Engineer (Electrical)

at the **Extreme Light Infrastructure – Nuclear Physics (ELI-NP)**

Research Activity 2 - High-Brilliance Gamma Beam

Job Description and Candidate's Profile

Scope of Work

The successful candidate will become a member of the operation, maintenance and development team of the High-Brilliance Gamma Beam System (GBS) and he will collaborate with the other technical teams of ELI-NP. High power RF engineering is needed for the operation of the high electric field accelerating structures used to accelerate electrons to relativistic energies and of the related multi-megawatt RF power amplifiers. High power supplies are needed for the operation of the magnets and quadrupole lenses of the electron accelerator.

During the implementation phase of the GBS, the successful candidate will be involved in the commissioning and testing of the high-power RF systems, high-voltage power supplies, power electronics and electrical power distribution lines.

During the operation phase the successful candidate will be in charge of the proper operation, maintenance and development of the GBS high-power RF systems, high-voltage power supplies, power electronics and electrical power distribution lines.

Main responsibilities:

In the implementation phase:

- The engineers will gather the knowledge and experience necessary to ensure the operation of the infrastructure and of the related equipment. In this context, they will benefit from training provided by the suppliers of the equipment regarding the assembling, testing and commissioning of the equipment. Therefore, the candidates will have to be available to travel and work abroad for a determined period of time;
- Ensuring the best and efficient collaboration and dialogue between the research staff and the suppliers of the respective equipment and various services;
- Ensuring the conformity of the activities with the standards in the field.

In the operational phase:

- Maintaining the performances of the ELI-NP equipment and systems to the desired level;
- Actively participating in the technological development activities performed at ELI-NP;
- Providing the technical support for the experiments.

Main tasks:

- Acquiring the knowledge and experience necessary to ensure the proper operation of the high-power RF systems, high-voltage power supplies, power electronics and electrical power distribution lines;
- Providing technical support for scientific and engineering activities during the implementation of experimental setups that use ***High-Brilliance Gamma Beam***;
- Participation to the installation of all the electronics equipment and devices related to high-power RF systems, high-voltage power supplies, power electronics and electrical power distribution lines;
- Follow-up and documentation on activities during the installation, commissioning, maintenance

- Producing technical specifications, drawings and costs estimations; writing and/or reviewing installation, maintenance, coordination procedures;
- Maintenance and exploitation of the high-power RF systems, high-voltage power supplies, power electronics and electrical power distribution lines;
- Contribution to the organization and scheduling of the preventive, predictive and corrective maintenance of the electronics equipment;
- Collaboration with other technical teams to meet the expected goals of the working team, this includes collection of information, reporting and coordination.

Professional background:

- Bachelor or Master Degree in Engineering in Electrical/Automation/Electronics or related field.
- Experience in high power RF technologies and applications; proven record of projects related to production of technical specifications for high power electronics systems in industrial plants and/or research institutions; proven experience in RF equipment technologies is desirable.
- Operation and maintenance experience, preferably in similar positions in industrial plants and/or research institutions.
- Hands-on experience with hardware is essential;
- Self-motivation to develop the qualification and skills in the field of the laser systems;
- Fluency in English, communication and interpersonal skills are a prerequisite;
- Availability to travel and perform work stages abroad.

Working arrangements/Conditions of employment:

- Full-time position, based in Bucharest–Magurele, Romania.
- Included: private medical coverage, paid annual leave;
- Motivating salary, at European level, based on qualifications and experience.
- Professional, multicultural and interdisciplinary work environment

Applications:

Applications shall be accompanied by the documents requested in the Rules of Selection for this position;

Applications shall be sent to the Human Resources Department at human.resources@eli-np.ro