

School on Synchrotron and Free-Electron-Laser Methods for Multidisciplinary Applications



7-18 May 2018
Trieste, Italy

Further information:
<http://indico.ictp.it/event/8308/smr3202@ictp.it>
School Secretary: E. Brancaccio (Ms)

The school will introduce young scientists to synchrotron and free electron laser (FEL) based research with a glance to the future. The school's interdisciplinary character will provide a stimulating environment for discussions with leaders in the field.

Directors:

Nadia Binggeli, ICTP, Trieste
Maya Kiskinova, Elettra Sincrotrone Trieste
Jan Lüning, Université Pierre et Marie Curie, Paris

Description:

X-ray based analytical methods play an increasingly important role in many domains of fundamental research and applied science. The international cast of lecturers will introduce the basic principles of advanced X-ray spectroscopy and scattering techniques. Emphasis will be given on how these techniques allow accessing the complexity of matter by monitoring the atomic arrangement, electronic, magnetic and chemical properties of individual building blocks and their response to external stimuli like temperature, pressure, electric or magnetic fields and light pulses. The program will be complemented by lectures on recent advances in synchrotron and FEL sources enabling novel experimental methodologies. Demonstration sessions will be organized at Elettra's synchrotron and FEL facilities.

Topics:

- Fundamentals of synchrotron and FEL radiation and production;
- Beamlines: photon transport and handling;
- X-ray Absorption Spectroscopy;
- X-ray Crystallography and Powder Diffraction;
- Inelastic and Elastic Scattering (SAXS, WAXS and RIXS);
- Photoelectron spectroscopy;
- Imaging techniques using X-rays and advantages using coherent X-rays;
- Spectromicroscopy and imaging using X-rays and IR;
- Time-resolved approaches using FELs and synchrotrons.

How to apply:

Online application:
<http://indico.ictp.it/event/8308/>

Female scientists are encouraged to apply.

Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries.
There is no registration fee.

Deadline:

15 January 2018



The Abdus Salam
International Centre
for Theoretical Physics
www.ictp.it
Trieste, Italy

