



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 JSFA by Wiley and Sons

9:00 Welcome from sponsors **Parsec** and **Polsinelli** and **Department Director**

ON-SITE SENSORS

9:15 - 09:40 **Giuseppe Florida**, PARSEC, ITALY – Sensors for fermentation management

9:45 – 10:05 **Pablo Marchal**, UNIJAEN , SPAIN - Semisupervised learning for improving on-site sensor calibrations

FOOD CASES

10:10 – 10:35 **Stefano Farris**, UNIMILANO, ITALY - Nano-modified electrodes for the determination of contaminants from food packaging materials

10:40 – 11:00 beer break (craft beers from Dept and Polsinelli)

11:00 – 11:25 **Stefano Veronesi**, CNR NANO, PISA, ITALY - 3D-graphene grown on nano-porous backbone, a novel material for food sensing applications

11:30 – 11:55 **Bart Nicolai**, UNILEUVEN, BELGIUM - 3-D visualisation of food microstructure by X-ray CT at multiple spatial scales

12:00 – 12:25 **Corrado Di Natale**, UNIROMA2, ITALY – Gas sensors for wine/food analysis

12:30 – 12:55 **Luis Diaz**, IPBRAGANZA, PORTUGAL - Qualitative Analysis of Bread Using an Electronic Tongue: Exploring its Application Capabilities

13:00 – 13:25 **Isabella Taglieri**, UNIPISA, ITALY - Recent application of E-tongue for the characterization of Trás-os-Montes portuguese wine

13:30 quick lunch (no alcohol)

THE POLYPHENOL CHALLENGE

14:15 – 14:40 **Marco Cecchini**, CNR-NANO, PISA, ITALY - Acoustic sensors for polyphenol detection in wine matrices

14:45 – 15:10 **Margherita Modesti**, UNITUSCIA, VITERBO, ITALY - A low-cost device VIS-NIRs-based for monitoring the polyphenol content along red vinification process

15:15 – 15:40 **Daniel Cozzolino**, UNIQUEENSLAND, AUSTRALIA - Phenolics and Spectroscopy: successful stories and challenges (remote)

15:45 – 16:00 wine and coffee break (wine offered by Sensi Vigne&Vini)

16:00 – 16:25 **Jacopo Rossi**, STEROGLOSS-FELIX INSTRUMENTS, ITALY - Evaluation of the technological ripeness of the grapes using non-destructive techniques

16:30 – 16:55 **Maria L. Rodriguez-Mendez**, UNIVALLADOLID, SPAIN - Nanostructured electrochemical sensors: Innovative solutions for the detection of phenolic compounds

FIELD CASE

17:00 – 17:25 **Giovanni Rallo**, UNIPISA, ITALY - Feedback and/or feedforward control systems for soil-plant water status management: an insight on setting and calibration issues

SHORT PRESENTATIONS

17: 30: 10' Presentation of selected innovative research (10) in sensors development/application in food and beverage

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

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).

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