

The Extreme Light Infrastructure ERIC (ELI ERIC) is the world's largest and most advanced high-power laser research infrastructure. As an international user facility dedicated to multi-disciplinary science, ELI provides access to world-class high-power, high-repetition-rate laser systems and enables cutting-edge research, as well as breakthrough technological innovations. The ELI ERIC operates as a single multi-site organization with two complementary facilities specialized in different fields of research with extreme light: ELI Beamlines in Dolní Břežany (Czech Republic) and ELI ALPS in Szeged (Hungary).

ELI Beamlines Facility operates four cutting-edge high-power femtosecond laser systems reaching unprecedented intensities. The operational laser systems make unique femtosecond sources of X-rays and accelerated particles available to scientific users for pioneering research in physical, chemical, materials, life and medical sciences as well as physics of dense plasmas, warm dense matter, and laboratory astrophysics. The ELI Beamlines Facility employs over 350 researchers, engineers and other professionals from more than 38 countries.

The EuPRAXIA Doctoral Network is a new Horizon Europe Marie Skłodowska-Curie Actions Doctoral Network (MSCA-DN), offering 12 high level fellowships that will carry out an interdisciplinary and cross-sector plasma accelerator research and training program for the new EuPRAXIA research infrastructure (www.eupraxia-dn.org). ELI Beamlines Facility in collaboration with the Czech Technical University (www.cvut.cz) will host 2 fellows for 3 years.

ELI Beamlines (the Laser research team and the LUIS team, Dept. of Radiation Physics and Electron Acceleration) is recruiting a young physicist in relevant fields to work on the project "Study laser-plasma interaction in a preformed plasma channel in a high repetition rate regime".

In our team we therefore have the following position available:

Graduate student – Laser-plasma acceleration of high-quality electron beam (177)

Job description:

- research and development of laser-driven compact electron accelerator, based on the high-power high-repetition rate laser system, including relevant laser and plasma diagnostics
- optimization of the laser-plasma interaction aiming a stable and repeatable electron beam required for a compact LPA-based free-electron laser

- contribution to experimental activity in the LUIS technology area, utilizing the novel high-repetition high-power high-quality laser system for the high-quality electron beam acceleration

Requirements:

- MSc in physics or related field
- basic knowledge in programming (C++, Python, MatLab, Mathematica)
- readiness to work in the laser and experimental laboratories
- good knowledge of spoken and written English is necessary
- team player with good communication skills

We offer:

- the opportunity to participate in this unique scientific project
- career growth, professional education
- nice and friendly working environment
- competitive and motivating salary
- meal allowance and canteen
- support of leisure time activities
- 5 weeks of holidays and 6 days of personal leave
- other employee benefits

Applications containing CV, cover letter, contacts of references, PDF file of the master thesis and any other material the candidate considers relevant, should be sent to Prof. Carsten P. Welsch (Carsten.Welsch@Inf.infn.it). Please include the following text in your cover letter, to allow us to process your personal details:

Information on the processing of personal data can be found on <https://www.eli-beams.eu/informace-o-zpracovani-vasich-osobnich-udaju-gdpr/>. We are an equal opportunity employer.