

Junior Researcher

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

Research Activity 5 – Experiments with Combined Laser and Gamma Beams

Vacuum R&D

Job Description and Candidate's Profile

Scope of work

Junior Researchers will ensure part of the scientific expertise needed in the operation and development of the Combined Laser and Gamma Beams experiments at ELI-NP. They will pursue their activity in working groups led by Senior Researchers, while personal research and collaboration initiative will be encouraged.

In the operational phase, they will ensure the optimal operation of the experimental setups within Research Activity 5, will participate to the upgrades and to the development of new experimental setups and will prepare and support experiments within the experimental program of ELI-NP.

Main responsibilities:

- Advising the Heads of Research Activities according to their own areas of expertise;
- Participating to the design and construction of the experimental setups and market research;
- Be active in the research teams in the development of the experimental setups and in performing the research experiments;
- Maintaining collaborations with external research teams.

Main tasks:

- Performing the specific tasks within Research Activity 5 led by a Senior Researcher;
- Participating to scientific meetings and conferences;
- Participating to the specific activities during the commissioning and installation phases;
- Getting actively and efficiently involved in the communication within the ELI-NP team and promoting a harmonious collaboration framework.
- Improving scientific knowledge and competencies in ELI-NP research topics.

Professional background:

- PhD degree in fields related to the research activity at ELI-NP;
- Very good knowledge in a scientific field relevant for ELI-NP;
- Hands on experience with vacuum installations with different technologies;
- Up to date with the state of the vacuum industry and available technical options (turbo-molecular pumps, ion pumps, dry pumps, scroll pumps, membrane pumps, cryopumps, vacuum gauges types and ranges);
- Practical expertise in leak detection and residual gas analyser data interpretation;
- Experience with vacuum compatible materials and systems;
- Fluency in English, both written and spoken;
- Goal-oriented attitude;
- Taking ownership of handled tasks;
- Willingness to continuously improve and develop new skills;
- Proven teamwork experience, communication and efficient collaboration skills;
- Good references in research;

Would be a plus, but at least 2 required:

- Experience with high vacuum systems, preferably in the framework of laser, nuclear or high-energy physics experiments;
- Experience in designing and building automatic interlocks for vacuum systems;
- Programming and maintenance of PLC systems (e.g. Simatic Step 7 - WinCC);
- Knowledge of proper architecture design patterns for the safe operation of high vacuum systems (e.g. protection against power cuts, spontaneous leaks) to ensure both operator as well as equipment safety.

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, depending on qualifications and experience;
- The candidate should be available to travel abroad for scientific collaboration at various research infrastructures, for part of the time.

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.