



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. A brief summary of the beamlines is provided below:

**L1-Allegro** is a 1 kHz, 50 mJ laser based entirely on thin disk DPSSL pumped picosecond OPCPA. This laser is used regularly for user experiments and is currently being upgraded to have an auxiliary pulse train and a higher output energy of 100 mJ.

**L2-DUHA** is under development and is designed to be a 100 TW, 50 Hz laser for driving a laser wakefield accelerator. This laser based on high energy OPCPA pumped by a cryogenically cooled Yb:YAG multi-slab DPSSL.

**L3-HAPLS** is a 10 Hz, 1 PW laser which was developed by Lawrence Livermore National Laboratory. This laser is currently being used in user experiments and performance ramping of the laser to improve the output parameters has begun.

**L4-Aton** is a kJ-class laser with a design peak power value of 10 PW firing once every 5 minutes and based on amplification via OPCPA and Nd:glass. Commissioning is ongoing with a primary focus on compression of the high energy pulse to 10 PW peak power.

We are looking for:

## Laser scientist (125)

### Job description:

The successful candidate will contribute to the development/upgrade of a laser as a member of the laser development team. This contribution can take many forms and will typically include some combination of practical laboratory work, numerical simulations of optical systems and physical processes, and design and construction of optical subsystems. The nature of the contribution would be determined in part by the interests of the applicant as well as the needs of the project. Possible areas of focus include, but are not limited to, the implementation of high



energy OPCPA, compression of high peak power (100 TW to multi-PW) laser pulses, ultra-short pulse diagnostics and characterization, high energy/average power DPSSL development, precision synchronization of ultrashort pulse trains, and beam manipulation and imaging of large aperture lasers.

**Duties:**

- actively contribute to the development of the laser in the lab and assist younger scientists and students
- assist with the design of subsystems of the laser and be able to take the lead on certain aspects of the laser development
- perform calculations and develop models of optical systems, typical examples could be laser energetics, beam propagation, or nonlinear interactions of light pulses
- prepare manuscripts for publication in academic journals and present experimental results at scientific conferences

**We offer:**

- the opportunity to participate in this unique scientific project
- career growth, professional education
- competitive and motivating salary
- flexible working hours
- nice and friendly working environment
- 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, and any other material the candidate considers relevant, should be sent to Mrs. Jana Ženíšková, HR Senior Specialist (jana.zeniskova@eli-beams.eu). 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.