



SESAME

Synchrotron-light for Experimental Science & Applications in the Middle East

Vacancy Notice No:	SS/20/03.
Position and Grade:	Experimental Data Engineer (Grade and Step will be defined according to the experience).
Sector:	Scientific.
Duty Station:	Allan, Jordan.
Issue Date:	December 16, 2020.
Type/Duration of Appointment:	Fixed term for 3 years and renewable (first 12 months are probation period).
Date for entry on duty:	March 1 st 2021, or as soon as possible before this.
Application Deadline:	February 18 th , 2021 or until a suitable candidate is found.

Organization Setting

The Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME) has been established in Jordan, under the auspices of UNESCO. Its mission is to promote international collaboration in the Middle East and neighboring countries using synchrotron light for basic and applied research in physics, chemistry, biology, materials science, environmental and medical investigations, archaeological studies and other research areas of relevance to the region. The centerpiece of SESAME is an advanced 2.5 GeV synchrotron light source that has been constructed and is operated by the Members of SESAME with the support of the international community. SESAME is an international scientific and technological center of excellence open to all qualified scientists worldwide. Three beamlines (XAFS/XRF, IR and MS) are currently in operation and open to external users. A fourth and fifth beamline (for X-ray tomography and soft X-ray spectroscopy) are under construction and are expected to come into operation in 2022. The experimental data engineer will be associated with the Data Collection and Analysis team of the Scientific Sector at SESAME and be responsible among with the other team members for the experimental data flow from the beamlines to the final destination in the storage pool. In this interdisciplinary setting, closely connected to data generation and acquisition, new staff member will have the opportunity to implement, customize and develop innovative workflows of vary scale data analysis and scientific exploitation.

Assignment

Under the supervision of the Scientific Director, and in close collaboration with the Data Collection and Analysis team, the main responsibilities of the candidate will be:

- Design, develop, implementation, documentation, maintenance, and continuous improvement of the beamlines Data Acquisition Systems (DAQ).
- Establishing standards, procedures and workflows for experimental data collection, automatization and protocols.
- Design, develop, coding, testing and debugging system software under Linux OS platform environment.
- Tasks will range from high level instrument programming and scripting of

<p>experimental workflows in order to manage small to large data rates and volumes between beamline detectors and high-performance compute and storage infrastructures to data processing and visualization.</p> <ul style="list-style-type: none"> • Creativity and resourcefulness are needed for handling intersectional interesting problems of the instrument hardware and software. • Working closely with beamline scientists and control engineers on any of the above functions. • Carrying out any other relevant tasks/duties as requested by the Scientific Director and/or the Data Collection and Analysis team leader.
<p>Education and Experience</p> <ul style="list-style-type: none"> • B.Sc. degree in engineering or science. • Proven programing experience in C\C++. • Proven scripting experience in Python. • Excellent knowledge in Linux OS (preferably Red Hat based OS). • Adequate knowledge in networking (TCP/IP, UDP, broadcasting, ...etc.). • Up to 3 years relevant working experience. <p><i>Favored profile</i></p> <ul style="list-style-type: none"> ▪ Experience in computational tools and programing i.e. CUDA, OpenCL, MPI or OpenCV. ▪ Knowledge or experience in EPICS.
<p>Skills and Abilities</p> <ul style="list-style-type: none"> • Available to work in Jordan. • Available to work under pressure. • Excellent knowledge of English (oral and written). • Team spirit and good communication skills. • Working in an environment that requires multi-tasks skills. • Skills in organizing resources and establishing priorities. • Skills in troubleshooting, diagnostics, and problem-solving. • Available to travel abroad, including periods away from home. • Passionate about new technologies, scientific research, and synchrotron radiation applications (preferable). • Result oriented, responsible, self-directing and eager to learn. • A good listener and communicator who can build sustainable relationships. • Enthusiastic about developing new project ideas.
<p>Remuneration</p> <p>Appointment is made by the SESAME Director. The Experimental Data Engineer will be hired at the Grade and Step compatible with his/her experience.</p>
<p>How to apply</p>

A detailed C.V. in English including the name, affiliation and e-mail address of 3 referees, and a motivation letter should be addressed to the Administrative Director by filling the Online Submission Form on the announcement page. Candidates from SESAME Members with equal qualification will be given preference.

For further Information

Consult the SESAME web site: www.sesame.org.io