



SESAME

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

Vacancy Notice No:	TS/22/05
Position and Grade:	Power Supplies Engineer Grade P0-P1, grade and Step will be defined according to the experience)
Sector:	Technical
Duty Station:	Allan, Jordan
Issue Date:	December 21, 2023
Type/Duration of Appointment:	3 years (first 12 months are probation period).
Date for entry on duty:	As soon as possible
Application Deadline:	March 21, 2023 or until a suitable candidate is found

Organization Setting

SESAME is the first synchrotron light source in the Middle East and neighbouring countries. It is located in Allan (Jordan). The Facility was officially inaugurated in May 2017. It consists of a 20 MeV Microtron, an 800 MeV Booster synchrotron and a 2.5 GeV electron storage ring. Three beamlines are in operation and hosting users. They are the BM02-IR (Infrared) spectromicroscopy beamline, BM08-XAFS/XRF (X-ray Absorption Fine Structure/X-ray Fluorescence) spectroscopy beamline, and ID09 - MS/XPD (Materials Science/X-ray Powder Diffraction) beamline. A fourth, the soft X-ray ID11L-HESEB (HEImholtz-SEsame Beamline) beamline, will be receiving its first users in 2023, and a fifth, the ID10-BEATS (BEAmline for Tomography at SESAME) beamline, will be inaugurated in June 2023. This suite of five beamlines, from the eight planned for Phase I, will allow world-class research in virtually all fields of science.

Assignment

Under the supervision of the Technical Director, and in close collaboration with the Power Supplies team, the main responsibilities of the candidate will be:

- Participate in putting specification, in the design, procurement, test, calibration, installation, commissioning, operation, of new DC or pulsed power supplies systems (including PFN and PFL systems and modulators).
- Participate in maintenance, upgrade and development of the DC or pulsed power supplies systems (including PFN and PFL systems and modulators) for the SESAME accelerators, as well as to any other activities of the power supplies' team.
- Participate in both analog and digital electronic design.
- Carrying out comprehensive tests and setting proper testing procedures for various systems, this also include the ability to automate the testing procedure if required.
- Work closely with other machine and beamlines' teams to ensure that ultimate performance and precision of the installed power supplies is achieved, performance limits are well understood and the required beam stability is achieved.

- Provide support for machine operation and for the running power supplies systems, in regards of operational faults and requests for development and/or enhancements.
- Flexibility to work in different working modes and conditions, to participate in machine development shifts, and support machine operation during user shifts when required.
- Documentation and reporting on progress on the work undertaken in all areas on a periodic basis.

Education and Experience

- B.Sc. degree in Electronics Engineering or equivalent.
- Five to eight years of experience in the relative fields.
- Excellent understanding of EMC and EMI suppression methods.
- Excellent PCB layout skills, Altium Designer knowledge is preferred.
- Excellent interpretation of electric/electronic schematics.
- Familiar with different electric measurement and analysis tools and how to operate them.
- Basic programming skills, C and Python preferred.
- Good experience in development and operation of laboratory instrumentation.
- Good skills in using laboratory electrical/mechanical tools for the installation of equipment and performing troubleshooting and repairing if required.
- Experience in proper wiring, cabling, testing, and termination techniques of different cables-types.
- Skills in troubleshooting, diagnosing, and problem-solving.
- Experience in reporting and documentation.
- Have good physical abilities.

Knowledge, Skills and Abilities

- Solid knowledge of analog and digital electronics.
- Solid knowledge in the principle of operation of different electric and electronic devices.
- Solid knowledge in the principle of operation of power inverters and converters.
- Solid knowledge in Circuit simulation (p-spice, LT-SPICE, PSIM).
- Solid knowledge in control theory.
- Knowledge of procedures and standards in the relevant field, including but not limited to safety, protection, interfacing, etc.
- Excellent knowledge in CAD systems, AutoCAD is required, SolidWorks is preferred.
- Identifying and resolving problems in a timely manner.
- Excellent communication skills, both oral and written.
- Able to work independently without direct supervision.
- Available to work in Jordan.
- Available to work under pressure.
- Available to work occasional shifts.
- Availability to travel abroad in the frame of SESAME collaborations, training, sharing knowledge and any other requirements.

- Very good knowledge of English (oral and written).
- High degree of multi-tasking and time management capability.
- Integrity and professionalism.
- Team spirit and good communication skills.

Remuneration

- Appointment is made by SESAME Director. The Power Supplies Engineer will be hired at the Grade and Step compatible with his/her experience.
- The work location is in Allan, Jordan.
- The position requires full time commitment.
- In addition to the basic salary the incumbent is entitled to other allowances (as stated in SESAME provisional Staff Rules and SESAME Staff Regulations).
- 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: <http://www.sesame.org.jo>