



# Ph.D. WINTER SCHOOL

of the Italian Society of Agricultural Chemistry

## Current challenges in agricultural ecosystems: the need for a multidisciplinary approach

*Piacenza, Italy, 13-16 February 2017*

### School aims

The incoming edition of the Ph.D. winter school of the Italian Society of Agricultural Chemistry is to promote scientific knowledge in a friendly environment, bringing together Ph.D. students and young scientists.



The School will be featured in base lectures regarding agricultural ecosystems, sustainable production systems and environmental changes in agricultural ecosystems. A further session will be devoted to new methods to study agricultural ecosystems, including -omic technologies.



Besides base lectures, the school will include practical sessions (metabolomic platform, rhizosphere experiments, high CO<sub>2</sub> experiments).

### Venue & costs

The school will be held at the Università Cattolica del Sacro Cuore, Campus of Piacenza (<http://www.unicatt.it>).

Registration is required; to register, applicants are request to send an abstract (250 words) related to the topic(s) of their research, to [luigi.lucini@unicatt.it](mailto:luigi.lucini@unicatt.it). Registration fee is 70 € and includes participation to scientific sessions

(lectures and practical sessions), coffee breaks, social dinner and electronic book of abstracts.

Accommodations are available at the school (Residenza Gasparini facilities <http://educatt.unicatt.it/educatt-residenza-gasparini-il-collegio>) or at the Hotel City (5 minutes walk - <http://www.hotelcitypc.it/>).

The cost are as follows:

- single room, Residenza Gasparini: 45 €
- one person in double room, Hotel City: 45 €
- single room, Hotel City: 68 €

For all accommodation options, applicants can contact directly the Residenza Gasparini ([reception.piacenza@educatt.org](mailto:reception.piacenza@educatt.org) - tel: +39 0523 621111).

### Provisional programme

The school will include four sessions, across the multidisciplinary approach of studying agricultural ecosystems. Several different subjects will be faced, within the context of agricultural chemistry, in the framework of a sustainable agriculture.

<b>Mon 13 Feb 2017</b>	<b>First session: <i>Introduction to agricultural ecosystems</i></b>
14,30-15,30	Opening and introduction of participants
15,30-18,00	the soil environment the living component of soil soil-plant-microorganisms interaction
18,30-21	get together dinner
<b>Tues 14 Feb 2017</b>	<b>Second session: <i>Sustainable agricultural production systems</i></b>
9,00-12,30	Agriculture in semiarid, arid, and humid environments: challenges and mitigation strategies (thematic speech, two reports) Agriculture in polluted soils (thematic speech, two reports)
14,30-15,30	keynote speech - agricultural production under unfavourable ecosystems
16,00-18,00	presentation of their current research by attendees

<b>Wed 15 Feb 2017</b>	<b>Third session: <i>New methods to study agricultural ecosystems (basic concepts and applications)</i></b>
9,00-11,30	metabolomics (thematic speech, two reports) genomics & transcriptomics (thematic speech, two reports)
11,30-12,30	presentation of their current research by attendees
14,30-18,00	Parallel practical sessions (alternating groups) <i>Visit to experimental facilities (experiments related to drought, high CO2 and root exudation)</i> <i>Tools to investigate rhizosphere processes (pros and cons of different methods, hands on different tools including different rhizobox designs)</i> <i>GC/MS and UHPLC/QTOF facilities</i>
20,00	winter school dinner

<b>Thur 16 Feb 2017</b>	<b>Fourth session: <i>Environmental challenges in agricultural ecosystems: climate change, waste management and recycling</i></b>
9,00-10,00	keynote speech -climate change & agricultural productions
10,00-11,30	precision agriculture waste recovery & environment waste recovery, treatment & reuse
12,30-13,00	Closing ceremony

Despite the general structure includes the alternation of base lectures and practical sessions, the programme includes also the presentation of research activities / topics by the attendee, with the aim of facilitating interactions and promote the building of cooperative networks.

### Organizing committee

- Vito Armando, Laudicina, University of Palermo
- Luigi Lucini, Università Cattolica del Sacro Cuore
- Tanja Mimmo, Free University of Bolzano
- Nicola Tomasi, University of Udine
- Anita Zamboni, University of Verona

### Further info

<http://www.chimicagraria.it/didattica.php>  
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