

PROGRAM OF ICUIL 2022

Sep. 18 Sunday

18:00-20:30

Reception

Sep. 19 Monday

9:00-9:15

Welcome address

Nobel lecture & Ultra-intense lasers | Chair: Seong Ku Lee

- Gérard Mourou, Ecole Polytechnique

9:15-10:35 (Nobel lecture) Extreme Light for the Benefit of Science and Society (45'+5')

- Jin Woo Yoon, Center for Relativistic Laser Science

(Invited) Achieving the highest laser intensity over 10^{23} W/cm² (25'+5')

10:35-11:05

Coffee break

High repetition rate lasers I | Chair: Pavel Bakule

- Cathherine Yuriko Teisset, TRUMPF Scientific Lasers

(Invited) High Power Ultrafast Industrial Thin-Disk Amplifiers (25'+5')

- Cristina Hernandez-Gomez, Central Laser Facility

11:05-12:35 (Invited) Current Status of the Extreme Photonics Applications Centre (25'+5')

- Adam Borzsonyi, Extreme Light Infrastructure - Attosecond Light Pulse Source

Next-generation few-cycle, high average power lasers at ELI-ALPS for external user experiments (12'+3')

- Vladimir Chvykov, Colorado State University

Ti:Sa Amplifiers for 100s TW Laser Systems with High Repetition Rate (12'+3')

12:35-14:00

Lunch

Laser-driven charged particle acceleration I | Chair: Nasr Hafz-Hafiz

- Antony Gonsalves, Lawrence Berkeley National Laboratory

(Invited) BELLA Center upgrades and laser wakefield acceleration experiments (25'+5')

- Ki Hong Pae, Center for Relativistic Laser Science

Direct laser acceleration of electrons from a plasma mirror by an intense few-cycle Laguerre-Gaussian laser and its dependence on the carrier-envelop phase (12'+3')

14:00 -15:45

- Laura Desiree Geulig, Ludwigs-Maximilians-Universität Munich

Update on the laser heavy ion acceleration at CALA (12'+3')

- Tim Ziegler, Helmholtz-Zentrum Dresden-Rossendorf

Proton acceleration in the relativistically induced transparency regime at DRACO-PW surpassing the 100 MeV frontier (12'+3')

- Prashant K. Singh, University of Szeged

MeV Deuterium ions driven by few-cycle relativistic intense laser-foil interaction (12'+3')

- Wenjun Ma, Peking University

The acceleration of very heavy ions at ultrahigh intensity (12'+3')

15:45-16:10

Coffee break

Laser facilities I | Chair: Ioan Dancus

- Patrick Audebert, Laboratoire pour l'Utilisation des Lasers Intenses

16:10-18:10 (Invited) The Apollon laser facility: commissioning and first experiments on the PW level (25'+5')

- Karl Krushelnick, University of Michigan

(Invited) The ZEUS laser facility at the University of Michigan (25'+5')

	<ul style="list-style-type: none"> • Yuxin Leng, Shanghai Institute of Optics and Fine Mechanics (Invited) Current status of SEL-100 PW laser facility (25'+5')
16:10-18:10	<ul style="list-style-type: none"> • Zsuzsanna Major, GSI Helmholtzzentrum für Schwerionenforschung GmbH The high-energy laser system PHELIX for high-power laser-matter interaction and warm-dense-matter studies (12'+3') • Patrick K. Rambo, Sandia National Laboratories Z-Petawatt Full-Aperture Upgrade (12'+3')
19:00-20:00	Dinner

Sep. 20 Tuesday

	<p>Strong field QED Sang Pyo Kim</p> <ul style="list-style-type: none"> • Matt Zepf, Helmholtz-Institute-Jena (Keynote) Testing Strong Field QED – Precision Photon/Photon Scattering Experiments (40'+5')
9:00-10:45	<ul style="list-style-type: none"> • Antonino Di Piazza, Max Planck Institute for Nuclear Physics (Invited) Strong-field QED in the presence of tightly focused intense laser fields (25'+5') • Mohammad Mirzaie, Center for Relativistic Laser Science Nonlinear Compton scattering driven by a multi-PW femtosecond laser (12'+3') • Christian Schubert, IFM-UMSNH Applications of the Worldline formalism in strong-field QED (12'+3')
10:45-11:05	Coffee break
	<p>Laser-driven charged particle acceleration II Chair: Woosuk Bang</p> <ul style="list-style-type: none"> • Mamiko Nishiuchi, Kansai Photon Science Institute (Invited) Highly ionized heavy ion acceleration via ultra-relativistic high fields with PW lasers (25'+5')
11:05-12:35	<ul style="list-style-type: none"> • Daniele Margarone, ELI Beamlines (Invited) Recent experimental results on high intensity, high repetitive laser-matter interaction with HAPLS laser at ELI-Beamlines (25'+5') • Domenico Doria, Extreme Light Infrastructure - Nuclear Physics Recent results from the commissioning of the 1 PW laser system of ELI-NP via laser-driven acceleration of particles (12'+3') • Vincent Bagnoud, GSI Helmholtzzentrum für Schwerionenforschung GmbH Recent progress on proton acceleration at PHELIX (12'+3')
12:35-13:35	Lunch
13:35-15:00	Poster session I
	<p>Laser facilities II Chair: Zsuzsanna Major</p> <ul style="list-style-type: none"> • Dimitris Charalambidis, Extreme Light Infrastructure - Attosecond Light Pulse Source (Invited) The ELI project: Status, perspectives, opportunities (25'+5')
15:00-16:30	<ul style="list-style-type: none"> • Ioan Dancus, Extreme Light Infrastructure - Nuclear Physics 10 PW laser systems facility at ELI-NP (12'+3') • Markus Loeser, Helmholtz-Zentrum Dresden-Rossendorf Current status and performance of the PEnELOPE Laser System (12'+3') • Leonard Doyle, Ludwig-Maximilians-Universität München Review of the control and data acquisition system for the ATLAS-3000 multi-Petawatt laser system (12'+3') • Loïc Meignien, Laboratoire pour l'Utilisation des Lasers Intenses LULI2000 Facility Overview and Status Update (12'+3')
16:30-17:00	Coffee break
	<p>Post-compression Chair: Kyung Taec Kim</p> <ul style="list-style-type: none"> • Jaismeen Kaur, Laboratoire d'Optique Appliquée Pulse compression down to the few-cycle regime via non-linear ellipse rotation in multi-pass cells (12'+3')
17:00-18:15	<ul style="list-style-type: none"> • Szabolcs Toth, Extreme Light Infrastructure - Attosecond Light Pulse Source Sub-2-cycle pulses with 10 mJ energy enabled by post-compression in multiple thin plates (12'+3') • Ji In Kim, Center for Relativistic Laser Science Post-compression using thin solid plate for peak-power enhancement of a high-power femtosecond laser (12'+3') • Levente Lehotai, University of Szeged Complete simulation of multi-TW laser pulse post-compression close to single-cycle in multiple thin plates (12'+3') • Efim Khazanov Beam focusing of PW laser pulse after 6-fold post-compression (12'+3')
19:00-20:00	Dinner

Laser-driven charged particle acceleration III | Chair: Antony Gonsalves

- Jerome Faure, Laboratoire d'Optique Appliquée
(Keynote) Recent Progress in High-Repetition Rate Laser Wakefield Acceleration Driven by Single-Cycle Pulses (40'+5')
- Olena Kononenko, Laboratoire d'Optique Appliquée
Quasi-monoenergetic GeV beams from controlled injection in all-optical plasma wave-guide (12'+3')
- 9:00-10:45 • Andreas Seidel, Friedrich-Schiller-University
Effects of the laser polarization and CEP on the electron pointing jitter in Laser Wakefield Accelerators (12'+3')
- Paolo Tomassini, Extreme Light Infrastructure - Nuclear Physics
High brightness attosecond electron beams with the Resonant Multi-Pulse Ionisation injection (12'+3')
- Min Chen, Shanghai Jiao Tong University
Recent Progress on high order harmonics generation and curved plasma channel based wakefield acceleration at SJTU (12'+3')

10:45-11:05 Coffee break

Beam characterization & temporal contrast | Chair: Jake Bromage

- Andreas Döpp, Ludwig-Maximilians-Universität München
Machine-learning strategies for ultra-intense laser characterization and experiments (12'+3')
- Griffin D. Glenn, Sandia National Laboratories
Spatiotemporal characterization of nanosecond laser pulses using an ultrafast diode array (12'+3')
- Hiromitsu Kiriya, Kansai Photon Science Institute
Demonstration of pulse temporal quality improvement in femtosecond pre-pulse and picosecond pedestal in the J-KAREN-P laser (12'+3')
- Stefan Bock, Helmholtz-Zentrum Dresden-Rossendorf
Experimental and theoretical description of non-linearity induced contrast degradation in high-power lasers (12'+3')
- Yannik Zobus, Technische Universität Darmstadt
A High-Contrast, 2 mJ Seed for the PHELIX and PEnELOPE Lasers (12'+3')
- Simon Roeder, GSI Helmholtzzentrum für Schwerionenforschung
Enabling Highest Temporal Contrast Regimes Using the In-Stretcher Beam Size (12'+3')

12:35-13:35 Lunch

13:35-15:00 **Poster session II**

Nuclear physics with ultraintense lasers | Chair: Daniele Margarone

- Markus Roth, Technische Universität Darmstadt
(Invited) Next-generation Neutron sources and applications from high-intensity lasers (25'+5')
- Lorenzo Giuffrida, Extreme Light Infrastructure – Beamlines
Proton-Boron nuclear reaction driven by ultra-intense laser systems: an overview of recent experimental achievements (12'+3')
- 15:00-16:30 • Pascal Boller, GSI Helmholtzzentrum für Schwerionenforschung
On-line detection of radioactive fission isotopes produced by laser-accelerated protons (12'+3')
- Dario Lattuada, University of Enna KORE
Coulomb Explosion for Nuclear Astrophysics (12'+3')
- Karoly Osvay, University of Szeged
Fusion-neutron generation with 12fs, 20mJ laser pulses (12'+3')

16:30-17:00 Coffee break

High repetition rate lasers II | Chair: Catherine Yuriko Teisset

- Takashi Sekine, Hamamatsu Photonics
(Invited) High energy LD-pumped cryogenically cooled Yb:YAG ceramic laser (25'+5')
- 17:00-18:15 • Jorge J. Rocca, Colorado State University
(Invited) Advances in kW average power ultrafast lasers based on cryogenically cooled Yb:YAG lasers and applications (25'+5')
- Pavel Bakule, Extreme Light Infrastructure – Beamlines
High-repetition rate laser drivers for proton and electron laser-plasma accelerators at ELI-Beamlines (12'+3')

19:00-20:00 **Banquet**

Sep. 22 Thursday

OPCPA | Chair: Hiromitsu Kiriama

- Jake Bromage, University of Rochester
(Invited) Commissioning and performance of MTW-OPAL, an all-OPCPA system (25'+5')
- Zenghu Chang, University of Central Florida
(Invited) Intense mid-infrared lasers for strong-field physics (25'+5')
- 9:00-10:45 • Timo Eichner, University of Hamburg
Highly stable OPCPA-based seed laser for Ti:Sapphire based LPA drivers (12'+3')
- Florent Scol, Commissariat à l'Énergie Atomique et aux Énergies Alternatives
 μ J-range, all-polarization maintaining fiber optical parametric chirped pulse amplification at 1053 nm based on hybrid fiber (12'+3')
- Seung-Whan Bahk, University of Rochester
Experimental verification of pump wavefront transfer in an optical parametric amplifier (12'+3')

10:45-11:05

Coffee break

Radiations driven by ultraintense lasers | Chair: G. Ravindra Kumar

- Harsh Harsh, Helmholtz Institute Jena
Bright Betatron beams from Different Injection Schemes in a Laser-Driven Plasma Wakefield (12'+3')
- Nasr A. M. Hafz, Extreme Light Infrastructure - Attosecond Light Pulse Source
Dual-color laser-plasma electron accelerator & development of high-repetition particle/x-ray sources at ELI-ALPS (12'+3')
- Marie Ouillé, Laboratoire d'Optique Appliquée
11:05-12:35 Relativistic single-cycle optics (12'+3')
- Óscar Amaro, Instituto Superior Técnico
Focused Laser-Electron Scattering Toolkit for upcoming Strong Field QED Experiments (12'+3')
- Maksim A. Valialshchikov, Skolkovo Institute of Science and Technology
Towards high photon density for Compton scattering by spectral chirp (12'+3')
- Reed Hollinger, Colorado State University
Relativistic nanophotonics: creating extreme plasma conditions with the ALEPH ultra-intense laser (12'+3')

12:35-

Lunch, excursion, & dinner

Sep. 23 Friday

Laser technologies & components | Chair: Zenghu Chang

- Arno Klenke, Helmholtz-Institute Jena
(Invited) High power multicore fibers – current status and future perspectives (25'+5')
- Kyle D. Chesnut, University of California-Irvine
9:00-10:15 Review of Chirped Pulse Juxtaposed with Beam Amplification as a Route to Exawatt Peak-Power Lasers (12'+3')
- Flemming Tinker, Aperture Optical Sciences Inc.
Enhancing Manufactured Off-Axis Parabola Performance Using a Collimator for Measuring Focal Spots with High Dynamic Range (12'+3')
- Yann Bernard, Horiba France
Recent achievements on 800 nm metal coated pulse compression gratings in picosecond and femtosecond regimes (12'+3')

10:15-10:35

Coffee break

Interactions between ultraintense lasers & mesoscopic targets | Chair: Il Woo Choi

- G. Ravindra Kumar, Tata Institute of Fundamental Research
(Invited) Extreme contrast, femtosecond laser interaction with solids (25'+5')
- Yinren Shou, Center for Relativistic Laser Science
10:35-11:50 Strong hard x-ray flashes generated from carbon nanotube plasmas driven by a petawatt femtosecond laser (12'+3')
- Johannes Hornung, GSI Helmholtzzentrum für Schwerionenforschung
Study of preplasma properties using time-resolved reflection spectroscopy (12'+3')
- Ankit Dulat, Tata Institute of Fundamental Research
Ultrafast snapshots on nanometric scales of pre-plasma from relativistic laser-solid interaction (12'+3')

11:50-12:05

Closing remarks