

## **Senior Researcher**

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

**Research Activity 3 – Nuclear Physics with High-Power Lasers**

*Senior Researcher in Experimental Strong-Field Physics with Lasers*

### **Job Description and Candidate's Profile**

#### **Scope of Work**

The Senior Researcher will perform scientific experiments and technological developments in Strong- Field QED with High- Power Lasers, will create and lead scientific working groups, and will guide Junior researchers, Post-docs and PhD students. The Senior Researcher will advise the Head of Research Activity in his area of expertise and will participate in the definition and implementation of the scientific aims of Research Activity 3.

#### **Main responsibilities:**

- Collaborating with the Heads of Research Activities for building-up the research teams at ELI-NP and defining the scientific topics;
- Participating in the decision making process regarding the scientific strategy of ELI-NP;
- Leading the research teams in the development of the experimental setups and in performing the research experiments;
- Fostering collaborations with external research teams;
- Identifying topics of scientific interest, correlating the knowledge and experience in the fields of ELI-NP and shaping the main directions of research;
- Contributing to the creation of a new pool of specialists in a unique field of research, which is at the frontier of scientific knowledge today.

#### **Main tasks:**

- Participating in the implementation of the ELI-NP facility;
- Proposing topics of research relevant for ELI-NP and solutions for the implementation of strong-field QED physics experiments within RA3;
- Advising the Head of Research Activity on the specific research field(s) within their areas of expertise;
- Coordinating the activity of PhD students and Post-docs;
- Participating in the scientific strategy meetings of ELI-NP, and in scientific events;
- Participating with leading roles in the implementation of the experimental setups foreseen in the ELI-NP Technical Design Reports (TDRs) for the experiments;
- Maintaining and enhancing the existing scientific collaborations and establishing new ones;
- Leading teams of researchers and engineers in measuring the equipment's parameters and assessing the fulfilment of the technical requirements;
- Actively and efficiently involving in the dialog and 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;
- At least 10 years of experience in research and development or higher education, out of which at least 4 years in fields relevant to strong-field QED with high-power lasers, or closely related fields, such as:
  - relativistic particle acceleration with high power lasers;
  - strong-field QED physics;
  - high-energy particle and radiation diagnostic techniques and instrumentation;

- plasma physics experiments and plasma diagnostics with femtosecond lasers;
  - femtosecond laser spectroscopy and applications.
- Strong publication record and proven history of innovation and leadership in the field;
- Excellent references in research;
- Proven research team leadership;
- Fluent in English;
- Proven teamwork experience, communication and efficient collaboration skills.

**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;
- 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 the Human Resources Department at [human.resources@eli-np](mailto:human.resources@eli-np)