

**Program of 16<sup>th</sup> International Conference on X-ray Lasers 2018**  
**October 7 – 12, 2018**  
**Prague, Czech Republic**

**Sunday October 7, 2018**  
*at Cafe Louvre, Prague*

18:00-20:00 PM                      **Registration and Welcome drink**

**Monday October 8, 2018**  
*at Cafe Louvre, Prague*

8:00-8:40 AM                      **Registration**

8:45-9:00 AM                      **Welcome**

Session I: X-Ray lasers

Chair: **S. Sebban**

9:00-9:30 AM      J. Rocca                      Shorter wavelength, higher repetition rate, x-ray lasers enabled by new pump lasers

9:30-10:00 AM      D. Bleiner                      A New Brilliant Tool in Materials Chemistry

10:00-10:20 AM      G. Tallents                      The ablation of solid targets using a capillary discharge laser

10:20-10:40 AM      R. Feshchenko                      Determination of conditions for effective pumping the active medium of lasers based on Ni-like Kr and Xe ions in low-inductive capillary Z-discharges

10:40-11:10 AM                      **Coffee break**

Session II: **HHG**

Chair: **T. Kawachi**

11:10-11:40 AM      T. Popmintchev                      Quantum Design of Coherent X-rays

11:40-12:00 AM      G. Lambert                      Studying ultrafast demagnetization through Faraday effect and linearly polarized high order harmonics

12:00-12:20 PM      V. Nefedova                      A new method for conversion efficiency and spectral phase control of high-order harmonic generation in noble gases

12:20-13:40 PM                      **Lunch**

Session III: **X-Ray lasers**

Chair: **A. Klisnick**

13:40-14:10 PM      E. Oliva                      Hydrodynamic and Maxwell-Bloch simulation of plasma-based UV and soft X-ray lasers

14:10-14:30 PM	V. Antonov	Towards generation of attosecond pulses by a plasma-based x-ray laser via modulation of its resonant transition by an optical field
14:30-14:50 PM	A. Vinogradov	Energy Density in a Collapsing Electromagnetic Wave
14:50-15:20 PM	J. Nielsen	Enhanced fluorescence from X-ray line coincidence pumping

15:20-15:50 PM **Coffee break**

Session IV: **Incoherent sources**

Chair: **W. Yan**

15:50-16:20 PM	H. Stiel	Time-resolved near-edge X-ray absorption spectroscopy in the water window and beyond using laboratory based laser plasma sources
16:20-16:40 PM	M. Nevrlka	XUV Lab at FNSPE CTU in Prague
16:40-17:00 PM	N. Tanaka	Intense Laser Produced Plasma EUV Source for Advanced Materials Processing
17:00-17:20 PM	M. Vassholz	X-Ray Emission from Structured Targets

**Tuesday October 9, 2018**  
*at Cafe Louvre, Prague*

Session V: **LWFA**

Chair: **F. Quere**

9:00-9:30 AM	T. Kawachi	Generation of Short Wavelength Radiation and Energetic Particles by Using PW-Class Lasers
9:30-9:50 AM	Y. Gu	Gamma-ray flux generation via relativistic oscillating plasma mirror
9:50-10:20 AM	W. Yan	All-optical Highly Nonlinear Thomson scattering

10:20-10:50 AM **Coffee break**

Session VI: **HHG**

Chair: **T. Popmintchev**

10:50-11:20 AM	Z. Zeng	Ultrafast Inner Shell Electron Excitation with high Energy Recollision Electron driven by Mid-Infrared laser
11:20-11:40 AM	O. Hort	Parametric generation of coherent XUV light
11:40-12:00 AM	S. Stremoukhov	Quasi-phase matching of harmonics generating in laser plasmas: experiment and theory

12:00-13:20 PM **Lunch**

Session VII: **XFEL**

Chair: **J. Chalupsky**

13:20-13:50 PM	A. Higginbotham	High-Pressure Science on X-ray Free Electron Lasers
13:50-14:10 PM	N. Medvedev	X-ray Free-Electron Laser Induced Damage in Solids

14:10-14:30 PM T. Burian Behavior of inorganic scintillators exposed to short-wavelength free-electron laser radiation  
14:30-14:50 PM A. Klisnick Pulse duration encoding in linear autocorrelation measurements of plasma-based and free-electron XUV lasers

14:50-15:20 PM **Coffee break**

Session VIII: **XFEL**  
Chair: **A. Higginbotham**

15:20-15:50 PM S. Vinko Study of hot-dense plasmas created by x-ray FELs  
15:50-16:20 PM O. Kocharovskaya Shaping of X-ray Pulses via Dynamical Control of their Interaction with a Resonant Medium

16:20-20:00 PM **Poster session**

**Wednesday October 10, 2018**  
*at Cafe Louvre, Prague*

Session IX: **HHG**  
Chair: **O. Hort**

9:00-9:30 AM M. Zurch Ptychography and Single Shot Nanoscale Imaging with Plasma-based Laser Sources  
9:30-9:50 AM M. Emelin High-harmonic generation in the regime of high-frequency atomic stabilization: role of initial atomic state  
9:50-10:10 AM R. Pausch Quantitative simulations of angularly and spectrally resolved radiation from plasma-based light sources with PICongPU

10:10-10:40 AM **Coffee break**

Session X: **LWFA**  
Chair: **L. Chen**

10:40-11:10 AM F. Quere Identification of coupling mechanisms between ultraintense laser light and dense plasmas  
11:10-11:40 AM J. Liu Laser-driven novel radiation sources  
11:40-12:00 AM S. Bulanov High power gamma flash generation in multi-petawatt laser-plasma interaction  
12:00-12:20 PM J. Wang High quality X-ray/gamma-ray radiation from a plasma undulator

12:20-13:00 PM **Lunch box**

13:00-19:30 PM **Conference trip to Kutná Hora** (bus to will leave from Vítězná street)

**Thursday October 11, 2018**  
*at Cafe Louvre, Prague*

Session XI: **X-ray lasers**  
Chair: **E. Oliva**

- 9:00-9:30 AM S. Sebban Progress on laser-driven soft x-ray lasers at LOA
- 9:30-10:00 AM O. Guilbaud Seeded soft x-ray lasers activities in the LASERIX facility
- 10:00-10:30 AM C. Menoni Soft x-ray laser nanoscale molecular imaging: enhanced mass range and sensitivity
- 10:30-11:00 AM **Coffee break**

Session XII: **LWFA**  
Chair: **A. Pirozhkov**

- 11:00-11:30 AM T. Hosokai Multi-stage Laser Wakefield Acceleration with Preformed Plasma Channels
- 11:30-12:00 AM L. Chen Gamma ray emission from wakefield accelerated electrons wiggling in laser field
- 12:00-12:20 PM A. Debus Compact X-ray sources by Traveling-Wave Thomson scattering and All-Optical FELs
- 12:20-13:40 PM **Lunch**

Session XIII: **XFEL**  
Chair: **G. Tallents**

- 13:40-14:10 PM J. Hajdu Structural studies with XFELs
- 14:10-14:40 PM E. Kuznetsova Coherent control of Mossbauer nuclei for spectral flux enhancement of X-rays
- 14:40-15:00 PM J. Chalupsky Practical use of ablation/desorption imprinting methods in X-ray laser-matter experiments
- 15:00-15:20 PM Ch. Lyu High-intensity narrow-band hard-x-ray lasing in He-like ions
- 15:20-15:50 PM **Coffee break**

Session XIV: **LWFA**  
Chair: **T. Hosokai**

- 15:50-16:20 PM A. Pirozhkov Control of Burst Intensification by Singularity Emitting Radiation
- 16:20-16:40 PM Y. Li Polarized gamma ray generated from Wakefield accelerated electrons wiggling in laser field
- 16:40-17:00 PM A. Koehler Transverse electron beam dynamics in the beam loaded regime
- 18:00-22:00 PM **Conference diner at restaurant Nebozizek**

**Friday October 12, 2018**  
*at ELI Beamlines, Dolní Břežany*

8:00 AM

Conference buses to ELI Beamlines will leave from Vítězná street

Session XV: **Facility**

Chair: **C. Menoni**

9:00-9:30 AM

G. Korn

Laser driven secondary sources of x-rays and particles at ELI Beamlines

9:30-10:00 AM

H. Kiriya

J-KAREN-P laser facility: Overview and update

10:00-10:30 AM

**Coffee break**

Session XVI: **Facility**

Chair: **J. Nilsen**

10:30-11:00 AM

A. Irman

Laser plasma electron acceleration at the DRACO Petawatt laser facility in Dresden

11:00-11:20 AM

M. Chyla

Status and Development of High Average Power Lasers at HiLASE

11:20-11:50 AM

M. Krus

PALS RESEARCH CENTER: present and future

11:50-12:00 AM

**Closing remarks**

12:00-13:20 PM

**Lunch**

13:20-14:20 PM

**Laboratory tour ELI Beamlines and HiLASE**