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.

Do you want to see what it takes to be a part of a scientific team and get a taste of what it means to be a scientist?

The Betatron team dealing with secondary sources of radiation within the Department of Radiation Physics and Electron Acceleration

In our team we are offering an

Internship on
Interferometric Characterization of Supersonic Gas Jet Flow for Laser-plasma accelerator based X-ray Source
(IN-30-2023)

What are you going to do?:

- Get acquainted with a unique four-pass interferometric setup developed in ELI-Beamlines for the characterization of supersonic nozzles
- Use already developed tools (our setup together with controllers and code for analysis), but also possibly participate in further development
- Perform tomographic measurement autonomously in order to obtain a 3D gas jet density profile
- Be a part of our team and discuss your work with other members
- Perform experiments using rare gas targets and measure their density distribution based on the position of an obstruction to the gas flow
- Capture fast gas jet turbulences (ns) using the Schlieren method
- Understand the principles of physics involved
- Analyze results

Our requirements:

- University student entering at least the third year of BSc. program (physics or engineering)
- Basic knowledge of related physics and Matlab is beneficial but not necessary.
- Willingness to learn new skills
- Independent English speaker

Internship´s duration:

- 2 – 6 months with a possibility of project continuation through BSc. / MSc. Thesis, start is possible from the 1st or 15th of the month. Exact start based on an agreement.

Our offer:

- Unique opportunity to turn theory into practice within an international research institution in the field of laser technology
- Dedicated mentor
- Specific topic scope – possibility to work on exciting projects within an established team
- Final presentation: Intern conducts final presentation regarding their internship. The event always takes place during the last week of a month when the intern is leaving.
- Completion certificate
- Events for Interns
- Financial remuneration of 170 CZK per hour on an agreement to complete a jod (DPP)
- We do not cover accommodation and/or travel and refreshment expenses
- The starting date is either on the 1st or in particular cases the 15th of the month
- Applicants from 3rd countries, outside of EU must obtain necessary visa and working permits prior to the start of their internship.

Shoot your shot and apply!

Application containing your CV and the topic you are applying for with a brief motivation letter should be sent to **Ms. Andrea Fürst** via andrea.furst@eli-beams.eu

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.


eli
BE PART OF AN ELITE TEAM