The ELI (Extreme Light Infrastructure) is a unique European project to build large research facilities. ELI-Beamlines as a cutting edge laser facility is currently being constructed in Dolní Břežany near Prague. ELI will be delivering ultra-short, ultra-intense laser pulses with extremely high peak power. It will make available laser beams over a wide range of intensities for multi-disciplinary applications in physics, medicine, biology, material science, modeling astrophysical processes under the conditions of terrestrial laboratories and fundamental sciences. With the ELI-Beamlines lasers new physics regimes when, as yet, unexplored processes come into play, will be accessed.

The HIFI (High Field Initiative) project has recently begun its work at ELI-BL. The HIFI project is established to be the leading project in the high field science. In contrast to other approaches we are emphasizing the synergy between the theory and experiments and building a strong theoretical group to develop new ideas for experiments. In parallel we are building a computing center aimed at conducting computer simulations. The project will advance our knowledge of laser accelerated electrons and ions as well as high energy photon generation in novel regimes when radiation friction and quantum electrodynamics processes, such as electron-positron pair creation and vacuum polarization, become significant. To explore this regime experimentally an upgrade of the existing at ELI-BL infrastructure around the 10 PW laser beam will be done within the HIFI project.

SCIENTISTS FOR ERT (Excellence Research Team)

The ERT (Excellence Research Team) recruits scientists for developing theory, computer simulations, and for preparing and developing of experiments on high power laser facilities, who will work with Prof. S. V. Bulanov*) and ELI-BL staff on **the following activities:**

- theory of charged particle acceleration and hard electromagnetic radiation in relativistic laser plasmas
- development and use of numerical techniques (various computer codes) for simulation of nonlinear processes in laser plasmas
- participation in design and conducting experiments for high-field sciences in ELI-Beamlines

Further questions on scientific project can be addressed to Sergei V. Bulanov (e-mail: sergei.bulanov@eli-beams.eu)

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Requirements:

- PhD in Physics or Mathematics with the focus on theoretical, computation or experimental physics or equivalent degree
- the candidate is required to have experience in one or several fields of theoretical physics related to nonlinear waves, charged particle acceleration, quantum electrodynamics, numerical modeling of nonlinear processes in plasmas or in experimental plasma physics

Job conditions:

- the opportunity to participate in this unique scientific project
- career growth, professional education
- competitive and motivating salary
- 5 weeks of holiday and other employee benefits

Interviews will begin immediately and the position will stay open until filled.

Applications, containing CV, cover letter, contacts of references, and any other material the candidate considers relevant, should be sent to Mrs. Jana Ženíšková, HR specialist (+420 - 601560322).

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*) The ERT team leader, Prof. S. V. Bulanov has graduated from Moscow Institute of Physics and Technology (MFTI). He obtained the PhD degree from MFTI in the field of theoretical physics and astrophysics and the Doctor of Sciences degree at the Institute of General Physics RAS in Moscow in the field of plasma physics. S. V. Bulanov is an expert in theoretical astrophysics, in nonlinear wave theory, in the theory of relativistic laser plasmas and in computer simulations. Being theoretician S. V. Bulanov for several years was a leader of experimental group at the KPSI (JAERI-JAEA-QST) institute in Kyoto in Japan. S. V. Bulanov is a recipient of several notable awards: State Prize of the USSR for Sciences and Technology for achievements in high energy astrophysics, Japan Atomic Energy Agency President's Awards and Awards of the Japan Laser Society for contribution to the laser physics development, and Hannes Alfven Prize of European Physical Society for experimental and theoretical contribution to the development of large-scale next-step devices in high-temperature plasma physics research. S. V. Bulanov published 2 monographs and about 600 papers. His citation indexes are: 16183 citations with the h-index equal to 58, according to the Thomson Reuters Web of Knowledge survey engine.

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