

# Preliminary Program of ALPS2019 (16 April 2019 updated)

The 8th Advanced Lasers and Photon Sources conference will be held on 22-25 April 2019.

In ALPS2019, a presentation number is defined as ALPS-<#1>-<#2>.

The number <#1> indicates the session order in the ALPS2019 conference.

The number <#2> indicates the presentation order in the session.

Category	Session	Topics
A.	ALPS-12 [A1] ALPS-14 [A2]	Novel optical materials/structure and applications
B.	ALPS-1 [B1] ALPS-2 [B2]	High average power lasers and applications
C.	ALPS-9 [C1] ALPS-11 [C2] ALPS-13 [C3]	High peak power lasers, high pulse energy lasers and applications
D.	ALPS-15 [D1] ALPS-19 [D2] ALPS-20 [D3]	Novel solid state / fiber / diode lasers and applications
E.	ALPS-17 [E]	Short wavelength light sources and applications
F.	ALPS-16 [F1] ALPS-18 [F2]	Terahertz devices, nonlinear optics and applications
G.	ALPS-8 [G1] ALPS-10 [G2]	Novel optical devices, metamaterials, structure and applications
H.	ALPS-3 [H]	Optical devices and techniques for bio and medical applications
I.	ALPS-5 [I1] ALPS-7 [I2]	Optical frequency combs / Frequency stabilized lasers and applications
J.	JS-2 [ALPS-J]	Joint session ALPS+HEDS+XOPT JS-2-1 (ALPS), JS-2-2 (HEADS), and JS-2-3 (XOPT)
ACUIL.	ALPS-4 [ACUIL1] ALPS-6 [ACUIL2]	Special sessions co-organized with ACUIL Ultra-high intensity lasers and applications
P.	ALPS-P1 ALPS-P2	Poster sessions: P1(Category A,B,C, and E) and P2(Category D, F, G, H, and I)

Date	Time	Room 303	Room 511+512
Mon. 22 Apr.	09:00-09:30	Opening Remarks	
	09:30-10:00	ALPS-1 [B1] High power lasers 1	
	10:00-10:30		
	10:30-11:00	Break	Break
	11:00-11:30	ALPS-2 [B2] High power lasers 2	ALPS-3 [H] Biomedical imaging
	11:30-12:00		
	12:00-12:30	Lunch	
	12:30-13:00		Lunch
	13:00-13:30	ALPS-4 [ACUIL1] Ultra-high intensity lasers	ALPS-5 [I1] Dual-comb
	13:30-14:00		
	14:00-14:30		
	14:30-15:00		
	15:00-15:30	Break (15:10-15:40)	Break
	15:30-16:00		ALPS-7[I2] Comb applications
	16:00-16:30	ALPS-6 [ACUIL2] Applications of ultra-high intensity lasers	
	16:30-17:00		
	17:00-17:30		
	17:30-18:00		

Date	Time	Room 303	Room 511+512
Tue. 23 Apr.	09:00-12:00	OPIC Plenary Session Room 501+502	
	12:00-12:30	Lunch	
	12:30-13:00		
	13:00-13:30		
	13:30-14:00	JS-2 [ALPS-J] ALPS-HEDS-XOPT joint session	ALPS-8 [G1] Modulation, wavelength conversion and measurement with linear and nonlinear processes
	14:00-14:30		
	14:30-15:00		
	15:00-15:30	Break	Break
	15:30-16:00	ALPS-9 [C1] Ultra-high intensity lasers and technology	ALPS-10 [G2] Metamaterial, metasurface and new materials for laser applications
	16:00-16:30		
	16:30-17:00		

Date	Time	Room 303	Room 511+512
Wed. 24 Apr.	09:00-09:30		ALPS-12 [A1] Optical materials / structure and applications 1
	09:30-10:00	ALPS-11 [C2] Ultra-short pulse high intensity lasers and technology	
	10:00-10:30		
	10:30-11:00	Break	Break
	11:00-11:30	ALPS-13 [C3] Measurements and applications of high intensity lasers	ALPS-14 [A2] Optical materials / structure and applications 2
	11:30-12:00		
	12:00-12:30	Lunch	
	12:30-13:00		
	13:00-13:30		
	13:30-14:00	ALPS-P1 Poster session 1 Exhibition Hall A	
	14:00-14:30		
	14:30-15:00		
	15:00-15:30	Break	
	15:30-16:00	ALPS-P2 Poster session 2 Exhibition Hall A	
	16:00-16:30		
	16:30-17:00		

Date	Time	Room 303	Room 304	
Thu. 25 Apr.	09:00-09:30	ALPS-15 [D1] Novel material and wavelength lasers	ALPS-16 [F1] Terahertz applications	
	09:30-10:00			
	10:00-10:30			
	10:30-11:00	Break		
	11:00-11:30	ALPS-17 [E] Ultrashort light source and application	ALPS-18 [F2] Terahertz applications and nonlinear optics	
	11:30-12:00			
	12:00-12:30	Lunch		
	12:30-13:00			
	13:00-13:30			
	13:30-14:00	ALPS-19 [D2] Ultrafast and advanced lasers		
	14:00-14:30			
	14:30-15:00			
	15:00-15:30			Break
	15:30-16:00	ALPS-20 [D3] Fiber lasers		
	16:00-16:30			
	16:30-16:40	Award ceremony		
	16:40-16:45	Closing Remarks		

## Monday, 22nd April 2019, Room 303

### Opening remarks

9:00 - 9:15 Room 303

**Hitoki Yoneda**

*Institute for Laser Science, The University of Electro-Communications (UEC)*

### ALPS-1 [B1] High power lasers 1

9:15 - 10:30 Room 303

**Chair: Ryo Yasuhara**

*National Institute for Fusion Science*

- |   |  |
|---|--|
| <b>ALPS-1-01</b><br><i>invited</i><br><b>9:15</b> | <b>High-average-power DUV picosecond pulse generation based on a gain-switched LD and hybrid MOPA</b><br>Kenta Kohno<br><i>Spectronix</i>                                      |
| <b>ALPS-1-02</b><br><b>9:45</b>                   | <b>1-J, 300-Hz Laser System by Using High Peak Power Laser-Diode Pumped Nd:YAG Amplifiers for Industrial Applications</b><br>Takaaki Morita<br><i>HAMAMATSU PHOTONICS K.K.</i> |
| <b>ALPS-1-03</b><br><b>10:00</b>                  | <b>Purification of the liquid media of stimulated Brillouin scattering phase conjugate mirrors for high average laser system</b><br>Seongwoo Cha<br><i>KAIST</i>               |
| <b>ALPS-1-04</b><br><b>10:15</b>                  | <b>Kerr-Lens Mode-Locked Yb:LuAG Ceramic Thin-Disk Laser</b><br>Shotaro Kitajima<br><i>University of Electro-Communications</i>  |

-----Break (10:30 - 11:00) -----

## Monday, 22nd April 2019, Room 303

### ALPS-2 [B2] High power lasers 2

11:00 - 12:00 Room 303

**Chair: Junji Kawanaka**

*Institute of Laser Engineering, Osaka University*

**ALPS-2-01 Canceled**

**ALPS-2-02 Experimental and Theoretical Studies of the Diode Pumped Alkali Lasers**

**11:00**

Boris Barmashenko

*Ben-Gurion University of the Negev*

**ALPS-2-03 Diode pumped rubidium laser based on etalon effects of alkali cell windows**

**11:15**

Zhiyong Li

*Institute of Electronics, Chinese Academy of Sciences*

**ALPS-2-04 Rare earth doped Aluminium oxide/nitride ceramics for light emitting application**

*invited*

**11:30**

Yasuhiro Kodaera

*UC San Diego*

-----Lunch (12:00 - 13:00) -----

## Monday, 22nd April 2019, Room 511+512

### ALPS-3 [H] Biomedical imaging

11:00 - 12:30 Room 511+512

**Chair: Masayuki Suzuki**

*Faculty of Science and Engineering, Doshisha University*

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|--|--|
| <b>ALPS-3-01</b><br><i>invited</i><br><b>11:00</b> | <b>AI cell sorting - where photonics meets microfluidics and AI</b><br>Keisuke Goda<br><i>University of Tokyo</i>  |
| <b>ALPS-3-02</b><br><i>invited</i><br><b>11:30</b> | <b>In-vivo tomographic visualization of intracochlear vibration using supercontinuum multifrequency-swept optical coherence microscope</b><br>Samuel Choi<br><i>Niigata University</i> |
| <b>ALPS-3-03</b><br><b>12:00</b>                   | <b>Fluorescence imaging with Y<sub>2</sub>O<sub>3</sub>:Yb nanoparticles in the second near-infrared window</b><br>Yoshiki Akino<br><i>The University of Nagoya</i>                    |
| <b>ALPS-3-04</b><br><b>12:15</b>                   | <b>Establishment of a novel measurement technique for pedicle screw stability -LASER resonance frequency analysis-</b><br>Daisuke Nakashima<br><i>Keio University</i>                  |

-----Lunch (12:30 - 13:30) -----

## Monday, 22nd April 2019, Room 303

### ALPS-4 [ACUIL1] Ultra-high intensity lasers

13:00 - 15:10 Room 303

**Chair: Chang Hee Nam**

*Institute for Basic Science*

**ALPS-4-01**

**13:00**

**Opening address**

Chang Hee Nam

*Institute for Basic Science*

**ALPS-4-02**

**13:05**

**Recent Progress on the ultra-intense and ultra-fast laser facility at SIOM from SULF to SEL**

Yuxin Leng

*State Key Laboratory of High Field Laser Physics, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*

**ALPS-4-03**

**13:30**

**Ultra-intense sub-20 fs laser for nonlinear Compton scattering**

Seong Ku Lee

*IBS-GIST*

**ALPS-4-04**

**13:55**

**Recent Performance and Progress on the J-KAREN-P High Intensity Laser Facility**

Hiromitsu Kiriya

*National Institutes for Quantum and Radiological Science and Technology*

**ALPS-4-05**

**14:20**

**Innovative Power Laser System Developed at Osaka University**

Junji Kawanaka

*Osaka University*

**ALPS-4-06**

**14:45**

**A multi-function high-intensity laser driver for intense radiation sources - Xingguang-III facility**

Qihua Zhu

*Laser Fusion Research Center, China Academy of Engineering Physics*

-----Break (15:10 - 15:40) -----

## Monday, 22nd April 2019, Room 511+512

### ALPS-5 [I1] Dual-comb

13:30 - 15:00 Room 511+512

**Chair: Mitsuru Musya**

*Institute for Laser Science, University of Electro-Communications (UEC)*

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|--|---|
| <b>ALPS-5-01</b><br><i>invited</i><br><b>13:30</b> | <b>Advances in Optical Time Transfer using Frequency Combs</b><br>Nathan Newbury<br><i>National Institute of Standards and Technology</i>   |
| <b>ALPS-5-02</b><br><b>14:00</b>                   | <b>Dual-comb Based Angle Measurement Using a Grating and a Corner Cube Combined Sensor</b><br>Siyu Zhou<br><i>Tsinghua University</i>   |
| <b>ALPS-5-03</b><br><b>14:15</b>                   | <b>Rapid Characterization of Orbital Angular Momentum Spectrum of Arbitrary Optical Vortex using Dual-comb Spectroscopy</b><br>Akifumi Asahara<br><i>The University of Electro-Communications</i> |
| <b>ALPS-5-04</b><br><b>14:30</b>                   | <b>Bidirectional dual-comb fiber laser with controllability of carrier-envelope-offset frequency</b><br>Yoshiaki Nakajima<br><i>The University of Electro-Communications</i>                      |
| <b>ALPS-5-05</b><br><b>14:45</b>                   | <b>Mutually coherent all-polarization-maintained dual-comb fiber laser with nonlinear amplifying loop mirror</b><br>Yoshiaki Nakajima<br><i>The University of Electro-Communications</i>          |

-----Break (15:00 - 15:30) -----



## Monday, 22nd April 2019, Room 303

### ALPS-6 [ACUIL2] Applications of ultra-high intensity lasers

15:40 - 17:45 Room 303

**Chair: Hiromitsu Kiriya**

*National Institutes for Quantum and Radiological Science and Technology*

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|----------------------------------|--|
| <b>ALPS-6-01</b><br><b>15:40</b> | <b>Collisionless Shock Acceleration in Near Critical Density Relativistic Plasma</b><br>Chang Hee Nam<br><i>Institute for Basic Science</i>                                  |
| <b>ALPS-6-02</b><br><b>16:05</b> | <b>Strong terahertz pulses generated from relativistic laser-produced plasmas</b><br>Yutong Li<br><i>Institute of Physics, Chinese Academy of Sciences</i>                   |
| <b>ALPS-6-03</b><br><b>16:30</b> | <b>Experimental Demonstration of a Laser Proton Accelerator with Image-Relaying Beam Transport</b><br>Chen Lin<br><i>Peking University</i>                                   |
| <b>ALPS-6-04</b><br><b>16:55</b> | <b>Dynamic structure enable relativistic electron plasma generation in microdroplet plasma</b><br>Krishnamurthy Manchikanti<br><i>Tata Institute of Fundamental Research</i> |
| <b>ALPS-6-05</b><br><b>17:20</b> | <b>500 TW Ti:sapphire laser at ETRI</b><br>Dong Hoon Song<br><i>Electronics and Telecommunications Research Institute</i>  |

## Monday, 22nd April 2019, Room 511+512

### ALPS-7 [I2] Comb applications

15:30 - 17:00 Room 511+512

**Chair: Nathan Newbury**

*National Institute of Standards and Technology*

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|--|---|
| <b>ALPS-7-01</b><br><i>invited</i><br><b>15:30</b> | <b>Miniature chip-based frequency combs: physics and applications</b><br>Kerry Vahala<br><i>California Institute of Technology</i>  |
| <b>ALPS-7-02</b><br><i>invited</i><br><b>16:00</b> | <b>Low timing jitter femtosecond fiber lasers and applications</b><br>Minglie Hu<br><i>Tianjin University</i>   |
| <b>ALPS-7-03</b><br><b>16:30</b>                   | <b>Timing Jitter Suppression through Relative Intensity Noise Stabilization in High-repetition-rate Mode-locked Fiber Lasers</b><br>Yan Wang<br><i>Peking University</i>                  |
| <b>ALPS-7-04</b><br><b>16:45</b>                   | <b>One-shot three-dimensional imaging using a stabilized all-optical Hilbert transform with optical frequency comb</b><br>Takashi Kato<br><i>The University of Electro-Communications</i> |

## Tuesday, 23rd April 2019, Room 303

### JS-2 [ALPS-J] ALPS-HEDS-XOPT joint session

13:30 - 15:00 Room 303

**Chair: Hitoki Yoneda**

*Institute for Laser Science, University of Electro-Communications (UEC)*

**Akifumi Yogo**

*Institute of Laser Engineering, Osaka University*

**Makina Yabashi**

*RIKEN SPring-8 Center*

**JS-2[ALPS-J]-01 Recent advances on the BELLA PW laser for collaborative research in  
invited laser plasma science**

**13:30**

Csaba Toth

*Lawrence Berkeley National Laboratory*

**JS-2[ALPS-J]-02 Status and Prospect of high energy density science with high power lasers  
invited at Osaka University**

**14:00**

Ryosuke Kodama

*Institute of Laser Engineering, Osaka University*

**JS-2[ALPS-J]-03 Status of the EBS Programme Implementation at the ESRF  
invited**

**14:30**

Francesco Sette

*European Synchrotron Radiation Facility*

-----Break (15:00 - 15:30) -----

## Tuesday, 23rd April 2019, Room 511+512

### **ALPS-8 [G1] Modulation, wavelength conversion and measurement with linear and nonlinear processes**

13:30 - 15:00 Room 511+512

**Chair: Takasumi Tanabe**

*Keio University*

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| <b>ALPS-8-01</b><br><i>invited</i><br><b>13:30</b> | <b>Linear Frequency Conversion in Rapidly Time-variant Metasurfaces</b><br>Bumki Min<br><i>KAIST</i>   |
| <b>ALPS-8-02</b><br><i>invited</i><br><b>14:00</b> | <b>Efficient SHG in Periodically Poled Lithium Niobate Microresonators</b><br>Fang Bo<br><i>Nankai University</i>  |
| <b>ALPS-8-03</b><br><b>14:30</b>                   | <b>A study on the modulation of vector optical field with near-field conformal</b><br>Xibo Sun<br><i>Research Center of Laser Fusion, China Academy of Engineering Physics</i> |
| <b>ALPS-8-04</b><br><b>14:45</b>                   | <b>Hong-Ou-Mandel Interference between Photons Encoded with Orthogonal Spectra</b><br>Aruto Hosaka<br><i>Keio University</i>   |

-----Break (15:00 - 15:30) -----

## Tuesday, 23rd April 2019, Room 303

### ALPS-9 [C1] Ultra-high intensity lasers and technology

15:15 - 17:00 Room 303

**Chair: Hiromitsu Kiriya**

*National Institutes for Quantum and Radiological Science and Technology*

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|--|--|
| <b>ALPS-9-01</b><br><i>invited</i><br><b>15:15</b> | <b>Recent status and progress of SULF 10 PW Laser</b><br>Xiaoyan Liang<br><i>Shanghai Institute of Optics and Fine Mechanics</i>   |
| <b>ALPS-9-02</b><br><b>15:45</b>                   | <b>Overview of a multi-petawatt OPCPA laser facility</b><br>Kainan Zhou<br><i>Laser Fusion Research Center, China Academy of Engineering Physics</i>                         |
| <b>ALPS-9-03</b><br><b>16:00</b>                   | <b>A 100-J class laser processing system with variable parameters for the database/platform in the TACMI consortium</b><br>Takashi Sekine<br><i>Hamamatsu Photonics K.K.</i> |
| <b>ALPS-9-04</b><br><b>16:15</b>                   | <b>Possible method for single-optical-cycle 100 petawatt lasers</b><br>Zhaoyang Li<br><i>Institute of Laser Engineering, Osaka University</i>                                |
| <b>ALPS-9-05</b><br><b>16:30</b>                   | <b>Wavefront optimization of Meter-size Gratings for 10PW-class lasers</b><br>Arnaud Cotel<br><i>HORIBA Scientific</i>   |
| <b>ALPS-9-06</b><br><b>16:45</b>                   | <b>600 mm deformable mirrors for multi PW lasers</b><br>Alexis Kudryashov<br><i>Institute of Geosphere Dynamics RAS</i>  |

## Tuesday, 23rd April 2019, Room 511+512

### **ALPS-10 [G2] Metamaterial, metasurface and new materials for laser applications**

15:30 - 16:30 Room 511+512

**Chair: Tomohiro Amemiya**

*Tokyo Institute of Technology*

<b>ALPS-10-01</b> <i>invited</i> <b>15:30</b>	<b>Optical Nanoantennas for Plasmon Enhanced Infrared Spectroscopy</b> Kai Chen <i>Jinan University</i>
<b>ALPS-10-02</b> <b>16:00</b>	<b>Correlation between Optical Absorption and Device Performance of Metamaterial Perfect Absorber Solar Cells</b> Tomohisa Isegawa <i>Tokyo University of Agriculture and Technology</i>
<b>ALPS-10-03</b> <b>16:15</b>	<b>Unidirectional launching and elongating propagation of Airy surface plasmon polaritons by a metasurface coupling grating</b> Feng Lin <i>Peking University</i>

## Wednesday, 24th April 2019, Room 303

### ALPS-11 [C2] Ultra-short pulse high intensity lasers and technology

9:15 - 10:30 Room 303

**Chair: Takashi Sekine**

*Hamamatsu Photonics K.K.*

**ALPS-11-01**      **Construction of multi-terawatt ALLEGRA laser system operating at 1 kHz repetition rate at ELI-Beamlines**

*invited*

**9:15**

Pavel Bakule

*ELI-Beamlines*

**ALPS-11-02**      **Carbon Nanotube Mode-Locked Cr:ZnS Laser with 400 nm Tuning Range**

**9:45**

Daiki Okazaki

*Institute of Industrial Science, The University of Tokyo*

**ALPS-11-03**      **Development of ultra-low loss and high efficient cavity switch with UV writing ozone mixed gas switch**

**10:00**

Yurina Michine

*University of Electro-Communications*

**ALPS-11-04**      **All-ytterbium frontend for high-energy field synthesis and molecular fieldoscopy**

**10:15**

Hanieh Fattahi

*Max Planck Institute of Quantum optics*

-----Break (10:30 - 10:45) -----

## Wednesday, 24th April 2019, Room 511+512

### ALPS-12 [A1] Optical materials / structure and applications 1

9:00 - 10:30 Room 511+512

**Chair: Masashi Yoshimura**

*Osaka University*

**ALPS-12-01**      **Quasi-phase-matched GaAs stacks for mid-infrared wavelength conversion**  
*invited*      **fabricated with the room-temperature bonding**

**9:00**      Ichiro Shoji  
*Chuo University*

**ALPS-12-02**      **Terbium Aluminum Garnet Ceramics for High-Average-Power Laser**  
**9:30**      **Isolators**

Shigeki Tokita  
*Osaka University*

**ALPS-12-03**      **Temperature dependence of laser-induced damage by multiple pulses**  
**9:45**      **irradiation**

Haruka Ogawa  
*Osaka University*

**ALPS-12-04**      **Group 10 based transition metal dichalcogenides 2D materials used for**  
**10:00**      **laser photonic applications**

Yuen Hong Tsang  
*The Hong Kong Polytechnic University*

**ALPS-12-05**      **Evaluation of Sensing Structure of Laser Microphone using Self-coupling**  
**10:15**      **Effect of Laser Diode for Spherical Sound Wave**

Daisuke Mizushima  
*Aichi Institute of Technology*

-----Break (10:30 - 11:00) -----



## Wednesday, 24th April 2019, Room 303

### ALPS-13 [C3] Measurements and applications of high intensity lasers

10:45 - 12:00 Room 303

**Chair: Pavel Bakule**

*Institute of Physics of the Czech Academy of Sciences, ELI Beamlines*

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|-----------------------------------|---|
| <b>ALPS-13-01</b><br><b>10:45</b> | <b>3D spatiotemporal distortion and detection of femtosecond petawatt lasers</b><br>Zhaoyang Li<br><i>Institute of Laser Engineering, Osaka University</i>                                  |
| <b>ALPS-13-02</b><br><b>11:00</b> | <b>Time-resolved soft X-ray absorption spectroscopy of nitric oxide near N K-edge at 400 eV</b><br>Nariyuki Saito<br><i>The Institute for Solid State Physics, the University of Tokyo</i>  |
| <b>ALPS-13-03</b><br><b>11:15</b> | <b>Temporal Change of the Optical Properties of Titanium Surface Irradiated by Femtosecond-Laser Pulses</b><br>Yuki Furukawa<br><i>Institute for Chemical Research, Kyoto University</i>    |
| <b>ALPS-13-04</b><br><b>11:30</b> | <b>Attosecond Soft-X-Ray Spectroscopy of the Opto-Electronic Response of a Transition Metal Dichalcogenide Material</b><br>Jens Biegert<br><i>ICFO - The Institute of Photonic Sciences</i> |
| <b>ALPS-13-05</b><br><b>11:45</b> | <b>Time-resolved imaging of photoresist stripping dynamics induced by laser irradiation</b><br>Naoki Nishioka<br><i>Osaka Institute of Technology</i>                                       |

-----Lunch (12:00 - 13:15) -----

## Wednesday, 24th April 2019, Room 511+512

### ALPS-14 [A2] Optical materials / structure and applications 2

11:00 - 12:00 Room 511+512

**Chair: Takunori Taira**

*RIKEN SPring-8 Center*

#### **ALPS-14-01 PPLN-based compact modelocked laser**

*invited*

Ursula Keller

*ETH Zurich*

**11:00**

#### **ALPS-14-02 High performance lead-free electro-optic and magneto-optic polycrystalline materials**

**11:30**

Javier Garay

*UC San Diego*

#### **ALPS-14-03 Super-flat white-light generation in multi-thin plates**

**11:45**

Shaobo Fang

*Institute of Physics, Chinese Academy of Sciences*

-----Lunch (12:00 - 13:15) -----

## Wednesday, 24th April 2019, Exhibition Hall A

### ALPS-P1 Poster Session 1

13:15 - 14:45 Exhibition Hall A

- |                   |   |
|-------------------|---|
| <b>ALPS-P1-01</b> | <b>Development of transparent Er:Y<sub>2</sub>O<sub>3</sub> ceramics fabricated by spark plasma sintering</b><br>Mayu Imai<br><i>Kitami Institute of Technology</i>   |
| <b>ALPS-P1-02</b> | <b>Development of high-quality CsLiB<sub>6</sub>O<sub>10</sub> crystal for high-power DUV application</b><br>Masashi Yoshimura<br><i>Institute of Laser Engineering, Osaka University</i>                           |
| <b>ALPS-P1-03</b> | <b>Crystal growth and optical properties of SrB<sub>4</sub>O<sub>7</sub> crystal for DUV laser application</b><br>Tsuyoshi Sugita<br><i>NIKON Corporation</i>   |
| <b>ALPS-P1-05</b> | <b>An approach to make a variable wavelength laser by GaN/InGaN-MQW with high-reflection DBR and external mirror</b><br>Yen-Chun Chen<br><i>National Chiao Tung University</i>                                      |
| <b>ALPS-P1-06</b> | <b>Four-channel Surface Slotted Laser Array with 100 GHz Spacing Hetero-integrated with CMOS-compatible Silicon Waveguides for Optical Interconnects</b><br>Mingjin Wang<br><i>Institute of Semiconductors, CAS</i> |
| <b>ALPS-P1-07</b> | <b>3.6 kW Higher-Order Mode Fibre Amplifier</b><br>Kai Han<br><i>College of Advanced Interdisciplinary Studies, National University of Defense Technology</i>   |
| <b>ALPS-P1-08</b> | <b>Development of kW-class Yb:YAG TRAM CW Laser Oscillator with Direct Jet impingement Cooling</b><br>Haik Chosrowjan<br><i>Institute for Laser Technology</i>  |
| <b>ALPS-P1-09</b> | <b>Characteristics of multi-pass amplification by use of Yb:YAG active mirror</b><br>Ryo Kageyama<br><i>Utsunomiya University</i>   |
| <b>ALPS-P1-10</b> | <b>Regenerative amplification of visible picosecond laser pulses with Praseodymium-doped gain media</b><br>Shogo Fujita<br><i>Keio University</i>   |
| <b>ALPS-P1-11</b> | <b>High gain femtosecond CPA laser system based on Yb:YAG single crystal fiber boosters with different geometries</b><br>Elena Sall<br><i>Korea Electrotechnology Research Institute</i>                            |

<b>ALPS-P1-12</b>	<b>Spectral behavior of amplified near-infrared supercontinuum beam in ytterbium-doped double-clad passive fiber</b> Misaki Shoji <i>Utsunomiya University</i>
<b>ALPS-P1-13</b>	<b>Generation of single-cycle shortwave infrared pulses in BBO-based cascaded optical parametric amplifier</b> Yu-Chieh Lin <i>Attosecond Science Research Team, RIKEN</i>
<b>ALPS-P1-14</b>	<b>Parametric Amplification of Mid-Infrared Optical Pulses with Monolithic Carrier-Envelope Phase Stabilization by Multi-Plate Pulse Compression</b> Nobuhisa Ishii <i>The Institute for Solid State Physics, The University of Tokyo</i>
<b>ALPS-P1-15</b>	<b>Characteristics of longitudinally excited CO<sub>2</sub> laser operating at a high repetition rate</b> Kohei Sakamoto <i>University of Yamanashi</i>
<b>ALPS-P1-16</b>	<b>Key technologies for the high power cryogenically-cooled active-mirror amplifier</b> Jumpei Ogino <i>Institute of Laser Engineering, Osaka University</i>
<b>ALPS-P1-17</b>	<b>Recovery dynamics of semiconductor saturable absorber for ultra-high intensity lasers</b> Koichi Ogura <i>National Institutes for Quantum and Radiological Science and Technology</i>
<b>ALPS-P1-18</b>	<b>Development of a diode-pumped stable laser for low-jitter OPCPA pumping</b> Yasuhiro Miyasaka <i>National Institutes for Quantum and Radiological Science and Technology</i>
<b>ALPS-P1-19</b>	<b>Effect of annealing on nonlinear optical properties of 70% deuterated DKDP crystal at 355 nm</b> Dongting Cai <i>State Key Laboratory of Crystal Materials, Shandong University</i>
<b>ALPS-P1-20</b>	<b>Large Diameter TGG Ceramic Faraday Rotator for kW Class Average Power Laser</b> Hidetsugu Yoshida <i>Institute of Laser Engineering, Osaka University</i>
<b>ALPS-P1-21</b>	<b>Fabrication of GelMA Hydrogel Micro/Nano Structures Using Femtosecond Laser Two-photon Polymerization</b> Ziyuan Shi <i>Institute of Laser Engineering, Beijing University of Technology</i>
<b>ALPS-P1-22</b>	<b>Single-shot 2-D burst imaging in sub-nanosecond region with spectrally sweeping ultrafast laser pulses</b> Hirofumi Nemoto <i>Keio University</i>

<b>ALPS-P1-23</b>	<b>Electron temperature of high-pressure argon plasma induced by femtosecond laser</b> Yuki Mori <i>Aichi Institute of Technology</i>
<b>ALPS-P1-24</b>	<b>Short Pulse Light Source at 193nm for Hybrid ArF Laser</b> Yuuki Tamaru <i>Gigaphoton Inc.</i>
<b>ALPS-P1-25</b>	<b>Laser wavelength dependence of the soft x-ray spectra in a bismuth plasma</b> Hiromu Kawasaki <i>Utsunomiya University</i>

## Wednesday, 24th April 2019, Exhibition Hall A

### ALPS-P2 Poster Session 2

15:30 - 17:00 Exhibition Hall A

- |                   |   |
|-------------------|---|
| <b>ALPS-P2-01</b> | <b>Spectroscopic properties of heavily Er<sup>3+</sup>-doped silica glass</b><br>Yu Yamasaki<br><i>Ushio Inc.</i>   |
| <b>ALPS-P2-02</b> | <b>Measurement of small signal gain in Pr-doped waterproof fluoride glass fiber</b><br>Takumi Ikeda<br><i>Chiba Institute of Technology</i>   |
| <b>ALPS-P2-03</b> | <b>Dispersion-managed Tm-doped ultrashort pulse fiber laser using SWNT at 2 <math>\mu</math>m wavelength region</b><br>Kenta Watanabe<br><i>Nagoya University</i>   |
| <b>ALPS-P2-04</b> | <b>Dispersion management and analysis of all PM Er-doped passively mode-locked fiber laser with nonlinear amplifying loop mirror</b><br>Hayato Suga<br><i>Nagoya University</i>   |
| <b>ALPS-P2-05</b> | <b>Nonlinear Polarization rotation dispersion managed soliton mode-locked laser using normal dispersion Tm silica fiber</b><br>Takumi Sato<br><i>Institute for Laser Science, University of Electro-Communications</i>        |
| <b>ALPS-P2-06</b> | <b>Supercontinuum Generation Directly from a Random Fiber Laser</b><br>Rui Song<br><i>National University of Defense Technology</i>   |
| <b>ALPS-P2-07</b> | <b>Experimental Research of a 2<math>\mu</math>m Pulsed Laser Based on a Supercontinuum Source</b><br>Weiqiang Yang<br><i>National University of Defense Technology</i>   |
| <b>ALPS-P2-08</b> | <b>Development of a novel Herriott-multipass cavity laser oscillator with SESAM located at the compensated position for q-parameter preservation</b><br>Seong-Hoon Kwon<br><i>Gwangju Institute of Science and Technology</i> |
| <b>ALPS-P2-09</b> | <b>Amplification Property of Ce/Cr/Nd:YAG Ceramic Active-Mirror Laser Using White-light Pump Source</b><br>Taku Saiki<br><i>Kansai University</i>   |
| <b>ALPS-P2-10</b> | <b>Accuracy for Diffuse Reflection Object of Velocity and Distance Simultaneous Measurement Sensor by Self-Coupling Signal</b><br>Masanari Yamada<br><i>Aichi Institute of Technology</i>                                     |

<b>ALPS-P2-11</b>	<b>Signal processing using moving average method of self-coupling laser terminal voltage distance sensor</b> Tatsuya Ohba <i>Aichi Institute of Technology</i>
<b>ALPS-P2-12</b>	<b>Method Verification of Intensity Decision of Laser Microphone Using Deep Learning</b> Ryota Mori <i>Aichi Institute of Technology</i>
<b>ALPS-P2-13</b>	<b>Design concentration lens and simulate solar-pumped solid-state lasers by using a DPSS laser</b> Bo-Wei Huang <i>National Chiao Tung University</i>
<b>ALPS-P2-14</b>	<b>Development of intense terahertz source aiming at highly time resolved measurement of terahertz induced periodic surface structure formation</b> Chikai Hosokawa <i>ICR Kyoto University</i>
<b>ALPS-P2-15</b>	<b>Single shot 2D burst ultrafast imaging in terahertz region utilizing SF-STAMP</b> Kazuki Takasawa <i>Keio University</i>
<b>ALPS-P2-16</b>	<b>The modulation of femtosecond SPP wavepackets induced by MIM nano cavities</b> Naoki Ichiji <i>The University of Tsukuba</i>
<b>ALPS-P2-17</b>	<b>Fabrication of nano graphene wire employing ultrafast nanofocused surface plasmon pulses</b> Takumi Matsuda <i>Keio University</i>
<b>ALPS-P2-18</b>	<b>Improvement of image quality of rigid-endoscope OCT system using two-dimensional KTN optical scanner</b> Masato Ohmi <i>Osaka University</i>
<b>ALPS-P2-19</b>	<b>Wavelength Modulation Spectroscopy of Linalool Using Broadband 3μm Difference Frequency Laser</b> Shota Kato <i>Tokai University</i>
<b>ALPS-P2-20</b>	<b>Frequency Comb Generation from a Bismuth-Based Mode-Locked Fiber Laser</b> Yutaka Fukuchi <i>Tokyo University of Science</i>
<b>ALPS-P2-21</b>	<b>Dual-comb Spectroscopy Technique for Magneto-optic Effect Measurements</b> Takuto Adachi <i>The University of Electro-Communications</i>

<b>ALPS-P2-22</b>	<b>Development of Dual-Comb Faraday Effect Measurement Equipment</b> Yusuke Odagiri <i>NEOARK Corporation</i>
<b>ALPS-P2-23</b>	<b>Improvement of Q factor and dispersion of crystalline microresonator towards soliton comb generation</b> Shuya Tanaka <i>Keio University</i>
<b>ALPS-P2-24</b>	<b>Tailored generation of a highly-discrete Raman type comb</b> Weiyong Liu <i>The University of Electro-Communications</i>
<b>ALPS-P2-25</b>	<b>Development of broadband bidirectional dual-comb fiber laser with narrow relative linewidth</b> Yuya Hata <i>The University of Electro-Communications</i>
<b>ALPS-P2-26</b>	<b>High-accuracy shape measurement technique using two-color interferometry with optical frequency combs with air fluctuation compensation</b> Yoshihisa Ikisawa <i>The University of Electro-Communications</i>
<b>ALPS-P2-27</b>	<b>Technique of Digital Control of Laser Oscillation Frequencies by means of Difference Frequency Stabilization of a Microchip Laser</b> Iyon Titok Sugiarto <i>Kanazawa University</i>
<b>ALPS-P2-28</b>	<b>Second harmonic generation of ultraviolet laser based on a laser diode array with an external cavity of a volume Bragg grating</b> Zhiyong Li <i>Institute of Electronics, Chinese Academy of Sciences</i>



## Thursday, 25th April 2019, Room 303

### ALPS-15 [D1] Novel material and wavelength lasers

9:00 - 10:30 Room 303

**Chair: Dingyuan Tang**

*Nanyang Technological University*

**ALPS-15-01**

*invited*

**9:00**

**Diamond Raman Lasers**

Richard Mildren

*Macquarie University*

**ALPS-15-02**

**9:30**

**Characteristic of visible lasing with a  $\text{Pr}^{3+}$ -doped oxide crystal  $\text{YAlO}_3$**

Shogo Fujita

*Keio University*

**ALPS-15-03**

**9:45**

**Efficient continuous-wave operation of Er:YAP single crystal laser at 2.92  $\mu\text{m}$**

Hiroki Kawase

*SOKENDAI*

**ALPS-15-04**

**10:00**

**Fabrication of Er-doped Microresonator for On-Chip Mode-locked Laser with CNT as Saturable Absorber**

Riku Imamura

*Department of Electronics and Electrical Engineering, Keio University*

**ALPS-15-05**

**10:15**

**High Quality-Factor Kerr-lens Mode-locked Tm:Sc<sub>2</sub>O<sub>3</sub> Laser with anomalous spectral broadening**

Anna Suzuki

*Institute for Laser Science, The University of Electro-Communications*

-----Break (10:30 - 11:00) -----

## Thursday, 25th April 2019, Room 304

### ALPS-16 [F1] Terahertz applications

9:00 - 10:30 Room 511+512

Chair: Takashi Notake

*RIKEN*

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|--|--|
| <b>ALPS-16-01</b><br><i>invited</i><br><b>9:00</b> | <b>Terahertz manipulation of magnetization and terahertz devices based on the magnetic materials</b><br>Makoto Nakajima<br><i>Osaka University</i>   |
| <b>ALPS-16-02</b><br><b>9:30</b>                   | <b>Sub-THz spectroscopy using laser chaos</b><br>Fumiyoshi Kuwashima<br><i>Fukui University of Technology</i>  |
| <b>ALPS-16-03</b><br><b>9:45</b>                   | <b>Index-Tunable Terahertz Metamaterials with Lowered Loss Based on Double-Layered Asymmetric Closed-Ring Resonator Arrays</b><br>Tatsunosuke Matsui<br><i>Mie University</i>  |
| <b>ALPS-16-04</b><br><b>10:00</b>                  | <b>Terahertz Semiconductor Quantum Devices and Their Applications</b><br>Juncheng Cao<br><i>Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences</i>  |
| <b>ALPS-16-05</b><br><b>10:15</b>                  | <b>The observation of spin reorientation phase transition in <math>\text{Sm}_{1-x}\text{Er}_x\text{FeO}_3</math> by terahertz time domain spectroscopy</b><br>Yohei Koike<br><i>Institute of Laser Engineering, Osaka University</i> |
| -----Break (10:30 - 11:00) -----                   |  |

## Thursday, 25th April 2019, Room 303

### ALPS-17 [E] Ultrashort light source and application

11:00 – 11:45 Room 303

**Chair: Hiroki Mashiko**

*NTT BRL*

**ALPS-17-01**

*invited*

**11:00**

**Femtosecond-laser-driven micro undulator for THz emission**

Ye Tian

*Shanghai Institute of Optics and Fine Mechanics*

**ALPS-17-02**

**11:30**

**Actively stabilized extreme ultraviolet attosecond interferometer**

Koji Asaga

*Tokyo Denki University*

-----Lunch (11:45 - 13:15) -----

## Thursday, 25th April 2019, Room 304

### ALPS-18 [F2] Terahertz applications and nonlinear optics

11:00 – 11:45 Room 511+512

**Chair: Makoto Nakajima**

*Osaka University*

**ALPS-18-01**      **Large Phase Modulation of THz Wave Based on Dynamic Mode Coupling**  
*invited*      **Metasurfaces**

**11:00**

Yaxin Zhang

*University of Electronic Science and Technology of China*

**ALPS-18-02**      **Observation of Nonlinear Propagation Effects in High Harmonic**  
**11:30**      **Generation from Bulk Gallium Arsenide**

Peiyu Xia

*Institute for Solid State Physics, The University of Tokyo*

-----Lunch (11:45 - 13:15) -----

## Thursday, 25th April 2019, Room 303

### ALPS-19 [D2] Ultrafast and advanced lasers

13:15 - 15:00 Room 303

**Chair: Richard Mildren**

*Macquarie University*

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|---|--|
| <b>ALPS-19-01</b><br><i>invited</i><br><b>13:15</b> | <b>Physics and applications of monolithic mode-locked lasers with ultra-low intrinsic noise</b><br>Thomas Schibli<br><i>University of Colorado</i>   |
| <b>ALPS-19-02</b><br><i>invited</i><br><b>13:45</b> | <b>Oxide semiconductors for nonlinear optics and ultrafast pulse lasers</b><br>Jianrong Qiu<br><i>Zhejiang University</i>  |
| <b>ALPS-19-03</b><br><b>14:15</b>                   | <b>360 fs pulses with gigawatt peak power from a Tm:YAP based ring cavity regenerative amplifier</b><br>Seyed Ali Rezvani<br><i>Institute for Molecular Science</i>                                      |
| <b>ALPS-19-04</b><br><b>14:30</b>                   | <b>Dual Wavelength and Widely Tunable Operation of Nd,Gd:SrF<sub>2</sub> Laser</b><br>Vaclav Dubcek<br><i>Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering</i> |
| <b>ALPS-19-05</b><br><b>14:45</b>                   | <b>Neural Network Controlled Coherent Beam Combining</b><br>Henrik Tuennermann<br><i>Institute for Laser Science, University of Electro-Communications</i>   |

-----Break (15:00 - 15:30) -----

## Thursday, 25th April 2019, Room 303

### ALPS-20 [D3] Fiber lasers

15:30 - 16:30 Room 303

**Chair: Thomas Schibli**

*University of Colorado*

#### ALPS-20-01 Dark-bright vector soliton emission fiber lasers

*invited*

Dingyuan Tang

*Nanyang Technological University*

**15:30**

#### ALPS-20-02 Spectral dynamics of build-up femtosecond pulse in mode-locked Yb fibre laser with time stretch spectroscopy

Masayuki Suzuki

*Aichi Medical University*

**16:00**

#### ALPS-20-03 Liner Polarization High Peak Power Pulse Amplification By Using A Polarization Maintaining Very Large Mode Area Er-Doped Fiber Amplifier

Hiroshi Hashimoto

*Laboratories for Fusion Core Technologies, Furukawa Electric Co. Ltd.*

**16:15**

### Award ceremony

16:30 - 16:40 Room 303

**Junji Kawanaka**

*Institute of Laser Engineering, Osaka University*

### Closing remarks

16:40 - 16:45 Room 303

**Fumihiko Kannari**

*Keio University*