



Elettra Sincrotrone Trieste

Postdoctoral Position at DiProl beamline at FERMI - EXPIRATION DATE HAS BEEN POSTPONED

Deadline: 2 March 2020

Ref: DB/20/4

Company description

Elettra Sincrotrone Trieste is an international multidisciplinary research center operated as a user facility, featuring a 2.0/2.4 GeV, third-generation synchrotron light source (Elettra), a new free-electron laser light source (FERMI) and a variety of support laboratories. The extremely high quality of the machines and beamlines has set new performance records and has been producing results of great scientific and technological interest. See <http://www.elettra.eu> for more information.

Beamline/Activity/Project description

The DiProl beamline exploits the high degree of transversal and longitudinal coherence, as well as the variable polarization and wavelength tunability of the FERMI-FEL, to perform a variety of experimental measurements based on the scattering of x-rays. The most prominent technique is coherent diffraction imaging, which can be implemented either in transmission or reflection geometry. Optically-probed XUV four-wave-mixing (X-FWM) methods are another important ongoing development, which finds frequent usage in studies of thermal transport. Research applications in materials science, especially in the field of femto-magnetism, are now gaining importance in view of novel high-speed, high-density data storage applications. Information on these activities can be found at:

<http://www.elettra.eu/lightsources/fermi/fermi-beamlines/diproi/diproihome.html>

Job description

This job involves the operation, maintenance and upgrade of the beamline and experimental station. The development of the core capabilities of the instrumentation is a key aspect. The successful candidate will actively participate to the discussion and realization of the in-house research activities. It is expected that he/she interacts with the users of the beamline, not only by providing assistance during and after beamtimes, but also fostering collaborative research projects.

Qualifications

A Ph.D. in physics, engineering, chemistry or a related discipline is required. In the case the Ph.D has not yet been awarded, the candidate must prove that he/she has completed the course of studies and the defense has already been scheduled. In any case, the Ph.D. title must be obtained by the end of March 2020.

A track record in either FEL or synchrotron experiments is essential.

Established knowledge of at least two of the following experimental techniques will be positively evaluated, especially when combined with time-resolved methods:

1. coherent diffraction imaging or holographic techniques for fast imaging reconstruction;
2. small angle x-ray scattering;
3. x-ray absorption spectroscopy or x-ray reflectivity;
4. x-ray photon correlation spectroscopy.

Previous experience in FEL/synchrotron instrumentation development will be an advantage.

A research background in the fields of non-linear optics, transport phenomena or magnetism (especially dynamics) will be highly desirable.

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Time-management skills and ability to prioritize the jobs activities are expected, together with the capability to interact with staff and external collaborators, as well as to work as part of a multi-disciplinary team.

Excellent oral and written communication skills in English are essential.

A working knowledge of the Italian language is desirable, but not required.

The deadline for the submission of the application is March 2, 2020.

The appointment envisioned is a fixed term contract of an initial duration of 12 months. The salary will be commensurate with previous experience and qualifications of the candidate.

Applications should include a full curriculum vitae, the names and contact information (including electronic mail) of at least two references.

We thank all applicants in advance.

For more information, please contact Flavio Capotondi (email: flavio.capotondi@elettra.eu).

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?ref=DB%2F20%2F4>

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