



Elettra Sincrotrone Trieste

# RF Engineer

Deadline: 25 February 2022

Ref: GA/22/5

## 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. In order to allow the laboratory to remain competitive in the next 20 years, an entirely new source - Elettra 2.0 - belonging to the new generation of storage rings (DLSR or Diffraction Limited Storage Ring) is being developed. 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 will have to be upgraded and new beamlines developed to take full advantage of the characteristics of Elettra 2.0. The new machine is scheduled for commissioning in the second half of 2026. See <http://www.elettra.eu> for more information.

## Beamline/Activity/Project description

The core task of the Elettra Radio Frequency (RF) team is to ensure the effective, secure and continuous operation of the 500 MHz RF systems of the Elettra facility. Achieving this requires development and optimization of the RF subsystems and RF components, full understanding and extensive studies of beam dynamics in order to improve beam acceleration and quality and its application to the real accelerator, fine tuning of the RF system parameters and continuous maintenance duties. At the same time the RF team has performed and performs international collaborations - the last partner was the SESAME facility and current partner is the European Spallation Source ERIC - to design and deliver key components for particle accelerators. At present the RF team is involved in the design and refurbishing of the RF system for the Elettra 2.0 project, therefore facing a major challenge in terms of the required beam quality, beam reliability and project schedule.

## Job description

The successful candidate as part of the RF team will be involved in the design, development and commissioning of the new RF system suitable to accelerate the beam particles in the framework of the Elettra 2.0 project. He/she will also deal with the maintenance and operation of the current RF system of Elettra and perform measurement and acceptance test of prototypes and systems in the RF laboratory. The successful candidate is expected to be available for travel duties and to be on call for maintenance duties.

## Qualifications

A university degree in Electronic Engineering, Electrical Engineering, Telecommunications Engineering, Physics or related disciplines is required. A lower technical degree might be considered, if accompanied by at least two years of practical experience.

Possession of most of the following technical skills should be documented and demonstrated:

- strong competence and knowledge of electromagnetic, electronic, and electrical engineering principles;
- knowledge of basic circuitry design and their commissioning
- use of laboratory RF instrumentation and measurement equipment;
- use simulation and 3D electromagnetic design tools;
- commissioning experience of RF components, such as accelerating cavities or RF power amplifiers

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

S.S. 14 Km 163,5 in Area Science Park  
34149 Basovizza, Trieste, Italy  
T. +39 040 37581  
F. +39 040 938 0903

P.IVA e C.F. IT00697920320  
Cap. Soc. € 47.632.663,00 i.v.  
PEC: [sincrotrone.trieste.elettra@legalmail.it](mailto:sincrotrone.trieste.elettra@legalmail.it)  
[www.elettra.eu](http://www.elettra.eu)

Iscritta al Registro delle Imprese di Trieste  
Società di interesse nazionale  
ai sensi dell'art. 10, comma 4,  
L. 19 ottobre 1999 n. 370

CERTIFIED  
MANAGEMENT SYSTEM



UNI EN ISO 9001:2015  
UNI ISO 45001:2018



Elettra Sincrotrone Trieste

Previous experience at a research infrastructure would be considered a distinctive advantage, as would be knowledge of RF accelerator physics and RF engineering.

Very good oral and written communication skills in Italian, as well as good oral and written communication skills in English are essential.

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.

The appointment envisioned is a permanent position, although in the absence of fully qualified candidates a term position might be considered.

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

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

Due to the situation related to the COVID-19 virus, the interviews will be organized by video conference call.

The deadline for the submission of the application is February 25, 2022.

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, 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 be excluded from the present selection procedure. 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?id=2421>

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

S.S. 14 Km 163,5 in Area Science Park  
34149 Basovizza, Trieste, Italy  
T. +39 040 37581  
F. +39 040 938 0903

P.IVA e C.F. IT00697920320  
Cap. Soc. € 47.632.663,00 i.v.  
PEC: [sincrotrone.trieste.elettra@legalmail.it](mailto:sincrotrone.trieste.elettra@legalmail.it)  
[www.elettra.eu](http://www.elettra.eu)

Iscritta al Registro delle Imprese di Trieste  
Società di interesse nazionale  
ai sensi dell'art. 10, comma 4,  
L. 19 ottobre 1999 n. 370

CERTIFIED  
MANAGEMENT SYSTEM



UNI EN ISO 9001:2015  
UNI ISO 45001:2018