

Aldo Armigliato School on Scanning Electron Microscopy in Materials Science

December 11-14, 2023
CNR – IMM Bologna

Via Gobetti, 101 - 40129 Bologna (ITALY)

 IMM Institute for
Microelectronics
and Microsystems
National Research Council of Italy



SISM

Italian Society for Microscopical Sciences

DIRECTORS

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TEACHERS

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Nanoitaly

GENERAL PROGRAM

	MON 11	TUE 12	WED 13	THU 14
9:00		<i>Marco Vittori Antisari</i> Optimization of SEM performance	<i>Massimo Vanzi</i> EBIC: Principles and applications to device diagnostics	<i>Giancarlo Gazzadi</i> Introduction to Focused Ion Beam
09:30	Welcome and intro			
10:00	<i>to be confirmed</i> Electron sources, lenses, SEM operating principles	<i>Vittorio Morandi</i> Low Energy STEM: image formation and detection	<i>Francesca Rossi</i> Cathodoluminescence in the SEM	<i>Matteo Ferroni</i> Tomography in the SEM
11:00	<i>Roberto Balboni</i> Electron-Matter interaction and generated signals	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
11:30		<i>Amelia Montone</i> EDX Microanalysis	<i>Paola Bassani</i> Electron BackScattered Diffraction	Demo 4 – 1
12:00	<i>Vittorio Morandi</i> Detectors and image Formation	COMPANY presentations	COMPANY presentations	COMPANY presentations
12:30				
13:00	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>
14:30	Demo 1 – 1	Demo 2 – 1	Demo 3 – 1	Demo 4 – 2
15:45	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
16:15	Demo 1 – 2	Demo 2 – 2	Demo 3 – 2	Final remarks / End of the school
17:30				

PRACTICAL PART

TOPICS covered in the practical demonstrations:

Imaging with Secondary Electrons

Imaging with Backscattered Electrons

Operation of the SEM, gun and beam adjustment

Acquisition of EDX spectrum, compositional profiling and mapping

Transmission imaging of thin samples in the SEM

Basic sample preparation

Introduction to image optimization

Introduction to EDX spectrum analysis

IMPORTANT DATES

Registration through the SISM website: <https://www.sism.it/Workshops>

DEADLINE for REGISTRATION December 5, 2023

Participation to the School will be allowed up to a maximum of 24 participants. A minimum number of 10 attendees is required to confirm the School. Registered participants will be notified on the confirmation of the event.

The school is open to SISM and EMS members. Non-members are welcome to the School and will be requested to apply for a temporary SISM membership during the registration process.

For registration and payment procedures (by credit card, PayPal or bank transfer) please follow the instructions in the registration page <https://www.sism.it/Workshops>

REGISTRATION

REGISTRATION FEE

The fee includes participation to lectures, practical sessions, coffee breaks and lunches to the local CNR canteen. Students and young researchers with a temporary position can apply for a 20% discount on the fee (VAT excluded).

SISM and EMS members:	350 € +VAT
Non members (fee includes temporary SISM membership):	400 € + VAT
Students (fee includes temporary SISM membership):	320 € + VAT

For any received payment, an official receipt will be issued. Please note that, for foreign institutions and employees of Italian public institutions, the fee is exempt from VAT (Article 10 of DPR 633/72).