

ICUIL 2018 Conference - Program

Sunday, September 9th

15:00-19:00	Registration	
19:00-20:30	Welcome Reception	Thomas Kühl

Monday, September 10th

07:30-08:40	Registration	
08:40-08:45	Welcome address	Thomas Kühl
08:45-10:45	New and upcoming laser facilities	Chair: Terrance Kessler

- Petawatt Class Lasers – Current Status and Future Directions (40'+5')
Colin Danson, AWE plc
- Short pulse, high peak power, high average power lasers of the ELI facilities (40'+5')
Karoly Osvay, ELI-ALPS
- Recent Progress on the ultraintense ultrafast laser at SIOM (25'+5')
Yuxin Leng, Shanghai Institute of Optics and Fine Mechanics

10:45-11:00	Coffee Break	
11:00-12:30	QED/Laser-electron interactions	Chair: Christopher Barty

- GeV Electron Acceleration and Strong Field QED Research with Multi-PW Laser (25'+5')
Chang Hee Nam, GIST Korea
- Laser-electron scattering in the strongly nonlinear regime and the generation of high-order harmonics (25'+5')
Sudeep Banerjee, University of Nebraska
- Experimental evidence of radiation reaction in the collision of a high-intensity laser pulse with a laser-wakefield accelerated electron beam (25'+5')
Elias Gerstmayr, Imperial College London

12:30-14:00	Lunch break	
14:00-15:40	Laser Wakefield Acceleration	Chair: Felicie Albert

- Laser-plasma accelerator research at the BELLA Center (25'+5')
Carl Schroeder, Lawrence Berkeley National Laboratory
- Feedback control of the spatio-temporal properties of high-intensity laser pulses to optimize x-ray and 100-MeV electron generation (25'+5')
Daniel Symes, STFC Rutherford Appleton Laboratory
- Controlling relativistic electrons with radially polarized light (15'+5')
Diego Guenot, Lund University
- Highest peak current electron beams from laser wakefield accelerators (15'+5')
Arie Irman, Helmholtz-Zentrum Dresden-Rossendorf

15:40-16:00	Coffee break	
16:00-18:00	Poster session 1	
19:30	Barbecue dinner	

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Tuesday, September 11th

08:30-10:50		Ti:sapphire-based laser systems		Chair: Catherine Le Blanc	
<ul style="list-style-type: none"> • 339-J chirped pulse amplifier in 10 PW SULF Laser (15'+5') <i>Zebiao Gan, Shanghai Institute of Optics and Fine Mechanics</i> • Online diagnostics and long-term stability of the 200 TW ANGUS laser system (15'+5') <i>Timo Eichner, University of Hamburg</i> • Status update and first commissioning results of the Apollon 10PW laser (15'+5') <i>Dimitrios Papadopoulos, LULI/Ecole Polytechnique</i> • Towards high repetition rate ultra-intense lasers, latest developments at Amplitude Technologies (15'+5') <i>Franck Falcoz, Amplitude</i> • ATLAS-3000, the multi-PW Ti:Sa laser at Garching as an electron and radiation source (15'+5') <i>Stefan Karsch, MPI für Quantenoptik</i> • Operational Experience with the BELLA PW Laser Facility for Collaborative Research in Laser Plasma Science (15'+5') <i>Csaba Toth, Lawrence Berkeley National Laboratory</i> • High Energy TiSa Amplifiers for Multi-PetaWatt Laser Systems (15'+5') <i>Christophe Radier, Thales</i> 					
10:50-11:05		Coffee Break			
11:05-12:25		UHI Lasers at other large scale instruments		Chair: Dino Jaroszynski	
<ul style="list-style-type: none"> • Ultra-High Intensity Lasers at Hard X-ray Free Electron Lasers <i>Thomas Cowan, Helmholtz-Zentrum Dresden-Rossendorf (35'+5')</i> • LIGHT at GSI: Laser Ion Generation, Handling and Transport <i>Abel Blazevic, GSI Darmstadt (15'+5')</i> • Probing vacuum birefringence in head-on collisions between 10 PW laser and 1 GeV gamma-rays at ELI-NP (15'+5') <i>Yoshihide Nakamiya, IFIN-HH/ELI-NP</i> 					
12:30-14:00		Lunch Break			
14:00-16:00		Parallel Sessions			
Gratings/Damage		Chair: Jake Bromage	Relativistic Laser plasma interactions		Chair: Mamiko Nishiuchi
<ul style="list-style-type: none"> • High damage threshold optics in ultra-intense laser systems: State of the art and Next Gen Optics (25'+5') <i>Enam Chowdhury, The Ohio State University</i> • Meter-Scale Pulse-compression Gratings for High Power Laser system in China (25'+5') <i>Keqiang Qiu, University of Science and Technology China</i> • Meter-size 575x1015mm Gold-coated Gratings for 10-PW-class lasers (15'+5') <i>Arnaud Cotel, Horiba Scientific</i> • Pulse Compression Gratings in High Average Power Lasers (15'+5') <i>Turan Erdogan, Plymouth Grating</i> • Egypt on the World Map of UIL Research (15'+5') <i>Lotfia M. ElNadi, Cairo University</i> • Relativistic electron physics in ultrahigh intensity laser-solid interactions (15'+5') <i>Ravindra Gattamraju, Tata Institute of Fundamental Research</i> • Ultra-intense laser produced mega-gauss magnetic fields at the rear side of thin targets (15'+5') <i>Amit Lad, Tata Institute of Fundamental Research</i> • Highly relativistic ultrashort pulse laser interaction with ordered nanowire arrays: x-ray and neutron generation (15'+5') <i>Jorge Rocca, Colorado State University</i> 					

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- Dynamic field distribution study inside a dispersive multilayer dielectric coating for improving ultrashort laser pulse damage threshold (15'+5')
Seung-whan Bahk, University of Rochester

- Wavelength dependence in the relativistic interaction of ultrashort laser pulses with nanostructured solids (15'+5')
Zhanna Samsonova, Friedrich Schiller University Jena
- Relativistic interaction between few-cycle laser pulses and overdense plasmas (15'+5')
Neil Zaim, Laboratoire d'Optique Appliquée

16:00-16:20		Coffee break	
16:20-19:00		Parallel Sessions	
Components and targetry	Chair: Thomas Kühl	Laser-driven ion beams	Chair: Markus Roth
<ul style="list-style-type: none"> • Plasma mirror on LFEX (25'+5') <i>Yasunobu Arikawa, Osaka University</i> • A New Concept on Thermal-Lens-Free Solid State Laser: Heat Capacitive Active Mirror HACAM (25'+5') <i>Ken-ichi Ueda, ILS/UEC-Tokyo</i> • 235-mm-diameter Ti:sapphire for 10-PW ultrafast laser facility (25'+5') <i>Xiaoyan Liang, Shanghai Institute of Optics and Fine Mechanics</i> • Large-size LBO crystal for Ultrahigh Intensity Laser (25'+5') <i>Zhanggui Hu, Tianjin University of Technology</i> • Thin Disk -Slab Ti:Sa Amplifiers (15'+5') <i>Vladimir Chvykov, ELI-ALPS</i> • Ultrafast Thin-Disk Amplifiers (15'+5') <i>Knut Michel, Trumpf Scientific</i> 		<ul style="list-style-type: none"> • Relativistic Electron Streaming Instabilities Modulate Proton Beams accelerated in Laser-Plasma Interactions (15'+5') <i>Christian Rödel, Helmholtz Institute Jena</i> • Time and spatially-resolved density measurement of Proton-heated Warm Dense Silica using Phase Contrast X-ray imaging (15'+5') <i>Maxence Gauthier, SLAC National Accelerator Laboratory</i> • High Charge Ion Beams with Achromatic Divergence by a High Repetition Rate Petawatt Laser (15'+5') <i>Sven Steinke, Lawrence Berkeley National Laboratory</i> • Off-harmonic optical probing of high intensity laser-matter interaction with a stand-alone probe laser system (15'+5') <i>Constantin Bernert, Helmholtz-Zentrum Dresden-Rossendorf</i> 	
		Temporal Contrast I	Chair: Dimitris Papadopoulos
		<ul style="list-style-type: none"> • Spatio-temporal characterization of the PW BELLA laser (15'+5') <i>Antoine Jeandet, CEA</i> • Single-shot high-dynamic temporal and spatio-temporal characterizations by self-referenced spectral interferometry (25'+5') <i>Thomas Oksenhendler, iTEOX</i> • Exploring various spectral, temporal, and spatial pulse shaping techniques for high energy short pulse lasers (15'+5') <i>Jens Schwarz, Sandia National Laboratories</i> 	
19:30		Dinner	

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Wednesday, September 12th

08:30-10:30 High-energy high-intensity lasers Chair: Qihua Zhu

- Accurate Performance Predictions of the Kilojoule Petawatt-class Advanced Radiographic Capability (25'+5')
David Alessi, Lawrence Livermore National Laboratory
- PETAL laser performance on the first experimental campaigns (25'+5')
Nathalie Blanchot, CEA-CESTA
- Hybrid OPCPA/Glass 10-PW laser at 1 shot a minute (15'+5')
Erhard Gaul, National Energetics, Inc.
- LULI2000 Facility Overview and Status Update (15'+5')
Loic Meignien, CNRS
- Upgrades to the Z-Petawatt Laser at Sandia National Laboratories (15'+5')
Patrick Rambo, Sandia National Laboratories

10:30-10:45 Coffee Break

10:45-12:45 Temporal contrast II Chair: Vincent Bagnoud

- Generation of high-contrast few-cycle pulses via nonlinear ellipse rotation in a differentially pumped hollow-fiber (15'+5')
Nikita Khodakovskiy, ELI-HU Non-Profit Ltd.
- Spatiotemporal study on a PW laser: Theoretical models, measurement methods and experimental results (15'+5')
Lucas Ranc, LULI Ecole Polytechnique
- Pump induced contrast degradation in OPCPA systems (15'+5')
Viktor Pajer, ELI-ALPS
- Nonlinear interferometers for temporal contrast enhancement (15'+5')
Efim Khazanov, Institute of Applied Physics of the RAS
- High dynamic range, large temporal domain laser pulse measurement (15'+5')
Victor Schanz, TU Darmstadt
- Comparative study of pulse contrast evaluation techniques towards spatio-temporal beam analysis (15'+5')
Stefan Bock, Helmholtz-Zentrum Dresden-Rossendorf

12:45-14:15 Lunch break

14:15-16:05 Nuclear photonics Chair: Jorge Rocca

- Neutron and ion sources with compact laser systems (15'+5')
Arianna Formenti, Politecnico die Milano
- Laser-monitored fusion-triggered liquid transmutator (15'+5')
Toshiki Tajima, University of California at Irvine
- Laser-driven compact sources of epithermal and thermal neutrons (25'+5')
Satyabrata Kar, Queen's University Belfast
- R&D of Laser Driven Neutron Sources and Applications in Japan (15'+5')
Kunioki Mima, The Graduate School for the Creation of New Photonics Industries
- High-flux neutron generation from planar cryogenic deuterium jets (15'+5')
Chandra Curry, SLAC National Accelerator Laboratory
- Recent developments and future applications for Laser-Driven Neutron Sources (15'+5')
Markus Roth, TU Darmstadt

16:15-18:00 Coffee break and Poster session 2

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18:00-19:30 **2018 ICUIL Conference Panel Discussion**
"Networks and Motivations for Ultrahigh Intensity Laser Research"

- 2018 ICUIL Facility Census
C. P. J. Barty, University of California, Irvine
- US Intense Laser Facilities, Activities and Network
Jorge Rocca, Colorado State University
- High Intensity Lasers: Activities in Asia and R&D Programs in Japan
Yoshiaki Kato, The Graduate School for the Creation of New Photonics Industries
- ELI - next steps toward user facilities
Georg Korn, ELI-beamlines, Prague

19:30 Conference photo

20:00 Conference Dinner

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Thursday, September 13th

08:30-10:40	High-average-power high-intensity lasers	Chair: Joachim Hein
<ul style="list-style-type: none">• Status and prospects for fiber-based high-intensity lasers (25'+5') <i>Jens Limpert, Friedrich Schiller University Jena</i>• Demonstration of a kilowatt average power, 1 Joule short pulse laser (15'+5') <i>Brendan Reagan, XUV Lasers, Inc./Colorado State University</i>• Relativistic-intensity near-single-cycle kHz laser driver (15'+5') <i>Aline Vernier, Laboratoire d'Optique Appliquée</i>• 10-W CEP-stable few-cycle source at 2 um with 100-kHz repetition rate (15'+5') <i>Marcel Neuhaus, Ludwig Maximilians University Munich</i>• XCAN: a highly scalable femtosecond coherent amplification network (15'+5') <i>Christophe Simon-Boisson, Thales France</i>• Current status and performance of the PENELOPE Laser System (15'+5') <i>Markus Loeser, Helmholtz-Zentrum Dresden-Rossendorf</i>		
10:40-11:00	Coffee Break	
11:00-13:00	Nonlinear amplifiers and OPCPA technology	Chair: Jens Limpert
<ul style="list-style-type: none">• Designing an Efficient Raman Amplifier (25'+5') <i>Dan Haberberger, Laboratory for Laser Energetics</i>• Overview of a multi-petawatt OPCPA laser facility in CAEP (25'+5') <i>Kainan Zhou, Laser Fusion Research Center</i>• High-contrast, few-cycle pulses from picosecond-pumped OPCPA for relativistic laser-matter interaction (15'+5') <i>Zsuzsanna Major, GSI Darmstadt</i>• 15-W, few-cycle and ultra-stable mid-IR OPCPA (15'+5') <i>Nicolas Thiré, Fastlite</i>• Advances in Extreme Light Compression (15'+5') <i>Jonathan Wheeler, Ecole Polytechnique</i>		
13:30	Transfer to Lindau harbor	
14:30-22:00	Excursion	

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Friday, September 14th

08:30-10:10	Attoscience and EUV sources	Chair: Jonathan Zuegel
<ul style="list-style-type: none">• Recent progress on laser-driven soft x-ray lasers (25'+5') <i>Stephane Sebban, Laboratoire d'Optique Appliquée</i>• Towards isolated high energy attosecond pulses from relativistic high harmonics generation (15'+5') <i>Vyacheslav Leshchenko, Ludwig-Maximilians University Munich</i>• From quantum-optical XUV spectrometry to ultrafast nonlinear XUV optics (25'+5') <i>Paraskevas Tzallas, ELI-ALPS</i>• Helicity in a twist: full polarization and vortex control of EUV harmonics and attosecond pulses using light spin-orbital momentum coupling (15'+5') <i>Carlos Hernandez-Garcia, University of Salamanca</i>		
10:10-10:30	Coffee Break	
10:30-11:50	Beam Quality	Chair: Christopher Hooker
<ul style="list-style-type: none">• Characterization of beam-quality of J-KAREN-P laser facility at QST (15'+5') <i>Hiromitsu Kiriya, National Institutes for Quantum and Radiological Science and Technology</i>• Wavefront Degradation of a 200-TW Laser from Heat-Induced Deformation of In-Vacuum Compressor Gratings (15'+5') <i>Vincent Leroux, University of Hamburg</i>• Spatio-Temporal Characterization of Pump-Induced Wavefront Aberrations in Yb-Doped Materials (15'+5') <i>Issa Tamer, Helmholtz-Institute Jena</i>• High vacuum compatible wave front sensor for focal spot diagnostics and optimization (15'+5') <i>Ivan Doudet, Phasics S.A.</i>		
11:50-13:10	LWFA driven light sources and applications	Chair: Csaba Toth
<ul style="list-style-type: none">• Development and applications of light sources driven by laser-wakefield acceleration with picosecond lasers (15'+5') <i>Felicie Albert, Lawrence Livermore National Laboratory</i>• Warm Dense Matter probed at femtosecond resolution by Betatron X-rays (15'+5') <i>Benoit Mahieu, Laboratoire d'Optique Appliquée</i>• Laser-Plasma Driven Water-Window Undulator Radiation (15'+5') <i>Andreas Maier, Hamburg University</i>• Advanced electron and X-ray sources using laser wakefield acceleration (15'+5') <i>Andreas Döpp, Ludwig Maximilians University Munich</i>		
13:10-14:30	Closing Remark and Lunch	