

# Training

## Dolní Břežany

### Dates.

16–17 October, 2025

### Venue.

#### HiLASE Centre

Institute of Physics of the Czech  
Academy of Sciences

Za Radnici 828

252 41 Dolní Břežany, Czech Republic



### Audience.

- University students and early stage researchers
- Engineers & professionals working in manufacturing and industrial applications.

### Registration.



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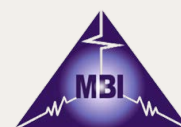


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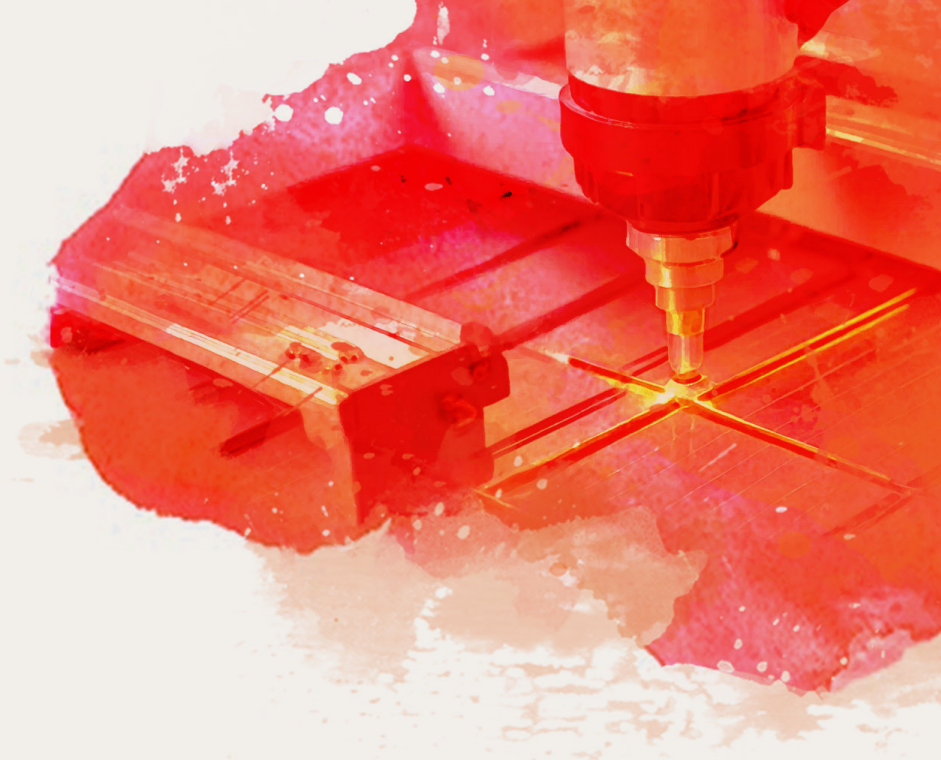
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# Training

## Dolní Břežany



## Description.

### Training in high-power lasers for industrial applications

#### Aims:

- Equip the next generation of scientists with expertise in advanced laser technologies and industrial applications.
- Support non-specialist users from diverse scientific backgrounds in overcoming technical and scientific challenges related to laser technologies.
- Expand the transnational user base by attracting professionals from a wide range of disciplines.
- Enhance efficiency and foster collaboration with other European facilities, networks, projects and industries.

#### Topics covered:

The training focuses on key laser applications in manufacturing and industry, including:

- **Introduction to High-Average Power Diode-Pumped Solid-State Laser Systems**

(e.g., Thin Disk Lasers, Multi-Slab Lasers)

- **Fundamentals of Selected Laser-Based Techniques and Applications:**

- Laser Shock Peening (LSP)
- Laser-Induced Damage Threshold (LIDT)
- Laser Micromachining (LMM)

- **Overview of Advanced Characterisation Devices**

- **Hands-On Training at HiLASE Facilities**

- Experiment design
- Laser processing
- Evaluation of results

- **Laser Safety Principles**

## Programme

## 16 October 2025

### 09:00–12:30 Morning Session

#### Registration

#### Welcome by the Head of HiLASE:

- Introduction to Thin Disk Lasers
- Introduction to cryogenically cooled multi slab lasers
- coffee break
- Principles of LSP – Laser Shock Peening
- Principles of LIDT – laser-induced Damage Threshold

### 13:30–17:00 Afternoon Session

- Principles of LMM – Laser Micromachining
- Overview of Characterisation Devices
- Visit of Laser facilities
- Wrap-up and networking

## 17 October 2025

### 09:00–12:00 Morning Session

- Coffee & Networking
- Laser safety
- Visit of workstations – Hands-on training – LIDT facility

### 13:00–17:00 Afternoon Session

- Visit of workstations – Hands-on training – LSP facility
- Visit of workstations – Hands-on training – LMM facility
- Wrap-up and networking

