine/food analysis

11:30 – 11:55 Luis Diaz, IPBRAGANZA, PORTUGAL - Qualitative Analysis of Bread Using an Electronic Tongue: Exploring its Application Capabilities

11:55 – 12:20 Isabella Taglieri, UNIPISA,  ITALY -  Recent application of E-tongue for the characterization of Trás-os-Montes portuguese wine

**12:30 quick lunch (no alcohol)**

## THE POLYPHENOL CHALLENGE

13:30 – 13:55 Daniel Cozzolino, UNIQUEENSLAND, AUSTRALIA - Phenolics and Spectroscopy: successful stories and challenges (remote)

13:55 – 14:20 Marco Cecchini, CNR-NANO, PISA, ITALY - Acoustic sensors for polyphenol detection in wine matrices

14:20 – 14:45 Margherita Modesti, UNITUSCIA, VITERBO, ITALY - A low-cost device VIS-NIRs-based for monitoring the polyphenol content along red vinification process

**14:50 wine and coffee break (wine offered by Sensi Vigne&Vini)**

15:20 – 15:45 Jacopo Rossi, STEROGLASS-FELIX INSTRUMENTS, ITALY - Evaluation of the technological ripeness of the grapes using non-destructive techniques

15:45 – 16:10 Maria L. Rodriguez-Mendez, UNIVALLADOLID,  SPAIN - Nanostructured electrochemical sensors: Innovative solutions for the detection of phenolic compounds

## ON-SITE SENSORS

16:10 - 16:35 Pablo Marchal, UNIJAEN , SPAIN - Semisupervised learning for improving on-site sensor calibrations

16:35-17:00 Giuseppe Floridia, PARSEC, ITALY – Sensors for fermentation management

## SHORT PRESENTATIONS

10' Presentation of selected innovative research (10) in sensors development/application in food and beverage

*Organization and scientific committee*: Fabio Mencarelli (fabio.mencarelli@unipi.it), Andrea Bellincontro (bellin@unitus.it), Marco Cecchini (marco.cecchini@cnr.nano.it), Angela Zinnai (angela.zinnai@unipi.it), Francesca Venturi (francesca.venturi@unipi.it), Chiara Sanmartin (chiara.sanmartin@unipi.it), Alessandro Bianchi (alessandro.bianchi@unipi.it), Monica Macaluso (monicamacaluso@hotmail.it)

**Registration fee:** (deadline March 20, 2023): 100 € (tax enclosed), 70 € (tax enclosed) for PhD students. A participation certificate will be released to all the participants. The workshop can be attended ONLY by registered participants. The pdf of the oral presentations will be available and will be sent to the registered participants (if some speakers do not want to share his/her contribute, it is not our responsibility).

**The Scientific Committee will select 10 research to be presented and to be published in a Special Issue of Journal of the Science of Food and Agriculture**

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