SESAME

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

Vacancy Notice No:	TS/19/04
Position and Grade:	**Mechanical Engineer (Design) (P1, Step I)**
Sector:	Technical Sector
Unit/section:	Mechanical Group
Duty Station:	Allan, Jordan
Issue Date:	May 2019
Type/Duration of Appointment:	3 years (first 12 months are probation period).
Benefits:	Health insurance, Life and disability insurance, Rental subsides, Education grant.
Date for entry on duty:	As soon as possible
Application Deadline:	June 01, 2019

Organization Setting

SESAME is the first synchrotron light source in the Middle East. It is located in Allan (Jordan). The facility consists of a 20 MeV Microtron, an 800 MeV Booster synchrotron and a 2.5 GeV electron storage ring. Two beamlines, the XAFX/XRF (X-ray absorption fine structure/X-ray fluorescence) spectroscopy and IR (infrared) spectromicroscopy beamlines, are in operation and started to host users in 2018. A third beamline, the MS (Materials Science) beamline, is expected to come on stream in a few months, and a fourth, the MX (Macromolecular Crystallography) beamline, is under construction. Meanwhile, plans are underway for construction of the BEATS (BEAmline for Tomography at SESAME) beamline and HESEB (HElmholtz-SEsame) beamline for soft X-rays. SESAME will therefore permit world-class research in virtually all fields of science. The Centre offers a vibrating and stimulating international environment with great possibility for scientific and technical growth. SESAME will therefore permit world-class research in virtually all fields of science. The Centre offers a vibrating and stimulating international environment with great possibility for scientific and technical growth. It is seeking to recruit a motivated Mechanical Engineer (Design) to support the activities in the Mechanical Engineering Group. SESAME uses state-of-the-art instrumentation, codes and tools to ensure the reliable operation of the three accelerators. The Mechanical Engineering Group plays a vital role in the design and development of new and innovative technical systems that enable world-class applied research to be performed at SESAME.

Assignment

Under the supervision of the Technical Director, and in close collaboration with the Mechanical Group, the incumbent will:

- Work closely with internal & external scientific and engineering staff to produce mechanical designs for projects including SESAME accelerators and beamlines.
- Carry out mechanical design studies, design or modify complex and technically advanced mechanical assemblies (precision positioning systems, vacuum chambers, magnets, scientific equipment. etc.) in close collaboration with scientific and technical staff, using Computer Aided Design tools (AutoCAD and SolidWorks software).
- Create 3D models of mechanical assemblies according to technical specifications.
- Produce manufacturing drawings including dimensions, tolerances, materials, and procedures according to standards with a high level of skills.
- Carry out calculations and FEA.
- Participate in the installation, commissioning and service of the mechanical equipment's.
- Procurement of equipment through commercial suppliers.
- Supervision of internal and contract design staff and control of quality.
- Contribute to hazard analysis and risk assessment exercises.
- Maintain and update engineering drawings and documentation on projects.
- Work within SESAME procedures and contribute to their development.
- Carrying out any other tasks/duties as requested by the line manager and/or SESAME Technical Director.

Education and Experience

- B.Sc. degree in Engineering. Two to five years of experience in design and of technical systems.
- Proficiency in 3D CAD modelling (AutoCAD, Solid work preferred).
- Ability to prepare and update manufacturing and assembly drawings according to required standards.
- Experience with FEA analysis and relative codes.
- Work experience in developing products in a high-tech environment.
- Preparing technical documents and user manuals.
- Previous work in a scientific research lab or a synchrotron facility.

Knowledge, Skills and Abilities

- Working in an environment that requires multi-tasks skills.
- Working in a team but also capable of working independent without direct supervision.
- Excellent communication skills, both oral and written.
- Ability to learn and support new systems and applications, including support for the operational need of the facility (i.e. manning machine shifts).
- Good skills in using laboratory electrical/mechanical tools for the installation of equipment and performing troubleshooting and repairing if required.
- Skills in troubleshooting, diagnostics, and problem-solving.

- Good level of English, reading and writing.
- Available to travel abroad, including periods away from home.
- Available to work occasional shifts during machine development periods.

Employment Conditions

- The candidate would be expected to take up his/her position as soon as possible
- The work location is in Jordan
- The candidate should be willing to travel abroad for training, and to participate in workshops, seminars and meetings.
- The starting salary will be that of a P1 post. Very exceptionally, if the incumbent's qualifications and experience justify this, the Step, and thus starting salary, may be higher.
- The candidate should preferably be a national of a Member of SESAME.
- SESAME is an equal opportunity employer.

How to apply

A detailed C.V. in English and a cover letter should be addressed to the Administrative Director by filling the Online Submission Form on the announcement page.

For further Information

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