

Workshop

Laser particle accelerators, their applications and possibilities of experiments in the ELI infrastructure

Place: Sauletekio al. 3, NFTMC, A101

Date: 2025 / 04 / 24-25

Registration: <https://forms.gle/rcMbdYxvBv1mGfyu6>

Program

April 24 ♦ Thursday

- 9.00** **ELI user science opportunities: open access and mission-based calls**
Daniele Margarone, ELI Beamlines, Director of Research and Operations, Dolní Břežany, Czech Republic
- 9.30** **Current ELI-NP experimental and simulation activities on 1PW and 10PW lines: from high-brightness electron beams to optimization for secondary sources generation**
Paolo Tomassini, ELI Nuclear Physics, Magurele, Romania
- 10.00** **Towards QED vacuum boiling with high-power laser light**
Sergey Bulanov, ELI Beamlines, Dolní Břežany, Czech Republic
- 10.30** **Coffee break**
- 11.00** **Laser-driven Sources of Ultrashort X-ray Pulses for Multidisciplinary Applications**
Jaroslav Nejdl, ELI Beamlines, Dolní Břežany, Czech Republic
- 11.30** **Generating high energy ion beams using ultra-intense lasers**
Nicholas Dover, Imperial College London, UK
- 12.00** **Automated Bayesian Optimisation in Laser Plasma Acceleration**
Christoph Eberle, University of Munich, Germany
- 12.30** **A Unique Gas Target Setup for Nuclear Astrophysics**
Anup Yadav, Helmholtz-Zentrum Dresden - Rossendorf (HZDR), Germany
- 13.00** **Lunch**
- 14.00** **Experience working at ELI under User Calls**
Vidmantas Tomkus, Department of Laser Technologies, FTMC, Vilnius, Lithuania
- 14.20** **OPCPA: Latest advances in high-power facilities and research highlights**
Rimantas Budriūnas, Light Conversion / VU LTC, Vilnius, Lithuania
- 14.40** **High Intensity lasers for intense applications**
Justas Varpučianskis, Ekspla
- 15.00** **State of ICF research and European Initiatives for IFE**
Dmitri Batani, CELIA, Université de Bordeaux, France
- 15.30** **Discussion: lasers for fusion: moderated by Roman Hvezda (ELI):**
Daniele Margarone (ELI), Dmitri Batani (CELIA), Justas Varpučianskis (EKSPLA)
Valdas Maslinskas (Light Conversion)
- 16.00** **Coffee/Closing remarks and networking**

April 25 ♦ Friday

- 9.00** **Advancing Radiotherapy with Laser-Plasma Accelerators**
Olle Lundh, Lund Laser Center, Sweden
- 9.30** **Focused very high energy electron and gamma ray beams for radiotherapy**
Dino Jaroszynski, University of Strathclyde, Glasgow, UK
- 10.00** **Progress in radiobiology research at laser driven ionizing radiation sources at ELI**
Emília Rita Szabó & Réka Molnár, ELI ALPS, Szeged, Hungary
- 10.30** **Coffee break**
- 11.00** **Studies of BN and Ca using lasers**
Katarzyna Liliana Batani, Institute of Plasma Physics and Laser Microfusion, Warsaw, Poland
- 11.30** **The need of ELI in proton and neutron therapy applications**
Mantas Grigalavičius, VU LTC, Vilnius, Lithuania
- 12.00** **Radiotherapy reimagined: FLASH and the Next generation of treatment**
Jonas Venius, National Cancer Institute, Vilnius, Lithuania
- 12.30** **Potential or theranostic probes for radiotherapy**
Daumantas Matulis, VU Life Science Centre, Vilnius, Lithuania
- 13.00** **Lunch**

REGISTRATION

