



Elettra Sincrotrone Trieste

Research Associate for Euro-Biolmaging at Elettra

Deadline: 11 February 2022

Ref: DA/22/1

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. A new generation, diffraction-limited storage ring light source denoted as Elettra 2.0 is under development. See <http://www.elettra.eu> for more information.

Beamline/Activity/Project description

Euro-Biolmaging (EuBi hereafter) (<http://www.eurobioimaging.eu/>) is a large-scale pan-European research infrastructure project included in the Roadmap of the European Strategy Forum on Research Infrastructures (ESFRI) that recently has been structured as an European Research Infrastructure Consortium (ERIC). In this framework the SYRMEP X-ray imaging beamline of Elettra has been appointed as *Node for Phase Contrast Imaging* and is required to provide access for users submitting proposals through the EuBi portal (<http://www.eurobioimaging-interim.eu/>).

In order to meet the requests of the EuBi user community, the set-up of the SYRMEP beamline needs to be upgraded with the acquisition of new equipment, optimization of the acquisition and reconstruction pipeline for Computed micro-Tomography (micro-CT), implementation of new protocols for dynamic studies (4DCT) and optimization of the Pore3D software for quantitative analysis.

Job description

The successful candidate will be involved in the improvement of the acquisition and reconstruction pipeline for micro-CT with the implementation of online reconstruction processes (such as RECAST3D) and fast procedures for offline reconstruction of large volumes. He/she will also be in charge of the Pore3D software optimization through the completion of its porting from the IDL platform to a platform based on Python and Jupiter notebooks, and with an extension of its capabilities more focused on the framework of biomedical applications.

Qualifications

A PhD in Computer Science, Engineering, Physics or related disciplines and proven programming skills with Python, IDL, C ++ languages, Jupiter notebooks interface, and project management via GitHub platforms are required.

Knowledge of image processing techniques (both traditional and based on machine learning) is essential, as well as an advanced experience in the use of 3D / 4D data visualization software (VGStudio, Avizo, etc.) Hands-on experience in X-ray microCT with synchrotron radiation or conventional X-ray sources would be an asset.

The candidate should possess strong interpersonal skills to pursue collaborative research programs in a team-oriented environment and to be able to become part of existing research collaborations.

Good time management skills and ability to prioritize are expected, together with the ability to interact with project partners and to work as part of a multi-disciplinary team. Good oral and written communication skills in English are essential.

The appointment envisioned is a fixed term contract of an initial duration of 12 months.

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 reference.

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

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Due to the situation related to the COVID-19 virus, the interviews will be performed through video conferencing.

The deadline for the submission of the application is February 11, 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.

For more information, please contact Giuliana Tromba (email: giuliana.tromba@elettra.eu).

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?id=2341>

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