



**SISM**

Italian Society for Microscopy Sciences



Institute for  
Microelectronics  
and Microsystems

National Research Council of Italy

# SCANNING ELECTRON MICROSCOPY IN MATERIALS SCIENCE

12-15 December 2017

CNR IMM Bologna  
Via Gobetti 101, 40129 - Bologna, Italy

## **DIRECTOR**

Vittorio MORANDI

## **TEACHERS**

Aldo Armigliato, Roberto Balboni, Franco Corticelli, Ivan Elmi,  
Vittorio Morandi, Luca Ortolani - *CNR IMM Bologna*

Marco Vittori Antisari- *Nanoitaly*  
Giancarlo Gazzadi- *CNR Nano Modena*  
Giovanna Mura - *Uni. Cagliari*  
Regina Ciancio- *CNR IOM Trieste*  
Gianni Barucca- *Uni. Poli. Marche*



<http://semschool.bo.imm.cnr.it>

## REGISTRATION

Registration to the school is obtained by signing up before November 3<sup>rd</sup>, 2017, directly on the SISM website <http://www.sism.it>

SISM Member     300€

Non Member     400€

The fee includes participation to the courses, education materials, coffee breaks and lunches to the local CNR canteen. Students and young researchers with a temporary position can claim an additional 30% discount on the fees (VAT excluded).

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

Registration fees may be paid through:

### Credit card

SISM website: <http://www.sism.it>

### Bank transfer

S.I.S.M  
IBAN: IT 43 Q 02008 02455 000103039142  
BIC-SWIFT: UNCRITM1PM5 or UNCRITMM  
Address: Unicredit - Ag. Dante, Bologna  
Reference: "Name of the participant + BOSEM2017"

## VENUE

The school will take place at the *Institute for Microelectronics and Microsystems*, Bologna Section, located in the Bologna Research Area, in Italy.

## ACCOMODATION

For information on accommodation and how to reach CNR-IMM Bologna, please refer to <http://www.bo.cnr.it> or contact:

**Mrs. Giorgia Giovannini**

CNR – IMM Sezione di Bologna

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## PROGRAM OF THE WEEK

### Tuesday 12<sup>th</sup>

10:00	REGISTRATION
11:30	SEM the Instrument and Working Principles <i>R. Ciancio</i>
12:30	Electron-Matter Interaction and Generated Signals <i>R. Balboni</i>
13:30	
14:30	Electron Sources, Optics, Lenses and Aberrations <i>G. Barucca</i>
15:30	Detectors and Image Formation <i>V. Morandi</i>
16:30	COFFEE BREAK
17:00	SPONSORS PRESENTATIONS
18:00	

### Wednesday 13<sup>th</sup>

09:00	EDX Microanalysis <i>A. Armigliato</i>
10:00	SEM Performances Optimization <i>M. Vittori Antisari</i>
11:00	COFFEE BREAK
11:30	Low-Energy STEM Image Formation and Detection <i>V. Morandi</i>
12:30	Introduction to Focused Ion Beam <i>G. Gazzadi</i>
13:30	LUNCH
14:30	Tomography in the SEM <i>M. Ferroni</i>
15:30	SEM Applications in Device Diagnostics <i>G. Mura</i>
16:30	COFFEE BREAK
17:00	SPONSORS PRESENTATIONS
18:00	

### Thursday 14<sup>th</sup>

10:00	PRACTICAL SESSIONS <i>SEM, ESEM, FIB</i>
11:30	COFFEE BREAK
12:00	PRACTICAL SESSIONS <i>SEM, ESEM, FIB</i>
13:30	LUNCH
14:30	PRACTICAL SESSIONS <i>SEM, ESEM, FIB</i>
16:00	COFFEE BREAK
16:30	PRACTICAL SESSIONS <i>SEM, ESEM, FIB</i>
18:00	

### Friday 15<sup>th</sup>

09:30	PRACTICAL SESSIONS <i>SEM, ESEM, FIB</i>
11:00	COFFEE BREAK
11:30	PRACTICAL SESSIONS <i>SEM, ESEM, FIB</i>
13:00	ROUND TABLE DISCUSSION
13:30	LUNCH
18:00	