ČESKÝ OPTICKÝ KLASTR

*Let's Make Optics for the Future. Together.*

hilase

OPTICAL COFFEE CHAT

# DEFENCE a OPTIKA

**ST 29. 7. 2026 | 12:30–13:30 hod.**

Optical coffee chat bude přístupný online formou v prostředí **TEAMS**

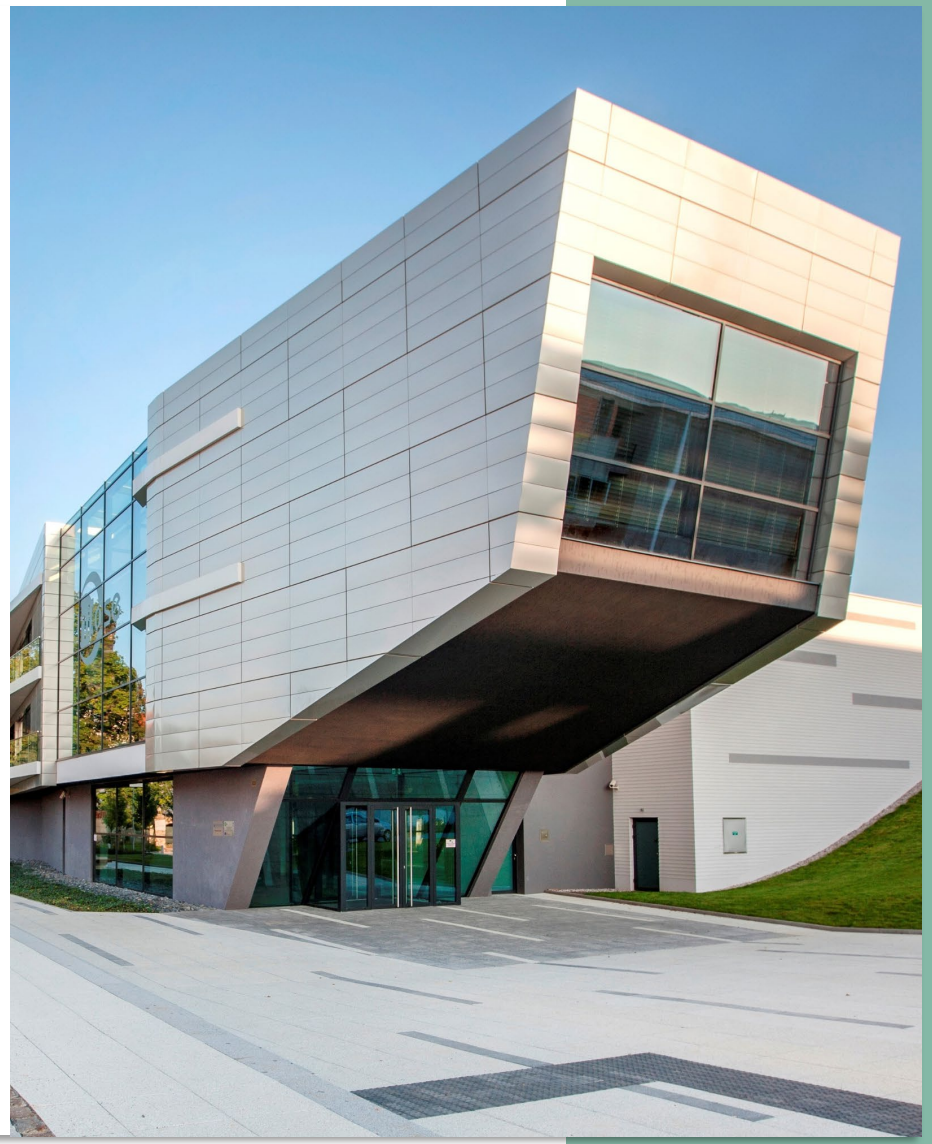
V případě zájmu prosíme o potvrzení Vaší účasti
přes registrační formulář zde: **https://forms.office.com/e/wJ91aPwsnU**

# DLA

*HiLASE*

*29.7.2026*

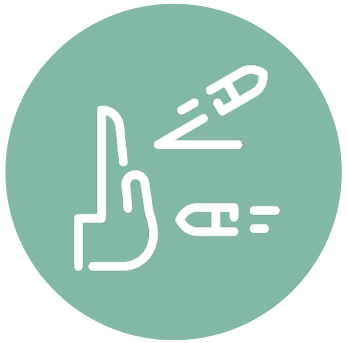
**Jan Brajer**
*Head of department*



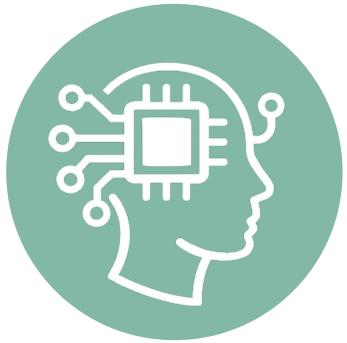
# KEY FOCUS AREAS

HIGH-TECH LASER MANUFACTURING TECHNOLOGIES

SPACE-BORNE LASER TECHNOLOGIES

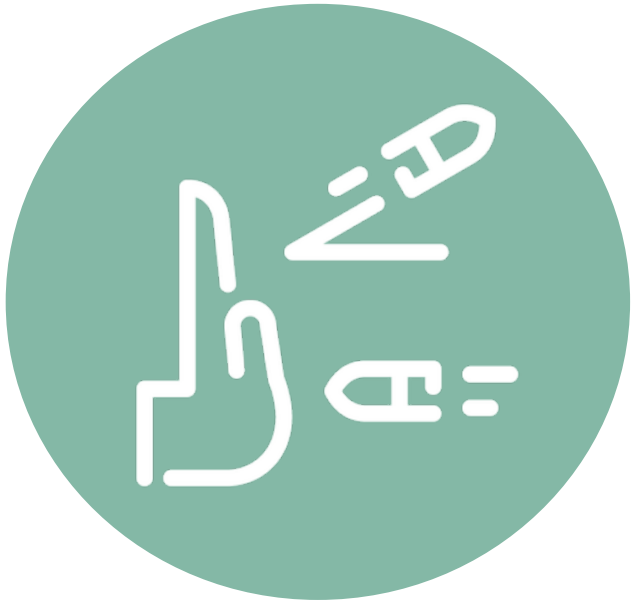


DEFENSE AND SECURITY LASER APPLICATIONS



AI & AUTOMATION

# DEFENSE AND SECURITY LASER APPLICATIONS



# DEFENSE AND SECURITY LASER APPLICATIONS

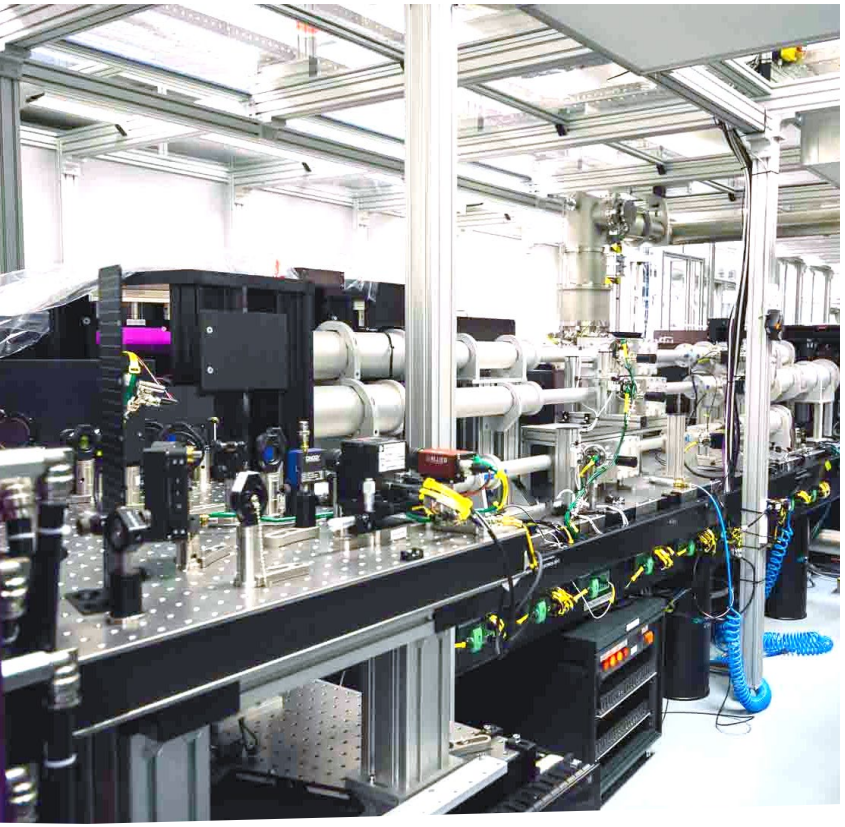
**How it contributes to the HiLASE mission:**

- *Excellence in research and technology:* lasers with **cutting edge** parameters, **unique** stations (LMCO) and other infrastructure, (e.g. adaptive optics)
- *Applications / market: balance of* creation of **complete packages** for integrators and pilot lines (TRL5–7) and **Novel approaches** for new applications (TRL1–4).

**"**Development of the HiLASE center in the field of laser technologies for defense applications, based on the **existing competencies of the center** and **current trends** in the external environment. The strategy focuses on strengthening **technological relevance** and **application applicability** for industry and research**."**

# HiLASE Laser defense main areas

*From photonics components to mission-oriented systems*



**High-Energy Lasers**
Beam Control • Adaptive Optics


**Laser Communication & Sensing**
LIDAR • Rangefinding

**Advanced Manufacturing**
Laser Peening • Surface Engineering

**TRL 1–8+ | Research → Development → Validation → Deployment**

# Defense

**High-Energy Lasers**
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**TRL 1–8+ | Research → Development → Validation → Deployment**

TRL 8

TRL 7

TRL 6

TRL 5

TRL 4

TRL 3

Prodef – XXX

Prodef – XXX

Contract – XXX

EDF – XXX

STEP – XXX

Industrial chair – Thalor group

Internal Initiative DRON

40) EDF – LACE2

XXX

LMCO IPP2

# Supporting Next-Generation Aerospace & Defense Systems


- ✓ Increased durability
- ✓ Extended fatigue lifetime
- ✓ Improved reliability of critical aerospace components

## Industrial deployment in the Czech F-35 ecosystem

LOCKHEED MARTIN

# Future Challenges – Areas for Cooperation

- Directed Energy
- Resilient Manufacturing
- Space Security
- Optical Communications


**HiLASE is seeking partnerships within NATO STO, SPS and the defense industry to develop next-generation laser-enabled capabilities**


SVAZ PRŮMYSLU A DOPRAVY ČESKÉ REPUBLIKY
VŠB TECHNICKÁ UNIVERZITA OSTRAVA
BeePartner
bee inspired & funded
Defence . Tech . Innovation 2026
Konference, která propojuje průmysl, výzkum a obranu
24. 3. 2026
Ostrava, Univerzitní aula VŠB-TUO


Odborná konference a výstava
18. 3. 2026 na veletrhu AMPER v Brně
pořádaná pod záštitou ministra obrany ČR
design. build. go!
DRONYX
UxV INNOVATION FORUM
Trendy a praxe ve vývoji a výrobě bezpilotních prostředků a protidronových systémů pro civilní i vojenské využití


DEFENCE HUB
CZECHINVEST
PART OF THE DIANA NETWORK
NATO Diana Accelerator
Czechia 2026 Final Pitch
13:30–14:00 Arrival and registration
14:00–14:10 Opening address by the Chief of the General Staff of the Czech Armed Forces
14:10–16:00 Strategic keynotes and expert panel on NATO innovation, space resilience, additive manufacturing and dual-use adoption
16:00–18:00 Pitching of selected Czech ecosystem startups and10 Cohort 2026 startups
18:00–20:00 Networking and Dinner
CONNECT ROBOTICS
COPSYS
CSMC
DEEPSPACE ENERGY
NIRICSON
SAFETY BOLT
SIMULARGE
SPACE POWER
WARPWARE


CSG
AKCELERÁTOR
24.–26. únor


NATO OTAN
#WEARENATO


UNIVERZITA OBRANY
... VÍCE NEŽ VYSOKÁ ŠKOLA