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 HHG 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
Designing optimal targets for highly non-linear optical processes
(IN-29-2023)

What are you going to do?:

- Use both analytical and numerical approaches to design optimal conditions needed to produce XUV radiation through the high-harmonic generation process
- Run numerical simulations of the process
- Use already developed tools (our model of HHG covering all the parts of the problem), but also possibly participate in further development
- Analyse results and find optimal conditions of the generation
- Be a part of our team and discuss your work with other members

Our requirements:

- Interest in the topic
- Some knowledge of related physics: electrodynamics, quantum mechanics
- Knowledge of some scripting language (e.g., Python or Matlab)
- Some experience with low-level programming languages (e.g., C, C++, Fortran)

- Willingness to learn new theoretical and computational approaches
- Independent English speaker
- University student entering at least the third year of BSc. program (engineering or physics)

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 practise 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.

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BE PART OF AN ELITE TEAM