

School on Synchrotron Light Sources and Their Applications

Description:

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. It will consist of three modules:

- (1) Physical aspects concerning the design and function of the main components: accelerators, insertion devices and beamline optics.
- (2) Overview of the arguments that can be made in order to fund and build a synchrotron light source, including socioeconomic benefits, stakeholder engagement, communication.
- (3) Overview of common beamline techniques, including those utilizing X-rays and infrared radiation.

TOPICS:

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| <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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, GIXRF and their applications in materials and life sciences • Tomography |
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12 - 23 January 2026



Trieste, Italy



**Deadline:
05 December 2025**

DIRECTORS:

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LOCAL ORGANISER:

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FURTHER INFORMATION:



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Female scientists are encouraged to apply.

REGISTRATION:

There is no registration fee.

