



Elettra Sincrotrone Trieste

# Scientist for the Optics Team of the Elettra 2.0 Project

Deadline: 29 August 2025

Ref: RA/25/20

## Background

Elettra Sincrotrone Trieste is an international multidisciplinary research center offering international users access to synchrotron and free-electron laser radiation for the characterization and processing of matter. The extremely high quality of the light sources and beamlines has set new performance records and has been producing results of great scientific and technological interest. In order to allow the laboratory to remain competitive in the next 20 years, an entirely new synchrotron radiation source - Elettra 2.0 - belonging to the new generation of storage rings (DLSR or Diffraction Limited Storage Ring) is being installed and will join the already operating free-electron source FERMI in the second half of 2026. The new source will exhibit a major increase in the brilliance and coherence fraction of the photon beams. The Elettra 2.0 optics is based on our enhanced symmetric six bend achromat structure (S6BA-E) with a 12-fold symmetry and an emittance of 200 pm-rad at 2.4 GeV. The new structure creates also straight sections in the arcs permitting the installation of additional insertion devices, thus increasing the number of beamlines. Existing beamlines are being upgraded and new beamlines constructed to take full advantage of the characteristics of Elettra 2.0. See <http://www.elettra.eu> for more information.

## Job description

The successful candidate will join the Optics Team and will be involved in the optimization of existing optical systems, the design of new ones and the definition and realization of new beamlines for Elettra 2.0. She/he will also participate in the activities of the Optical Metrology Lab. Key tasks will involve:

- Conceptual design and optical simulations of beamlines.
- Thermal and vibrational analysis of components in collaboration with the engineering team.
- Coding of custom optical software solutions.
- Optical characterization, assembly, alignment, and commissioning of critical optical systems such as mirrors and monochromators.
- Opto-mechanical design of components.

## Qualifications

A Ph.D. in Physics or a related discipline is required together with proven experience in two or more of the following areas:

- Design, realization, and commissioning beamlines at of large-scale facilities.
- X-ray optical simulation codes.
- Programming (in Python or C/C++ or Java).
- X-ray transport and diagnostics.

Good oral and written communication skills in English are required.

Good time management skills and ability to prioritize are expected, together with the ability to interact with staff at all levels and to work as part of a multi-disciplinary team.

### Elettra - Sincrotrone Trieste S.C.p.A.

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## General information

The appointment envisioned is a fixed term contract with a duration of 24 months.

The salary will be commensurate with the previous experience and qualifications of the candidate.

Applications should include full curriculum vitae and, if possible, contact information (including electronic mail) of at least three references.

The interviews could be performed through video conferencing.

The ranking of suitable candidates resulting from this selection process may be used within the following 24 months.

Employees or former employees of Elettra Sincrotrone Trieste S.C.p.A. or temporary and staff leasing employees or former employees with working experience at the company will be excluded from the present selection procedure. Employees or former employees of any Italian Public Entity who have exercised authority over Elettra Sincrotrone Trieste S.C.p.A. or have negotiated with Elettra - Sincrotrone Trieste S.C.p.A. within the last three years, will also be excluded from the present selection procedure, in accordance with the provisions of article 21 of the Italian legislative decree no. 39/2013 and in conjunction with article 53 (subsection 16ter) of Italian legislative decree no. 165/2001.

The deadline for the submission of the application is August 29, 2025.

We thank all applicants in advance.

For more information, please contact Edoardo Busetto (email: [edoardo.busetto@elettra.eu](mailto:edoardo.busetto@elettra.eu)).

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?id=4258>

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