



Elettra Sincrotrone Trieste

Postdoctoral Position for TeraFERMI beamline

Deadline: 16 February 2020

Ref: DB/20/3

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

TeraFERMI is the THz beamline of the FERMI Free-Electron-Laser at Elettra. TeraFERMI collects high brightness, coherent THz radiation emitted by the FERMI accelerator and guide it into a dedicated THz Laboratory. Ultrashort, single-cycle THz pulses with MV/cm electric fields and Tesla magnetic fields are available for experiments on a broad class of materials. These features permit to drive the system out of equilibrium, shaping the material properties in a desired manner. See <http://www.elettra.eu/lightsources/fermi/fermi-eamlines/terafermi/terafermi.html> for more information.

Job description

We are looking for a researcher with proven expertise in THz spectroscopy and THz-based ultrafast time-resolved techniques. He/she will contribute to the operation, optimisation, maintenance and upgrade of the TeraFERMI beamline and experimental station. He/she is expected to actively participate to the discussion and realization of the in-house research activities, with a special focus on Dirac quantum materials and other low-dimensional systems. The candidate will have to provide high-quality support to the external users of the beamline, also promoting collaborations in a variety of research projects.

Qualifications

A Ph.D. in physics or related disciplines 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 April 2020.

A proven track record in THz Time-Domain-Spectroscopy and THz Pump-Probe spectroscopy is mandatory.

Previous experience in research fields related to Dirac materials and semiconducting hetero-structures is highly desirable.

Proven skills and experience in the design, construction and commissioning of instrumentation relevant to synchrotron/FEL beamlines will be positively evaluated.

Knowledge of data analysis software and programming skills (Matlab, Python, Labview) would be appreciated. Previous experience with electromagnetic simulation codes is considered as a plus.

Time management skills and ability to prioritize 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.

The deadline for the submission of the application is February 16, 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.

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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.

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?ref=DB%2F20%2F3>

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