

*Aldo Armigliato*

# SEM SCHOOL IN MATERIALS SCIENCE

09-12 April 2019, CNR IOM Area Science Park Trieste, Italy

## **DIRECTOR**

Dr. Regina CIANCIO

## **TEACHERS**

Regina Ciancio *CNR IOM Trieste*

Roberto Balboni, Vittorio Morandi, Matteo Ferroni - *CNR IMM Bologna*

Marco Vittori Antisari- *Nanoitaly*

Giancarlo Gazzadi - *CNR Nano Modena*

Massimo Vanzi, Giovanna Mura - *Uni. Cagliari*

Amelia Montone - *ENEA Casaccia, Rom*

Paolo Mengucci - *Uni. Poli. Marche*



## PROGRAM OF THE WEEK

### Tuesday 09<sup>th</sup>

09:00	REGISTRATION
10:30	Electron-Matter Interaction and generated signals <i>R. Balboni</i>
11:30	SEM the Instrument and Working Principles <i>R. Ciancio</i>
12:30	Electron Sources, Optics, Lenses and Aberrations <i>P. Mengucci</i>
13:30	LUNCH
14:30	Detectors and Image Formation <i>V. Morandi</i>
15:30	SEM Performances and Optimization <i>M. Vittori-Antisari</i>
16:30	COFFEE BREAK
17:00	SPONSORS PRESENTATIONS
18:00	

### Wednesday 10<sup>th</sup>

09:00	EDX Microanalysis <i>A. Montone</i>
10:00	Low Energy STEM Image Formation and Detection <i>V. Morandi</i>
11:00	COFFEE BREAK
11:30	Introduction to Focused Ion Beam <i>G. Gazzadi</i>
12:30	Tomography in the SEM <i>M. Ferroni</i>
13:30	LUNCH
14:30	EBIC – Principles and applications to device diagnostics <i>M. Vanzì</i>
15:30	3D Photometric stereo at the SEM <i>G. Mura</i>
16:30	COFFEE BREAK
17:00	SPONSORS PRESENTATIONS
18:00	

### Thursday 11<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 12<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

## VENUE

The school will take place at the Istituto Officina dei Materiali (IOM), located in the AREA Science Park, Basovizza - Trieste, in Italy. The *Istituto Officina dei Materiali* (IOM) of the Italian National Research Council (CNR) is an interdisciplinary research center that combines material synthesis, advanced characterisations and numerical simulations, focusing on the study and development of innovative materials and devices at the micro- and nano-scale. The IOM Headquarters are located in Basovizza - Trieste, very close to the border with Slovenia.

## HOW TO REACH

It is possible to reach us by Trieste airport ([www.aeroporto.fvg.it](http://www.aeroporto.fvg.it)), by train and by car. The most important European hubs can also be accessed from Venice, Treviso and Ljubljana airports, which are also at close distance.

To reach the school site, you can take public transportation (bus 39 and 51) from the Trieste train station square. Please go to [www.triestetrasporti.it](http://www.triestetrasporti.it) to download the related timetables. You can also contact science bus for a sharing shuttle service to the school site.

For information regarding how to reach the school and about accommodation, please contact:

Regina Ciancio

CNR – IOM Sezione di Trieste

Tel: +39 040 375 6467

E-mail: [semschool2019@iom.cnr.it](mailto:semschool2019@iom.cnr.it)

## REGISTRATION

The school will be open to a **maximum of 24 participants**. A minimum number of 10 attendees is required to activate the courses. Registration to the school is obtained by signing up **before March 15th, 2019**, directly on the SISM website [sism.it](http://sism.it)

SISM MEMBERS: **300€**

NOT MEMBERS: **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** at SISM website

**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 + TSSEM2019"

## COMMITTEES

### **Scientific Committee**

Roberto Balboni, CNR-IMM Bologna

Regina Ciancio, CNR-IOM Trieste

Vittorio Morandi, CNR-IMM Bologna

### **Local Organizing Committee**

Regina Ciancio, CNR-IOM Trieste (Chair)

Simone Dal Zilio, CNR-IOM Trieste

### **IT Support**

Matteo Brutti, CNR-IOM Trieste

Vanja Cvelbar, CNR-IOM Trieste

Luca Ortolani, CNR-IMM Bologna

Alessandro Yoshi Polliotti, CNR-IMM Bologna