



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, Matteo Ferroni, Vittorio Morandi,
Luca Ortolani - *CNR IMM Bologna*

Marco Vittori Antisari- *Nanoitaly*
Giancarlo Gazzadi- *CNR Nano Modena*
Giovanna Mura - *Uni. Cagliari*
Amelia Montone - *ENEA Casaccia, Roma*
Gianni Barucca- *Uni. Poli. Marche*



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

REGISTRATION

Registration to the school is obtained by signing up before November 24th, 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
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 12th

10:00 REGISTRATION

11:30 SEM the Instrument and Working Principles
A. Montone

12:30 Electron-Matter Interaction and Generated Signals
R. Balboni

13:30

14:30 Electron Sources, Optics, Lenses and Aberrations
G. Barucca

15:30 Detectors and Image Formation
V. Morandi

16:30 COFFEE BREAK

17:00 SPONSORS PRESENTATIONS

18:00

Wednesday 13th

09:00 EDX Microanalysis
A. Armigliato

10:00 SEM Performances Optimization
M. Vittori Antisari

11:00 COFFEE BREAK

11:30 Low-Energy STEM Image Formation and Detection
V. Morandi

12:30 Introduction to Focused Ion Beam
G. Gazzadi

13:30 LUNCH

14:30 Tomography in the SEM
M. Ferroni

15:30 SEM Applications in Device Diagnostics
G. Mura

16:30 COFFEE BREAK

17:00 SPONSORS PRESENTATIONS

18:00

Thursday 14th

10:00 PRACTICAL SESSIONS
SEM, ESEM, FIB

11:30 COFFEE BREAK

12:00 PRACTICAL SESSIONS
SEM, ESEM, FIB

13:30 LUNCH

14:30 PRACTICAL SESSIONS
SEM, ESEM, FIB

16:00 COFFEE BREAK

16:30 PRACTICAL SESSIONS
SEM, ESEM, FIB

18:00

Friday 15th

09:30 PRACTICAL SESSIONS
SEM, ESEM, FIB

11:00 COFFEE BREAK

11:30 PRACTICAL SESSIONS
SEM, ESEM, FIB

13:00 ROUND TABLE DISCUSSION

13:30 LUNCH