

School on Synchrotron Light Sources and their Applications



6 - 17 December 2021
An ICTP Virtual Meeting
Trieste, Italy

Further information:
<http://indico.ictp.it/event/9645/smr3611@ictp.it>

The School will introduce young scientists to the design, operation, and research opportunities offered at a modern synchrotron light source and how such sources are realized.

Description:

The School will be held over two weeks and will consist of three modules: (1) the physical aspects concerning the design and function of the main components: accelerators, insertion devices and beamline optics; (2) an overview of the arguments that can be made in order to fund and build a synchrotron light source, including socioeconomic benefit, stakeholder engagement, communication; (3) overview of common synchrotron light techniques including synchrotron infrared techniques and XANES/EXAFS.

Topics:

- Fundamentals of synchrotron radiation from storage rings
- Fundamentals of X-ray interactions with matter
- Design and operation of storage rings
- Beamline design: Photon transport and optics
- Bending magnets and insertion devices
- Project management at a large facility
- Ancillary devices for light sources
- Socioeconomic justification
- Cultural heritage
- Stakeholder engagement/communications
- Starting up user operations at a new facility
- Industrial Applications
- IR microscopy
- Basics of X-ray crystallography and powder diffraction
- Basics of structural biology
- Fundamentals of X-ray absorption: EXAFS and XANES
- XRF, TXRF, GXRF and their applications in materials and life sciences
- Tomography

How to apply:

Online application:
<http://indico.ictp.it/event/9645/>

Female scientists are encouraged to apply.

Registration:

There is no registration fee.

Directors:

S. CONNELL, University of Johannesburg, AflS, South Africa
A. LAUSI, SESAME, Jordan
K. LORENTZ, Cyprus Institute, Cyprus
A. MIGLIORI, IAEA, Austria
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Local Organiser:

N. BINGGELI, ICTP, Italy

Deadline:

20 November 2021



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