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

WORKSHOP

May 21, 2026

Saulėtekio al. 3, Vilnius, FTMC, A101 room

09:00 **ELI user science opportunities: open access and mission-based calls**
Leonida A. Gizzi, ELI ERIC Science director, Dolní Břežany, Czech Republic

09:30 **ELI-NP capabilities and user research opportunities**
Mihail Cernaianu, ELI-NP, Magurele, Ilfov county, Romania

10:00 **The relativistic laser plasma platforms at ELI ALPS: Science and opportunities**
Subhendu Kahaly, ELI ALPS, Szeged, Hungary

10:30 **Coffee break**

11:00 **Laser-Driven Ultrafast Broadband X-ray Sources for Multidisciplinary Research**
Chaulagain Uddhab Prasad, ELI Beamlines, Dolní Břežany, Czech Republic

11:30 **Secondary sources and application developments at ELI-NP**
Andrei Florin, ELI-NP, Magurele, Ilfov county, Romania

12:00 **Laser Plasma Physics Platform status and L4f commissioning experiment**
David Prokop, ELI Beamlines, Dolní Břežany, Czech Republic

12:30 **Rethinking ISO 21254: Standardizing the Interpretation of Laser Damage Threshold Through Advanced Measurement and Analysis Methods,**
Andrius Melninkaitis, Vilnius University Laser Research Center (VU LRC)/ Lidaris

13:00 **Lunch**

14:00 **Laser-driven FLASH radiobiology using a high dose and ultra-high dose rate single pulse proton source (tbd)**
Alessandro Flaco, LOA ENSTA

14:30 **Tiny Models, Big Beams: Biological Experiments in FLASH Radiotherapy**
Mindaugas Džiugelis, National Cancer Institute

15:00 **International Consortium "LT Radiomed": Driving Collaborative Research and Biomedical Capacity at the VU Laser Research Center**
Mantas Grigalavičius, Vilnius University Laser Research Center (VU LRC)

15:20 **Semiconductor detectors for high-energy particles and beams (tbd)**
Tomas Čeponis, Vilnius University

15:50 **Poster session**

Feasibility of Terbium-161 Production via Fast Neutron Activation of Natural Gadolinium at ELI-ALPS
Nikoletta Giannakou, Vilnius University Laser Research Center (VU LRC)

Photosensitiser-Enhanced Radiation-Enabled Energy-Harvesting Films for Biomedical Platforms
Rokas Dobužinskas, Vilnius University Laser Research Center (VU LRC)

Radiosensitization by Radiofrequency Fields
Angela Chinhengo, Vilnius University Laser Research Center (VU LRC)/ Stellensbosch University, South Africa

Tomographic reconstruction of density profiles of gas jets for LWFA
Kazimieras Plentauskas, FTMC / Vytautas Magnus University

Tbd
Mandeep Kaur, FTMC

Bottom-up laser milling of de Laval nozzles for laser wakefield acceleration
Miglė Mackevičiūtė, FTMC

X-ray emission from a Cu target driven by 2 µm femtosecond laser pulses
Miroslav Saniuk, FTMC

High energy 1.53-cycle pulses via homogeneous post-compression in a single thin-plate
Dominykas Karvelis, Vilnius University Laser Research Center (VU LRC)

Developing an XUV beamline for NIR and MIR OPCPA laser systems at Laser Research Center of Vilnius University
Karolis Gineitis, Vilnius University Laser Research Center (VU LRC)

Two-Photon Lithography of High-Porosity Micro-Targets for Inertial Confinement Fusion Experiments
Ioanna-Angeliki Petsi, Vilnius University Laser Research Center (VU LRC)/ ABC, ENEA Frascati

Tbd

Tbd

Tbd

Tbd

17:00 **Coffee/end**

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WORKSHOP PROGRAM

May 22, 2026 — Saulėtekio al. 3, Vilnius, NFTMC, A101 room

09:00	**Automating physics: insights on measurement, modeling and optimization** **Andreas Döpp**, University of Munich, Physics Department
09:30	**Beam-Shape Effects and Bayesian Optimization in LWFA Driven by mJ-Class Femtosecond Pulses** **Mahdi Abedi Varaki**, FTMC
09:50	**The PETRA IV plasma-injector and recent pre-experiments** **Paul Winkler**, Deutsches Elektronen-Synchrotron DESY
10:20	**Betatron X-ray generation using dual stage plasma target** **Vidmantas Tomkus,** FTMC
10:40	**Coffee break**
11:10	**Optical Parametric Chirped Pulse Amplifiers: Fundamentals and recent advances** **Rimantas Budriūnas**, Vilnius University Laser Research Center (VU LRC)/ Light Conversion
11:40	**tbd**
12:00	**tbd**
12:30	**tbd**
13:00	**Lunch**