

# OPTO 2024 Program

	Monday 22.7.2024	Tuesday 23.7.2024	Wednesday 24.7.2024	Thursday 25.7.2024	Friday 26.7.2024	
8:00 - 8:15	Registration / Photos	Registration				
8:15 - 8:30						
8:30 - 8:45						
8:45 - 9:00						
9:00 - 9:15	Conference Opening /Photos	Mateusz Rebarz <i>Invited talk</i>	Block W1	Lukáš Nádvorník <i>Invited talk</i>	Block F1	
9:15 - 9:30						
9:30 - 9:45						
9:45 - 10:00		Michaela Pacáková <i>Invited talk</i>		Katarzyna Komolibus <i>Invited talk</i>		
10:00 - 10:15						
10:15 - 10:30						
10:30 - 11:00	Coffee Break / Photos	Coffee Break				
11:00 - 11:15	Martin Kozák <i>Invited talk</i>	Block Tu2	Block W2	Block Th2	Block F2	
11:15 - 11:30						
11:30 - 11:45	Block M2		Lunch		Lunch	Stanislav Kamba <i>Invited talk</i>
11:45 - 12:00						
12:00 - 12:15						
12:15 - 12:30	Lunch				Final Remarks	
12:30 - 12:45						
12:45 - 13:00						
13:00 - 13:15						
13:15 - 13:30						
13:30 - 13:45	Block M3	ELI Beamlines	Block Th3	Coffee Break		
13:45 - 14:00						
14:00 - 14:15					Jakub Zázvorka <i>Invited talk</i>	
14:15 - 14:30						
14:30 - 14:45					Pavla Hubálková <i>Invited talk</i>	
14:45 - 15:00	Coffee Break					
15:00 - 15:15	Technical Session	Chad Husko <i>Invited talk</i>	ELI Beamlines	Coffee Break		
15:15 - 15:30						
15:30 - 15:45						
15:45 - 16:00						
16:00 - 16:15						
16:15 - 16:30	Panel discussion with startups	Block Tu4	ELI Beamlines	Poster Session		
16:30 - 16:45						
16:45 - 17:00						
17:00 - 17:15						
17:15 - 17:30						
17:30 - 17:45						

## Evening program

18:00 - 19:00	Conference Dinner Networking	Prague tour	ÚFE Lab Tour Registration On-Site Monday	Lasergame, networking & refreshments
19:00 - 20:00				
20:00 - 21:00				
21:00 - 22:00				
22:00 - 23:00				

## Monday

8:00 - 9:00	Registration / Photos
9:00 - 10:30	Conference Opening /Photos
10:30 - 11:00	Coffee Break / Photos
	<b>Oral Session M2</b> Chair: Tomáš Maleček
11:00 - 11:45	<b>Electron-photon interactions for advanced electron microscopy</b> Martin Kozák, <i>Charles University</i> Invited talk
11:45 - 12:00	<b>Bright Attosecond Pulse Generation using Relativistic Plasma Mirrors</b> Marcel Lamač, <i>Charles University, ELI ERIC</i>
12:00 - 12:15	<b>Two-Photon Absorption Detectors For Laser Pulse Characterization</b> Adrian Filip Chlebowski, <i>Wrocław University of Science and Technology</i>
12:15 - 12:30	<b>Nanoparticle-assisted laser wakefield acceleration and the influence of nanoparticle material on accelerated electrons</b> Alžběta Špádová, <i>Czech Technical University, ELI ERIC</i>
12:30 - 14:00	Lunch
	<b>Oral Session M3</b> Chair: Andrej Farkaš
14:00 - 14:15	<b>Attosecond Control of High Harmonic Photons Emission in Silicon Using Coherent Combination of <math>\omega</math>-3<math>\omega</math> Fields</b> Adam Gindl, <i>Charles University</i>
14:15 - 14:30	<b>Modular multiscale approach to numerically simulate HHG in gases</b> Jan Vábek, <i>ELI ERIC</i>
14:30 - 14:45	<b>High flux HHG Beamline at ELI Beamlines and recent results</b> Matyáš Staněk, <i>Czech Technical University</i>
14:45 - 15:00	<b>Optimizing the Conversion Efficiency and Beam Quality of Third Harmonic Frequency of a Picosecond Laser</b> Šimon Šatra, <i>Charles University, HiLASE</i>
15:00 - 15:15	<b>Detection of Laser Beam and Localization of Laser Source for Aviation Safety</b> Kateřina Nováčková, <i>University of Defence</i>
15:15 - 15:30	<b>Optimized Infrared Optical System for FOK 2 Guided Missile</b> Yelyzaveta Leshchenko, <i>Warsaw University of Technology</i>
15:30 - 16:00	Coffee Break
16:00 - 16:15	Czech Optical Cluster
16:15 - 16:30	FORVIA HELLA
16:30 - 16:45	Radius Centre
16:45 - 17:45	Panel discussion with startups
Evening program	
20:00 - 23:00	Conference Dinner and Networking

## Tuesday

8:30 - 9:00	Registration
	<b>Oral Session Tu1</b> Chair: Jan Dzian
9:00 - 10:30	<b>ELI ERIC: new capabilities for applications in molecular, bio-medical and material science</b> Mateusz Rebarz, <i>ELI Beamlines</i> Invited talk
	<b>Impostor Syndrome</b> Michaela Pacáková, <i>Charles University - psychological counseling center</i> Invited Talk
10:30 - 11:00	Coffee Break
	<b>Oral Session Tu2</b> Chair: Julie Střihavková
11:00 - 11:15	<b>Optically Detected Magnetic Resonance Dependence on Carrier Concentration in (Cd,Mn)Te QW Studied in the Microscale</b> Amadeusz Dydniański, <i>University of Warsaw</i>
11:15 - 11:30	<b>Exceptional magnetic tunability of higher-bands originating states in a 2D magnetic semiconductor CrSBr</b> Rafał Komar, <i>University of Warsaw</i>
11:30 - 11:45	<b>All-Optical Generation of Drift Currents Through Inverse Faraday Effect</b> Romeo Homero Zapata, <i>Sorbonne Université</i>
11:45 - 12:00	<b>Miniature, mid-infrared spectrometers for in-situ environmental sensing and monitoring</b> Filip Łabaj, <i>Warsaw University of Technology</i>
12:00 - 12:15	<b>Light-Responsive Polymers in Soft Robotics: Exploring Novel Azobenzene Compounds for Photomechanical Advancements</b> Abdallah Guerchi, <i>Nicolaus Copernicus University</i>
12:15 - 12:30	<b>Advancements in Interferometric Scattering Microscopy: Quantitative Phase Detection via Photothermal Effect</b> Katerina Jirikova, <i>Czech Academy of Sciences</i>
12:30 - 14:00	Lunch
	<b>Oral Session Tu3</b> Chair: Tomáš Maleček
14:00 - 14:45	<b>A Brief Introduction into Magneto-Optics</b> Jakub Závorka, <i>Charles University</i> Invited talk
14:45 - 15:30	<b>Science Communication</b> Pavla Hubálková, <i>Charles University</i> Invited talk
15:30 - 16:00	Coffee Break
	<b>Oral Session Tu4</b> Chair: Andrej Farkaš
16:00 - 16:45	<b>To be clarified</b> Chad Husko, <i>Iris Light Technologies, Inc.</i> Invited talk
16:45 - 17:00	<b>Comparison of selected machine-learning algorithms in optimization of femtosecond fiber laser pulses</b> Alicja Katarzyna Kwaśny, <i>Wrocław University of Science and Technology</i>
17:00 - 17:15	<b>Design of asymmetric QWs for broadband superluminescent emission around 2 μm wavelengths</b> Ifte Khairul Alam Bhuiyan, <i>Tampere University</i>
17:15 - 17:30	<b>Carrier-Envelope Phase Stabilisation in a Cr:ZnS Laser- pump power vs electro-optic modulation</b> Karolina Suliga, <i>Wrocław University of Science and Technology</i>
17:30 - 17:45	<b>Optimization of a Laser Pulse Temporal Shape Using Real-Time Feedback Control Loop</b> Rostislav Matuška, <i>Charles University</i>
Evening program	
18:00 - 21:00	Prague tour

## Wednesday

8:30 - 9:00	Registration
	<b>Oral Session W1</b> Chair: Michal Hubert
9:00 - 9:15	<b>Entropy Source of an Optical Fiber-based Quantum True Random Number Generator - Modeling and Measurements</b> Michał Dudek, <i>Military University of Technology</i>
9:15 - 9:30	<b>Rydberg Atom-Based Detection of Modulated Signals in the Wi-Fi Frequency Range</b> Jan Nowosielski, <i>University of Warsaw</i>
9:30 - 9:45	<b>Extending the lifetime of stored collective Rydberg excitations via ac-Stark phase modulation</b> Bartosz Niewelt, <i>University of Warsaw</i>
9:45 - 10:00	<b>All-Optical Detection of Weak Microwave Fields Using Rubidium Rydberg Atoms</b> Sebastian Borówka, <i>University of Warsaw</i>
10:00 - 10:15	<b>Ultra-fast Programmable Pulse Pattern Generator for Electro-optical Light Control in Quantum Optics Experiments</b> Glib Mazin, <i>Palacký University</i>
10:15 - 10:30	<b>Experimental Hierarchy of Nonclassicality of Quantum States of Light via Potentials for Entanglement</b> Josef Kadlec, <i>Palacký University</i>
10:30 - 11:00	Coffee Break
	<b>Oral Session W2</b> Chair: Ondřej Novák
11:00 - 11:15	<b>Grating-Coupled Optical Interfaces in Silicon Nitride Waveguides</b> Daniel Benedikovic, <i>University of Zilina</i>
11:15 - 11:30	<b>Full field characterization of thick liquid crystal samples with correction of geometrical deformations</b> Tomasz Jankowski, <i>Military University of Technology</i>
11:30 - 11:45	<b>Refractive index sensor based on the micromachined side-hole optical fiber</b> Rafał Aleksander Kosturek, <i>Military University of Technology</i>
11:45 - 13:15	Lunch
13:15 - 17:45	ELI Beamlines
Evening program	
18:00 - 21:00	Optional Lab Tour of the Institute of Photonics and Electronics of the Czech Academy of Sciences Registration On-Site Monday

## Thursday

8:30 - 9:00	Registration
	<b>Oral Session Th1</b> Chair: Julie Střihavková
9:00 - 10:30	<b>THz Spintronics</b> Lukáš Nádvorník, <i>Charles University</i> Invited talk
	<b>Shining a light on the diagnostic power of biophotonics</b> Katarzyna Komolibus, <i>Tyndall National Institute</i> Invited talk
10:30 - 11:00	Coffee Break
	<b>Oral Session Th2</b> Chair: Antonín Baďura
11:00 - 11:15	<b>Interactions of high fluence low-power laser irradiation with living cells</b> Mariia Uzhytchak, <i>Czech Academy of Sciences</i>
11:15 - 11:30	<b>Comparison of tissue indices and tissue parameters extracted by inverse adding-doubling in hyperspectral imaging</b> Črt Keber, <i>University of Ljubljana</i>
11:30 - 11:45	<b>Hyperspectral Imaging and Laser Speckle Contrast Imaging of Murine Tumors in Dorsal Skinfold Window Chambers</b> Tadej Tomanic, <i>University of Ljubljana</i>
11:45 - 12:00	<b>Hemodynamics monitoring via ultrafast volumetric Spatio-Temporal Optical Coherence Tomography (STOC-T) in mouse retina</b> Wiktoria Marek Kulesza, <i>Institute of Physical Chemistry PAS</i>
12:00 - 12:15	<b>Advanced microscopy in studying peptide-coated DNA nanostructures with living cells</b> Petra Elblová, <i>Charles University</i>
12:15 - 12:30	<b>Spectroscopic Properties of Widely Used Herbicides: Bentazone</b> Daniel Fousek, <i>Charles University</i>
12:30 - 14:00	Lunch
	<b>Oral Session Th3</b> Chair: Lukáš Nowak
14:00 - 14:15	<b>Anti-Stokes Optical Cooling of Ytterbium-Doped Nanocrystals</b> Kamil Bruchal, <i>Wrocław University of Science and Technology</i>
14:15 - 14:30	<b>Second harmonic generation of 532 nm square pulses from an DSR mode-locked double-clad fiber laser</b> Piotr Bojęś, <i>Wrocław University of Science and Technology</i>
14:30 - 14:45	<b>Argon Trap Trace Analysis: Quantum Technology for Environmental Research</b> Leonardo Karl Reiter, <i>Heidelberg University</i>
14:45 - 15:00	<b>Spectral Resolution Beyond The Fourier Limit With Optical Heterodyne Detection</b> Wiktoria Michał Krokosz, <i>University of Warsaw</i>
15:00 - 15:15	<b>Investigating The Temperature Dependence Of Silicon Vacancy Centers Photoluminescence In Polycrystalline Diamond Thin Films</b> Irena Bydžovská, <i>Czech Academy of Sciences, Czech Technical University</i>
15:15 - 15:30	<b>Privacy-Preserving Image Classification in IoT Applications: A Gyrator Transform and DRPE-Based Approach</b> Poonam Yadav, <i>The NorthCap University</i>
15:30 - 16:00	Coffee Break
16:00 - 17:45	Poster session

Evening program

19:30 - 23:00	Lasergame, networking & refreshments
---------------	--------------------------------------

## Friday

8:30 - 9:00	Registration
	<b>Oral Session F1</b> Chair: Ondřej Novák
9:00 - 9:15	<b>Glass-Metal Soldering Assembly Concept</b> Uliana Finaeva, <i>Czech Technical University</i>
9:15 - 9:30	<b>Graphene-enhanced photodetection of a 6H-SiC detecting device with interdigital electrode layout</b> Bohdan Morzhuk, <i>Charles University</i>
9:30 - 9:45	<b>Gaussian and Laguerre-Gaussian localization precision under shot noise</b> Kamil Janusz Kalinowski, <i>Wrocław University of Technology</i>
9:45 - 10:00	<b>Binary Complex Amplitude App: A GUI-based MATLAB software for advanced laser beam shaping</b> Przemysław Litwin, <i>Wrocław University of Science and Technology</i>
10:00 - 10:15	<b>UV-activated conductive polymer – nanostructured ZnO heterostructures for sub-ppm NO<sub>2</sub> room temperature chemoresistive sensors</b> Piotr Kałużyński, <i>Silesian University Of Technology</i>
10:15 - 10:30	<b>Investigating The Optical Behaviour Of PDMS &amp; MOF Coated Surface Gratings When Exposed To VOCs</b> Patrick Nikolas Iftime, <i>Technological University Dublin</i>
10:30 - 11:00	Coffee Break
	<b>Oral Session F2</b> Chair: Lukáš Nowak
11:00 - 11:15	<b>Holmium-Doped Fiber Laser Optimization Using an Analytical Model</b> Jan Pokorný, <i>Czech Academy of Sciences</i>
11:15 - 11:30	<b>Absorption based source apportionment of atmospheric carbonaceous particulate matter using Aethalometer and Photoacoustic methods</b> Abdul Rahman, <i>University of Szeged</i>
11:30 - 12:15	<b>Infrared and THz studies of Phonons and Electromagnons in Ferroelectrics and Multiferroics</b> Stanislav Kamba, <i>Czech Academy of Sciences</i> Invited talk
12:15 - 12:30	Conference Closing/ Final Remarks