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.

In our team we have the following position available:

Junior scientist – Atomic, Molecular and Optical (AMO) science (195)

As part of the experimental capabilities at ELI Beamlines, the Department for Structural Dynamics operates and develops a multi-purpose user end-station for applications in AMO sciences (MAC) that uses an HHG source of ultrashort XUV pulses as the primary light source. The MAC user end-station is equipped with electron/ion spectrometers, detectors for coherent diffractive imaging and state-of-the-art sample delivery systems to enable advanced photon science experiments on low density targets (atoms, molecules, clusters and pure and doped droplets). Specific research areas include Atomic, Molecular and Optical (AMO) science experiments have particularly high demands on rapid data analysis for immediate feedback on the quality of collected data. To cover these needs we are working on the implementation of open-source software (often Python-based) for high repetition-rate imaging and spectroscopy applications for real-time analysis of diffraction and spectroscopy data.

We are now looking for a junior researcher/instrumental scientist to work with the MAC team to support user operation and contribute to the further development of unique experimental capabilities of the MAC user end-station.

Job description:

- support user operation at the MAC user end-station
- participate in the development of experimental capabilities of the MAC user end-station

with emphasis on the development of methods for on-and-off-line data analysis
- contribution to the relevant research activities of the Department within national and international collaborations

Requirements:

- PhD in physics, chemistry or related field is desirable, highly motivated candidates with M.Sc. degree are also encouraged to apply (in that case the position will be transferred to a PhD student position)
- strong interests in development of scientific instruments, in establishing concepts for data acquisition and experimental control
- programming skills in Phyton, Matlab are beneficial
- strong interests in scientific fields related to laser physics, nonlinear optics, high harmonic generation, physics with ultra-short pulses, interaction of light with matter, atomic and molecular physics, coherent diffractive imaging
- good networking and communication skills, capability to work in team
- a good knowledge of spoken and written English is necessary as the work environment is international

We offer:

- the opportunity to contribute to the unique scientific project and to develop own scientific profile in the interdisciplinary research field
- career growth, professional education
- competitive and motivating salary
- 5 weeks of holidays and 6 days of personal leave
- pleasant work environment in highly motivated international research-team
- other employee benefits

Project related questions can be addressed to Maria Krikunova (e-mail: maria.krikunova@eli-beams.eu) and Jakob Andreasson (e-mail: jakob.andreasson@eli-beams.eu)

Applications containing cover letter, CV, statement of scientific interests, brief description of previous projects, contacts of two possible references, educational certificates and any other materials the candidate considers relevant, should be sent to Mrs. Mirka Svobodová, HR Project Manager (mirka.svobodova@eli-beams.eu, +420-733690901). 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.