



8th International Mass Spectrometry School

Fundamentals, advances, instrumentation, and applications

Alghero, Sardinia (Italy) September 19-24, 2027



<https://www.spettrometriadi massa.it/imss2027>

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School director

Prof. Gianluca Giorgi

Department of Biotechnology, Chemistry & Pharmacy

University of Siena

Via Aldo Moro - 53100 Siena (Italy)

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Univ. of Basilicata

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Tutors (tbc)

Michela Begala, University of Cagliari – Italy

Aivett Bilbao, PNL, Richland – USA

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John McLean, Vanderbilt University – USA

Paola Montoro, Univ. of Salerno – Italy

Jens Soltwisch, University of Münster – Germany

Michele Suman, Barilla, Univ. of Parma – Italy

PROGRAM draft

Sunday, September 19

17:30	Registration
18:15	Opening session
18:45	Mass spectrometry. Where is it from? Where it is and where is it going?
20:00	<i>End of session</i>
20:30	<i>Welcome cocktail</i>

Monday, September 20***Volatile molecules: ionization techniques, GC-MS,***

8:30	Ionization of volatile molecules: electron ionization (EI), chemical ionization (CI)
9:45	<i>Coffee break & poster session</i>
10:30	EI fragmentation processes, energetics
11:45	Study of complex mixtures of volatile molecules: GC, fast GC, GC×GC
13:00	<i>Buffet lunch</i>

Polar molecules ionization techniques, LC-MS,

15:00	Classical and novel ionization methods at atmospheric pressure conditions
16:15	<i>Coffee break & poster session</i>
16:45	Study of complex mixtures of polar molecules using chromatographic approaches
18:00	<i>End of session</i>
18:00	<i>Urban trekking</i> in Alghero: discover the beautiful and sneaking corners of the town Guided tour

Tuesday, September 21***MALDI. Analyzers***

8:30	Matrix-assisted laser desorption ionization, MALDI-2. Mechanisms of ion production
9:45	Analyzers (I). Ion separation in space: beam instruments: sectors, quadrupole, time-of-flight
11:00	<i>Coffee break & poster session</i>
11:30	Analyzers (II). Ion separation in time: ion traps, FT-ICR, Orbitrap
12:45	<i>Buffet lunch</i>

High resolution MS, accurate mass measurements. Tandem mass spectrometry

14:30	High resolution mass spectrometry, accurate mass measurements. Examples and applications
15:45	Tandem Mass Spectrometry (MS/MS) and MS ⁿ : ion activation & dissociation
17:00	<i>Coffee break & poster session</i>
17:30	DIA & DDA methods. Target & untarget analysis
18:45	<i>End of session</i>

Wednesday, September 22***Imaging MS. Proteomics. Artificial intelligence in MS.***

8:30	Imaging mass spectrometry
9:45	<i>Coffee break & poster session</i>
10:30	Bottom-up, top-down, and complex-down proteomics
11:45	Artificial intelligence and machine learning in MS
13:00	<i>Buffet lunch</i>
14:15	<i>All to the beach!!</i> Travel by bus Enjoy the magnificence of sand and sea of the Sardinia beaches
19:00	Go back to Alghero

Thursday, September 23

Do it by yourself ! Ion mobility & big data

8:30	Exercises on MS, HRMS and MS/MS interpretation, mechanisms,
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Award for the best MS solver!

10:30	<i>Coffee break & poster session</i>
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11:15	Ion mobility & big data
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12:30	<i>Buffet lunch</i>
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Short orals. Workshop. Problem solving. Quantitation

14:15	Short orals by students:
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15:45	Workshop with Companies
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16:30	Problem solving
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17:15	<i>Coffee break & poster session</i>
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17:45	Quantitation by MS and MS ⁿ
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19:00	<i>Awards for the best orals!</i>
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19:15	<i>End of session</i>
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20:30	<i>Social dinner</i>
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Friday, September 24***Doping, forensics, metabolomics & MS in food***

8:30	MS in doping analysis
9:30	MS in forensics
10:30	<i>Coffee break & poster session</i>
11:00	MS in plant metabolomics
12:00	Food authentication and traceability
13:00	<i>Award for the best poster!</i>
13:10	ECTS test
13:30	<i>Arrivederci!</i>