Software Engineer

Deadline: 18 June 2021
Ref: IA/21/14

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 IT Group of Elettra Sincrotrone Trieste fulfils a wide range of activities ranging from ICT systems and services administration to accelerator and beamline control and acquisition, from scientific business software development to scientific computing as well as ICT research and development. The "Software for Experiments" team of the IT Group is focused on the development of control and data acquisition systems for the Elettra and FERMI beamlines. The control system of Elettra and FERMI consists of several computers distributed along the facilities that interface with the different equipment to be controlled. State-of-the-art hardware and software technologies are adopted; the TANGO control system software (http://www.tango-controls.org) is used to develop distributed control applications.

Job description

The successful candidate will be involved in research activities of industrial interest and in particular in the Microtomo 2 project focused on the design, construction and installation of a new x-ray experimental station for microtomography, based both on conventional and Thomson backscattering sources, in the framework of a collaboration with Università della Calabria.The successful candidate will work within the IT Group, more closely with the Software for Experiments Team and will collaborate with the Industrial Liason Office (ILO).He/she will address all topics related to the instrumentation control and in particular, he/she will be in charge of:

  1. interacting with the supplier companies to agree on the hardware to be used for the control of the instrumentation;

  2. designing and developing the control system for integrating the beamline instrumentation (motors, detectors, shutters, etc.)

  3. designing and developing the experiment control system, implementing the required imaging and tomographic scanning modalities;

  4. managing the data workflow (including data reconstruction and archiving);

  5. participating in the design and installation of the Access Control System;

  6. participating in the design and installation of the network and storage equipment

The final system integration will be done on site at Università della Calabria, Arcavacata di Rende (CS).

Qualifications

A university degree in Computer Science, Engineering or a related field is required together with advanced knowledge of Python, C/C++, GNU/Linux and familiarity with electronic laboratory instrumentation, detectors and networking concepts.

Work experience of a least 1 year in software engineering will be considered an advantage.

Preferences will be given to candidates with previous work experience in large scale research infrastructures and research institutes.

The following technical skills will be considered a plus:

- familiarity with the TANGO framework;

- familiarity with x-ray imaging and tomography;

- knowledge of distributed computer systems;

- experience in the development of PLC software.

Good time management skills are expected, together with the ability to interact with project partners and work as part of a multidisciplinary team.

Good oral and written communication skills in English are essential.

The appointment is a fixed term contract of 24 months. The salary will be commensurate with the previous experience and qualifications of the candidates.

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

The deadline for the submission of the application is June 18, 2021.

In accordance with the provisions of article 21 of the Italian legislative decree no. 39/2013 and in conjunction with article 53 (subsection16ter) 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.
For more information, please contact Roberto Pugliese (email: roberto.pugliese@elettra.eu).

To apply for this position please visit the following link:
https://www.elettra.trieste.it/it/about/careers/working-withus.html?id=1921