Post–Doctoral Research Assistant

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

Research Activity 5 – Experiments with Combined Laser and Gamma Beams

Numerical Simulations

Job Description and Candidate's Profile

Scope of Work

Post-doctoral research assistants will ensure part of the scientific expertise needed to prepare the ELI-NP experiments. Post-doctoral research assistants will pursue their activity in the working groups led by Research Scientists. Personal initiative concerning scientific research will be also encouraged.

Main tasks

- Improving scientific knowledge and competencies in ELI-NP research topics;
- Performing tasks within Research Activity 5 related to one or more of the following subjects: Numerical PIC simulations, MHD simulations, Processing simulation data;
- Participating in scientific meetings and conferences;
- Participating in the implementation of the setups foreseen in the Technical Design Reports (TDRs) for ELI-NP experiments;
- Participating in specific activities during the installation and commissioning phase;
- Providing support for the preparation of the technical documents for the acceptance of Project's deliverables;
- Actively and efficiently involving in the dialog and communication within the ELINP team and promoting a harmonious collaboration framework.

Proffesional backgraund :

- PhD degree in plasma physics or interaction of radiation with matter;
- Experience with high-performance-computing (HPC) on clusters or supercomputers;
- Relevant experience with particle-in-cell (PIC) simulations;
- Programming: C/ C++ and/or Fortran;
- Linux proficiency ;
- Proficient in at least one of the post-processing tools such as Matlab, IDL and VisIt;
- 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;
- Availability to travel and perform work stages abroad.

Would be a plus, but at least 2 required:

- Experience in numerical PIC simulations the interactions of laser beams with matter;
- Familiar with experiments (setups, detectors, beam optimization) with short pulse lasers;
- Experience in PIC simulations for laser acceleration processes in gas targets;
- Proficiency in MPI programming, code parallelization;
- Proven proficiency in programming post-processing code in Matlab or IDL.

Working arrangements/Conditions of employment:

- Full time position, based in Bucharest - Magurele, Romania, for 1 (one) year with the possibility of extension;
- Included: private medical coverage, paid annual leave.

- Motivating salary, at European level, based on qualifications and experience.
- The candidate should be available to travel abroad for scientific collaboration at various research infrastructures, for part of their time.

Applications:

The applications shall be accompanied by the documents requested in the Rules of Selection for this position.

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