Opening Address  9:00-9:15
Hitoki Y oneda
Conference Chair
Inst. for Laser Sci., Univ. Electro-Comm., Japan

ALPS-1  9:15
Optical frequency comb technology and applications
Chair: Mitsuru Musha
Inst. for laser Sci. Univ. of Electro-Communications, Japan

ALPS-1-1  9:15
Frequency comb sources for spectroscopy in the mid-infrared
Ingmar Hartl
DESY, Germany

ALPS-1-2  9:45
One-shot multi-point imaging with a fiber bundle using spectral interferometry of chirped optical-frequency comb
M. Uchida1, T. Kato1, Y. Tanaka1, and K. Minoshima3
1The Univ. of Electro-Communications (UEC), 2Japan Sci. and Tech. Agency (JST), ERATO MINOSHIMA Intelligent Optical Synthesizer (IOS) Project

ALPS-1-3  10:00
Coherent Mid-infrared Optical Frequency Comb Generation Based on an Yb-doped Fiber Laser System
L. Jin1, M. Yamanaka1, V. Sonnenschein1, H. Tomita1, T. Iguchi1, A. Sato1, A. Ideno1, T. Oh-bara1, and N. Nishizawa2
1Dep. Quantum Engineering, Nagoya Univ., Japan, 2Sekisui Medical Co. Ltd., Japan

ALPS-1-4  10:15
Repetition rate multiplication of a fiber-based optical frequency comb with a long-fiber-based ring resonator
Y. Nakajima1, A. Nishiyama1, S. Yashida1, T. Hariki1, and K. Minoshima3
1The Univ. of Electro-Communications, Japan, 2JST, ERATO MINOSHIMA IOS Project, Japan, 3Res. Fellow of the JSPS, Japan

ALPS-1-5  10:30
Development and characterization of 1.0-2.1 um octave-spanning, SC comb based on Er-doped ultrashort pulse fiber laser
T. Niinomi1, Y. Nomura1, L. Jin1, Y. Ozeki1, and N. Nishizawa1
1Nagoya Univ., Japan, 2University of Tokyo, Japan

--- 10:45-11:00 Break ----
### LSSE <Room 316>

**[Opening]  9:45-10:00**

**Opening Remarks**
Toshikazu Ebisuzaki  
Conference Chair of LSSE 2017  
Chief Scientist, Computational Astrophysics Laboratory, RIKEN, Japan

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### LSSE1  10:00-12:00

**Lasers for Space Development and Earth Sciences**

Chair: Toshikazu Ebisuzaki  
Computational Astrophysics Laboratory, RIKEN, Japan

**LSSE1-1  10:00**  
Invited

Lasers on Mars: searching for habitability and traces of life
Sylvestre Maurice¹, R. C. Wiens², F. Rull³  
¹IRAP (Univ. Paul Sabatier, CNRS), France, ²Los Alamos National Laboratory, USA, ³Unidad UVa-CSIC al Centro de Astobiologia, University of Valladolid, Spain

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**[Opening]  9:00-9:10**

**Opening Remarks**
R. Kodama  
Conference Chair of HEDS 2017  
Osaka University, Japan

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### HEDS1  9:10-10:30

**Plenary (ImPACT Session I )**

Chair: T. Hosokai  
Osaka University, Japan

**HEDS1-1  9:10**  
Plenary I

Outlook on the new physics with next generation short pulse high power lasers
Serugei Bulanov  
QST, Japan

**HEDS1-2  9:50**  
Plenary II

Plasma Acceleration: status and Path Forward  
Chan Joshi  
UCLA, USA

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10:30-11:00 Group Photo & Break
### Oral Program

**Oral, Tuesday, April 18 AM**

<table>
<thead>
<tr>
<th>ALPS &lt;Room 302&gt;</th>
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<tr>
<td><strong>[ALPS2]</strong> 11:00-12:00</td>
</tr>
<tr>
<td>Dual-comb spectroscopy</td>
</tr>
<tr>
<td>Chair: Hajime Inaba</td>
</tr>
<tr>
<td>AIST, Japan</td>
</tr>
<tr>
<td><strong>Invited</strong></td>
</tr>
<tr>
<td><strong>ALPS2-1</strong> 11:00</td>
</tr>
<tr>
<td>Self-Corrected Dual-Comb Spectroscopy</td>
</tr>
<tr>
<td>Jérôme Genest¹, Nicolas Bourbeau Hébert¹, Jean-Daniel Deschênes¹, David G. Lancaster²</td>
</tr>
<tr>
<td>¹Centre d’optique, photonique et laser, Univ. Laval, Canada, ²Laser Phys. and Photonics Devices Lab, Univ. of South Australia, Australia</td>
</tr>
<tr>
<td><strong>ALPS2-2</strong> 11:30</td>
</tr>
<tr>
<td>Development of Rapid Evaluation Method of Anisotropy of Nonlinear Optical Materials by Dual Comb Spectroscopy</td>
</tr>
<tr>
<td>K. Kondo¹, A. Asahara¹, Y. Wang¹, I. Shoji¹, K. Minoshima¹²</td>
</tr>
<tr>
<td>¹The Univ. of Electro-Communications, Japan, ²JST, ERATO MINOSHIMA Intelligent Optical Synthesizer, Japan, ’Chuo Univ., Japan</td>
</tr>
<tr>
<td><strong>ALPS2-3</strong> 11:45</td>
</tr>
<tr>
<td>Application of Relative Carrier Envelope Offset Frequency for Coherent Control in Dual-Comb Configuration</td>
</tr>
<tr>
<td>A. Asahara¹, K. Kondo¹, Y. Wang¹, and K. Minoshima¹²</td>
</tr>
<tr>
<td>¹Univ. of Electro-Communications, Japan, ²JST, ERATO MINOSHIMA Intelligent Optical Synthesizer, Japan</td>
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<tr>
<th>ALPS &lt;Room 511+512&gt;</th>
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<tbody>
<tr>
<td><strong>[ALPS3]</strong> 11:00-12:00</td>
</tr>
<tr>
<td>High energy laser systems and technology</td>
</tr>
<tr>
<td>Chair: Hiromitsu. Kiriya</td>
</tr>
<tr>
<td>QST, Japan</td>
</tr>
<tr>
<td><strong>Invited</strong></td>
</tr>
<tr>
<td><strong>ALPS3-1</strong> 11:00</td>
</tr>
<tr>
<td>PENEOPE – amplifier benchmarks and 10 J performance</td>
</tr>
<tr>
<td>D. Albach¹, M. Siebold¹, M. Loeser¹², C. Bernert¹² and U. Schramm¹²</td>
</tr>
<tr>
<td>¹Helmholtz-Zentrum Dresden-Rossendorf, Germany, ²Technische Universität Dresden, Germany</td>
</tr>
<tr>
<td><strong>ALPS3-2</strong> 11:30</td>
</tr>
<tr>
<td>Demonstration of a 64J at 10ns Output from Cryo-cooled Yb:YAG Laser using new laser-diode technology</td>
</tr>
<tr>
<td>Industrial Development Center, Central Res. Lab., Hamamatsu Photonics K.K., Japan</td>
</tr>
<tr>
<td><strong>ALPS3-3</strong> 11:45</td>
</tr>
<tr>
<td>Development of Materials Processing Technology using 100-J class High-Energy-Laser Pulses</td>
</tr>
<tr>
<td>Cent. Res. Lab. Industries R&amp;D Center, Hamamatsu Photonics K.K., Japan</td>
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<thead>
<tr>
<th>CLES / LANSA &lt;Room 416+417&gt;</th>
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<tbody>
<tr>
<td><strong>[CN1]</strong> 12:40-XX:XX</td>
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<tr>
<td>XXXXX</td>
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<td>Chair: XXXXX</td>
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<tr>
<td>XXXXX</td>
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<tr>
<td><strong>Invited</strong></td>
</tr>
<tr>
<td><strong>CN1-1</strong> 12:40</td>
</tr>
<tr>
<td>Current status of cyclotron-based epithermal neutron source for boron neutron capture therapy</td>
</tr>
<tr>
<td>Hiroki Tanaka¹, Yoshinori Sakurai¹, Minoru Suzuki¹, Shin-ichiro Masunaga¹, Toshinori Mitsumoto², Akira Maruhashi³, Koji Ono³</td>
</tr>
<tr>
<td>¹Kyoto University Research Reactor Institute, Japan, ²Sumitomo Heavy Industries Ltd, Japan</td>
</tr>
</tbody>
</table>

----- 12:00-13:15 Lunch Break -----
### Oral Program

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<th>Time</th>
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<th>Location</th>
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<tbody>
<tr>
<td>11:00-12:30</td>
<td>HEDS2</td>
<td>Beams (Ion) (ImPACT Session II)</td>
<td>Chair: C. Joshi, UCLA, USA</td>
<td>HEDS &lt;Room 311+312&gt;</td>
</tr>
<tr>
<td>11:00</td>
<td>Invited</td>
<td>Ion Acceleration Experiments with High Contrast High peak power PW Laser System J-KAREN-P</td>
<td>Mamiko Nishiuchi, QST, Japan</td>
<td>HEDS2-1</td>
</tr>
<tr>
<td>11:30</td>
<td>Invited</td>
<td>Laser ion acceleration using the Draco Petawatt facility at HZDR - experiments and radio-biological application</td>
<td>Karl Zeil, HZDR, Germany</td>
<td>HEDS2-2</td>
</tr>
<tr>
<td>12:00</td>
<td>Invited</td>
<td>High Intensity Laser Matter Interactions with the BELLA PW Laser Facility</td>
<td>Qing Ji, LBNL, USA</td>
<td>HEDS2-3</td>
</tr>
</tbody>
</table>

#### LSSE <Room 316>

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speakers</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00</td>
<td>Invited Hadean environment inferred from the oldest zircon of the Earth: Application of micro-analysis by laser technologies</td>
<td>Shinji Yamamoto¹, Shuhei Sakata², Hideyuki Obayashi³, Takafumi Hirata³, Tsuyoshi Komiyama³</td>
<td>LSSE1-2</td>
</tr>
<tr>
<td>11:30</td>
<td>Invited The Origin and Evolution of Planet Mars</td>
<td>James M. Dohm</td>
<td>LSSE1-3</td>
</tr>
</tbody>
</table>

----- 12:30-14:00 Lunch -----

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Oral Program

Oral, Tuesday, April 18 PM

**ALPS <Room 302>**

[**ALPS4**] 13:15-15:15

Fiber Lasers and Ultrafast Lasers

Chair: TBA

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**ALPS4-1** 13:15

Invited

3 kW Single Mode Fiber Laser for Materials Processing

Kensuke Shimaz, M. Kashwagi, S. Ikoma, K. Uchiuma, H. Miyashita, and D. Tanaka

Advanced Technology Laboratory, Fujiyuka Ltd., Japan

**ALPS4-2** 13:45

SRD-suppressed photonic bandgap fiber amplifier using a laser diode as the seed source

D. Yagisawa, A. Shirakawa

Inst. for Laser Sci., Univ. of Electro-Communications, Japan

**ALPS4-3** 14:00

Combining Efficiency in Divided Pulse Amplification

E. Jo, K. Iwata, H. Tünnermann, and A. Shirakawa

Inst. for Laser Sci., Univ. of ElectroCommunications, Japan

**ALPS4-4** 14:15

Single-Shot Spectral Measurements in Soliton Explosion on Yb Fiber Laser with Time-Stretched Dispersive Fourier Transformation

M. Suzuki, S. Yoneya, and H. Kuroda


**ALPS4-5** 14:30

2 GHz Repetition Rate, Single-Wall Carbon Nanotube Mode-Locked Yb:YAG Channel Waveguide Laser in an Extended Cavity Configuration

S. Y. Choi, T. Calmanto, C. Kränkel, F. Rotermund

1. ILP, Univ. Hamburg, Germany, 2. CUL, Univ. Hamburg, Germany, 3. Department of Physics, KAIST, Republic of Korea

**ALPS4-6** 14:45

Sub-100 fs mode-locked Yb\textsuperscript{3+}-doped CaF\textsubscript{2} laser by single-walled carbon nanotube

N. Yokosima, S. Kitajima, A. Shirakawa, S. Y. Choi, and F. Rotermund

1. Inst. for Laser sci., Japan, 2. Inst. of Laser-Phys., Univ. of Hamburg, Germany, 3. Department of Physics, Korea Advanced Inst. of Sci. and Tech., Korea

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**ALPS4-7** 15:00

Sub 200 fs Kerr-lens Mode-locked Tm\textsuperscript{3+}:Sc:O\textsubscript{3} Laser in-band Pumped by a 1611nm Er:Yb Fiber MOPA

M. Tokarzawa, Y. Mashiko, E. Fujita, and C. Kränkel

1. ILS, Japan, 2. Inst. of Laser-Phys., Univ. of Hamburg, Germany, 3. The Hamburg Centre for Ultrafast Imaging, Germany

----- 15:15-15:30 Break -----

**ALPS <Room 511+512>**

[**ALPS5**] 13:15-15:00

Ultra-high intensity lasers and technology

Chair: Takunori Taizara

**ALPS5-1** 13:15

Invited

J-KAREN-P laser facility producing 10\textsuperscript{22} W/cm\textsuperscript{2} at 0.1 Hz


KPSI QST, Japan

**ALPS5-2** 13:45

J-KAREN-P Laser Wavefront, Spot, and Pulse Shape

A. S. Pirozhkov, Y. Fukuda, M. Nishimichi, A. Sagisaka, K. Ogora, H. Kiriyama, M. Morii, M. Kanasaki, K. Kondo, and M. Kando

KPSI QST, Japan, "Kobe Univ., Japan

**ALPS5-3** 14:00

Formation process of ozone assisted gas grating

Y. Mihchine, H. Yoned

Inst. for Laser Sci., Univ. of ElectroCommunications, Japan

**ALPS5-4** 14:15

Picosecond pedestals of recompressed Ti:Sapphire laser pulses.

M. Kalashnikov, N. Khodakovskiy

Max-Born-Inst. for Nonlinear Opt. and Short Pulse Spectroscopy, Germany

**ALPS5-5** 14:30

Thin Disk Ti:Sapphire Amplifiers for High Average Power Sub PW class Laser Systems

M. Kalashnikov, V. Chvykov, R. Nagymihaly, H. Caso, K. Osval


**ALPS5-6** 14:45

Compression of high-power femtosecond laser pulses in a solid medium


1. Center for Relativistic Laser Sci., Inst. for Basic Sci., Korea, 2. 'Dep. of Phys. and Photon Sci., GIST, Korea, 3. Accelerator Research Organization, Japan, 4. Proton Medical Research Center, University of Tsukuba, Japan

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**CLES / LANSA <Room 416+417>**

**CN1-2** 13:20

Invited

Development of the linac-based neutron source for boron neutron capture therapy in University of Tsukuba

Hiroaki Kumada, Fujio Naito, Hitoshi Kobayashi, Toshikazu Kurihara, Takashi Ohnita, Yosuke Honda, Tsukasa Miyajima, Takemi Nakamura, Takeji Sakae, Kenta Takada, Hideyuki Sakurai, Akira Matsumura

University of Tsukuba, Japan, High Energy Accelerator Research Organization, Japan, Japan Atomic Energy Agency, Japan, Proton Medical Research Center, University of Tsukuba, Japan

---

**CN1-3** 14:00

Invited

RIKEN compact neutron systems with fast and slow neutron

Yoshie Otake

RIKEN, RIKEN Center for Advanced Photonics, Japan

---

**CN1-4** 15:00

Invited

Current status of the accelerator neutron source in Budker Institute

Sergey Tkachov, Boris Bayanov, Alexander Ivanov, Alexey Kashkarov, Dmitri Kasatov, Alexander Makarov, Yuri Osteriev, Ivan Shchudio, Igor Sorokin

Budker Institute of Nuclear Physics, Russia

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**CN1-5** 15:40

Invited

Nagoya University BNCT system using DC accelerator and sealed lithium target

Sachiko Yoshishashi, Akira Uritani, Kenichi Watanabe, Atsushi Yamazaki, Daiki Furuazawa, Kazuya Sato, Kazuki Tsuchida, Yoshiaki Kiyanagi, Hirokiko Shimizu, Katsuya Hirota, Masaki Kitaguchi, Go Ichikawa, Sohei Imajo, Yoshiyuki Tsuji, Tatsuya Tsuneyoshi, Yukinori Hamaji

1. Nagoya University, Japan, 2. National-Institute for Fusion Science, Japan

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Digest:

- 15:00-15:30 Break -----

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OPIC 2017 • April 18-21, 2017
### Oral Program

**HEDS <Room 311+312>**

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<th>Session</th>
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<th>Speaker(s)</th>
<th>Title</th>
<th>Affiliation(s)</th>
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<tr>
<td>HEDS3-1</td>
<td>14:00</td>
<td>Invited</td>
<td>Status and Perspective of ImPACT Program to Develop Ultra-compact XFEL Technologies</td>
<td>Yuji Sano, JST, Japan</td>
</tr>
<tr>
<td>HEDS3-2</td>
<td>14:30</td>
<td>Invited</td>
<td>Staging LWFA aiming for repeatable GeV-class accelerator</td>
<td>Tomonao Hosokai, Osaka Univ., Japan</td>
</tr>
<tr>
<td>HEDS3-3</td>
<td>15:00</td>
<td>Invited</td>
<td>Development of plasma and beam monitors for laser electron accelerators</td>
<td>Masaki Kando, QST, Japan</td>
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--- 15:30-16:00 Break ---

### LSSE <Room 316>**

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<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
<th>Affiliation(s)</th>
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<tr>
<td>LSSE2-1</td>
<td>13:30</td>
<td>Invited</td>
<td>Application of laser induced breakdown spectroscopy for the chemical investigation of concrete infrastructure</td>
<td>Gerd Wilsch, Cassian Gottlieb, Tobias Günther, Steven Millar, N. Sankat, Herbert Wiggenhauser, BAM, Germany</td>
</tr>
<tr>
<td>LSSE2-2</td>
<td>14:00</td>
<td>Invited</td>
<td>LIBS techniques for detecting materials in severe environments</td>
<td>Hironori Ohba, Ikuo Wakaida, National Institutes for Quantum and Radiological Science and Technology, Japan, Japan Atomic Energy Agency, Japan</td>
</tr>
<tr>
<td>LSSE2-3</td>
<td>14:30</td>
<td></td>
<td>Laser-induced breakdown spectroscopy for diagnosis of porcelain insulators</td>
<td>Takashi Fujii, Kouhei Motoki, Kohei Yajii, Shuzo Eto, Eiki Hotta, Tetsuya Suekane, Central Research Institute of Electric Power Industry, Japan, Tokyo Institute of Technology, Japan</td>
</tr>
<tr>
<td>LSSE2-4</td>
<td>14:50</td>
<td></td>
<td>Remote measurement of energetic material using ultra-short pulse laser</td>
<td>Naohiro Kitayama, Kiyohiro Sugiyama, Acquisition, Technology and Logistics Agency, Japan</td>
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<td>Time</td>
<td>Session</td>
<td>Speaker/Details</td>
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<tr>
<td>15:30-17:30</td>
<td><strong>Advanced Laser Technologies</strong></td>
<td>Chair: Shunichi Matsushita Forsukawa Electric Co., Ltd, Japan</td>
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<tr>
<td>15:30</td>
<td><strong>Invited</strong></td>
<td>Visible laser oscillation in Pr-doped waterproof fluoro-aluminate glass fiber (tentative) Yaushi Fujimoto Osaka Univ., Japan</td>
<td></td>
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<tr>
<td>16:00</td>
<td><strong>Invited</strong></td>
<td>Pr-YLF laser directly pumped by high power blue diode laser H. Tanaka, K. IIyama, Y. Kiyota, F. Kannari Keio Univ., Japan</td>
<td></td>
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<tr>
<td>16:15</td>
<td><strong>Passively Q-switched, visible Pr:YLF laser operation with a Co:MALO saturable absorber</strong> D.-T. Marzahl1, M. P. Demeke1, A. S. Yauvekovich1 V.E. Kisel1, Y. Y. Kuleshov1, and C. Krinkel11, Center for Laser Facility, Science and Technology Facilities Council, UK, 2Centre for Plasma Physics, Queen's University Belfast, UK, 3Ground Floor North B852, Sellafield Ltd, UK, 4Interface Analysis Centre, HH Wills Physics Laboratory, UK, 5Central Laser Facility, Science and Technology Facilities Council, Rutherford Appleton Laboratory, UK, 6Department of Physics, SUPA, University of Strathclyde, UK, 7Department of Physics, University of York, UK</td>
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<tr>
<td>16:30-16:45</td>
<td><strong>A 796-nm Laser-Diode Pumped Self-Frequency-Doubling Nd:GdCOB Green Laser</strong> L. Li1,2, Y. Liu1,2, S. Zhao1,2, and W. Zheng1,21, State key Lab. on Integrated Optoelectronics, Inst. of Sem., CAS, China, 2Lab. of Solid-state Optoelectronics Info. Tech., Inst. of Sem., CAS, China, 3College of Materials Sci. and Opto-Electronic Tech., Univ. of Chinese Academy of Sci., China</td>
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<tr>
<td>16:45</td>
<td><strong>Invited</strong></td>
<td>Comparative study of Ti:sapphire laser pumped by 451-, 476- and 520-nm laser diodes N. Sugiyama, H. Tanaka, and F. Kannari Keio Univ., Japan</td>
<td></td>
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<tr>
<td>17:00</td>
<td><strong>Invited</strong></td>
<td>Yb-doped CaF₂-LaF₃ ceramic laser K. Yamada1, S. Kitarita1, A. Shirakawa1, K. Ueda1, and H. Iishizawa11, ILS., UEC., Japan, 2NIKON Corp., Japan</td>
<td></td>
<td></td>
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<tr>
<td>15:30-17:30</td>
<td><strong>Novel laser control, diagnostics and applications</strong> Chair: Toshiyuki Kawashima Hamamatsu Photonics K.K., Japan</td>
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<tr>
<td>15:30</td>
<td><strong>AlPS6-1</strong></td>
<td>Attosecond streaking of chip-free high harmonics in the extreme ultraviolet driven by a long-wavelength infrared light source N. Saito1, N. Ishii1, T. Kanai1, S. Watanabe1, and J. Iritani11, ISSP, Univ. Tokyo, Japan, 2Tokyo Univ. Sci., Japan</td>
<td></td>
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<tr>
<td>15:45</td>
<td><strong>AlPS6-2</strong></td>
<td>Ultrafast Thulium-Doped Fiber Amplifier Generating Watt-Level 50 Femtosecond Pulses Y. Nomura1,2, T. Fuji1, 1Inst. for Molecular Sci., Japan, 2JST-PRESTO, Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td><strong>AlPS6-3</strong></td>
<td>Femtosecond Double-Pulse Laser Ablation for Titanium at the Fluence near Ablation Threshold R. Hida, T. Suzuki1, Y. Yamaguchi, and F. Kannari Dep. of Electronics and Electrical Eng., Keio Univ., Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:15</td>
<td><strong>AlPS6-4</strong></td>
<td>Mid Infrared Pulse Generation, Shaping and Amplification from a Supercontinuum Pulse R. Hida, T. Suzuki, Y. Yamaguchi, and F. Kannari Dep. of Electronics and Electrical Eng., Keio Univ., Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:45</td>
<td><strong>AlPS6-5</strong></td>
<td>CO₂-TEA Pulse Clipping Using Pulsed High Voltage Pre-Ionization For High Spatial Resolution I.R. LIDAR Systems T. Cherifi1, Divison of Sci. &amp; Eng., Saint Louis Univ.-Madrid Campus, Spain</td>
<td></td>
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<tr>
<td>17:00</td>
<td><strong>AlPS6-6</strong></td>
<td>Simulation and Experiment of 80 GHz Colliding- Pulse Semiconductor Mode-Locked Laser with High Power P. Zhao1,2, A. Liu1, and W. Zheng1,2, 1State Key Lab. on Int. Opt. Lab. Inst. Semiconductors, CAS, China, 2Lab. of Solid State Opt. Info. Tech., Inst. Semiconductors, CAS, China, 3Univ. of Chinese Academy of Sci., China</td>
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<td>16:00-XX:XX</td>
<td><strong>LNI-1</strong></td>
<td>Laser-driven neutron source development for industrial applications of plasma accelerators Ceri Brenner1, S. Kar2, J. Jowsey3, C.P. Jones3, S.R. Mirrayzi1, D.R. Busby4, C. Armstrong5, A. Atiyeh6, L.A. Wilson7, R. Clarke7, H. Ahmed7, M.M.H. Butler8, D. Haddcock9, A. Higgison9, A. McClymont1, C. Murphy1, M. Notley1, P. Oliver1, R. Allott2, C. Hernandez-Gomez3, P. McKenna5, D. Neely6, T.B. Scott6, 1Central Laser Facility, Science and Technology Facilities Council, UK, 2Centre for Plasma Physics, Queen’s University Belfast, UK, 3Ground Floor North B852, Sellafield Ltd, UK, 4Interface Analysis Centre, HH Wills Physics Laboratory, UK, 5Central Laser Facility, Science and Technology Facilities Council, Rutherford Appleton Laboratory, UK, 6Department of Physics, SUPA, University of Strathclyde, UK, 7Department of Physics, University of York, UK</td>
<td></td>
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</tr>
<tr>
<td>16:40</td>
<td><strong>LNI-1-2</strong></td>
<td>Repetitive neutron generation by laser-driven photofusion reaction Yasunobu Arikawa1, Yusuke Kato1, Yuki Abe2, Shuto Matsubara1, Hidetaka Kishimoto1, Alessio Morace1, Akifumi Yogo1, Hiroaki Nishimura1, Mitsu Y Nakai1, Shinsoke Fujoka1, Hiroshi Azechi1, Kuniaki Mima1, Shunsuke Inoue1, Yoshihide Nakamya1, Kunsuke Teramoto1, Masaki Hashida1, Shujii Sakabe1, 1Institute of Laser Engineering, Osaka University, Japan, 2The Graduate School for the Creation of New Photonics Industries, Japan, 3Advanced Research Center for Beam Science, Institute for Chemical Research, Kyoto University, Japan</td>
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<tr>
<td>16:00-XX:XX</td>
<td><strong>LNI-1-3</strong></td>
<td>3x10⁸ 8-D-D neutron generation by high intensity laser irradiation onto inner surface of a spherical shell target Nakahiro Satoh1, T. Watar1, K. Nishihara1, R. Yoshimura1, N. Akiyama1, M. Takagi2, T. Kawashima1, Y. Abe1, Y. Arikawa1, A. Sunahara1, Y. Hirokak1, K. Shigemori1, S. Fujoka1, M. Nakai1, H. Azechi1, 1HAMAMATSU PHOTONICS K.K., Japan, 2Central Research Laboratory, HAMAMATSU PHOTONICS K.K., Japan, 3Institute of Laser Engineering, Osaka University, Japan, 4Institute for Laser Technology, Japan</td>
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<tr>
<td>17:20</td>
<td><strong>LNI-1-4</strong></td>
<td>Development project for repetitive laser driven neutron source using diode pumped solid state laser Ryohsi Hanayama The Graduate School for the Creation of New Photonics Industries, Japan</td>
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<td>Room 316</td>
<td>Room 311+312</td>
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<tr>
<td><strong>HEDS</strong> 16:00-17:30</td>
<td><strong>LSSE</strong> 15:10</td>
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<tr>
<td>Application / High-Field Physics</td>
<td>Combining Raman and Laser Induced Breakdown Spectroscopy by Double Pulse Lasing</td>
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<tr>
<td>Chair: M. Nishiuchi</td>
<td>Vasily N. Lednev¹, Pavel A. Sdvizhenskii¹, Mikhail Yu. Grishin²,³, Vladimir V. Bukin²,⁴, A. N. Fedorov⁵, Sergey M. Pershin⁶</td>
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<tr>
<td>[HEDS4]</td>
<td>¹National University of Science and Technology MISiS, Russian Federation, ²Moscow Institute of Physics and Technology (State University), Russian Federation, ³Prokhorov General Physics Institute of Russian Academy of Sciences, Russian Federation</td>
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</table>

**HEDS4-1** 16:00 <br> Invited <br> Visualization of Lattice Dynamics in Nanoscale Graphite Triggered by Femtosecond Laser Pulses <br> Wenxi Liang <br> HUST, P.R. China

**HEDS4-2** 16:30 <br> Invited <br> Ultrafast Electron Diffraction and Microscopy using a Femtosecond-pulse Electron Beam <br> Jinfeng Yang <br> Osaka Univ., Japan

**HEDS4-3** 17:00 <br> Invited <br> The effect of laser contrast on generation of highly charged Fe ions by ultra-intense femtosecond laser pulses <br> Anatoly Faenov <br> Osaka Univ., Japan
9:00-12:10
OPIC Plenary Session
### Oral, Wednesday, April 19 PM

#### ALPS & HEDS & XOPT <Room 302>

<table>
<thead>
<tr>
<th>Title</th>
<th>Time</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>Implementation of Extreme Light Infrastructure-Nuclear Physics</td>
<td>13:30-15:30</td>
<td>Kazuo Tanaka</td>
</tr>
<tr>
<td>Linking high harmonics from solids and gases</td>
<td>14:30-15:00</td>
<td>Paul B. Corkum</td>
</tr>
<tr>
<td>Recent Advances of the Apollon 10 PW Laser</td>
<td>15:00-16:00</td>
<td>Christian G. Schroer</td>
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#### LDC & LEDIA <Room 301>

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<th>Title</th>
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<th>Speaker(s)</th>
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<tr>
<td>IQE Quantification of Nitride Semiconductors</td>
<td>13:30-14:00</td>
<td>Hiroshi Amano</td>
</tr>
<tr>
<td>IQE Quantification of Nitride Semiconductors</td>
<td>14:30-15:00</td>
<td>Kazuo Tanaka</td>
</tr>
<tr>
<td>Perfect X-ray focusing using fitting corrective glasses to aberrated optics</td>
<td>16:00-17:00</td>
<td>Christian G. Schroer</td>
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#### BISC & OMC <Room 418>

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<tr>
<th>Title</th>
<th>Time</th>
<th>Speaker(s)</th>
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<tr>
<td>Bioluminescent indicator applicable to membrane voltage recording in various excitable cell types</td>
<td>13:30-14:10</td>
<td>Takeharu Nagai</td>
</tr>
<tr>
<td>Wavefront correction enables vibrational imaging of bacteria with multimode fibre probes</td>
<td>14:30-15:40</td>
<td>Ivan Gusachenko</td>
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</table>

#### [OPIC Reception] 18:00-20:00 <Room 501+502>
### ALPS <Room 511+512> 13:30-15:15: Novel optical devices, materials, nanostructure and applications  
**Chairs:** Takasumi Tanabe  
Keio Univ., Japan  
Takuo Tanaka  
RIKEN, Japan  

**ALPS8-1 13:30 Invited**  
**Expanding applicable optical sources in plasmonics and through a dispersion increasing fiber**  
Chen-Bin Huang  
Inst. of Photonics Tech., National Tsing Hua Univ., Taiwan  

**ALPS8-2 14:00 Invited**  
**Metamaterial absorbers and their applications**  
Takuo Tanaka$^{1,2}$  
$^{1}$RIKEN Metamaterials Lab., Japan, $^{2}$RIKEN Innovative photon manipulation research team, Tokyo Inst. of Tech., Japan  

**ALPS8-3 14:30**  
**Nanofocused Surface Plasmon Pulses at 400 nm and 800 nm using an Aluminum Tapered Tip**  
K. Tomita, Y. Kojima, and F. Kannari  
Keio Univ., Japan  

**ALPS8-4 14:45**  
**Tuning Supermode Splitting for Stimulated Brillouin Scattering**  
Y. Honda$^{1,2}$, W. Yoshih$^{1}$, T. Tetsumoto$^{1}$, S. Fujii$^{1}$, K. Furusawa$^{1}$, N. Sekine$^{1}$ and T. Tanabe$^{1}$  
$^{1}$Keio Univ., Japan, $^{2}$NICT, Japan  

**ALPS8-5 15:00**  
**A Silicon Waveguide Platform with Large Misalignment Tolerance for Flip-Chip Based Hybrid Silicon/III-V Laser**  
H. Wang$^{1,2}$, W. Zheng$^{1,2}$  
$^{1}$Lab. of Solid State Opt. Info. Tech., Inst. Semiconductors, CAS, China, $^{2}$State Key Lab. on Int. Opt., Inst. Semiconductors, CAS, China  

*----- 15:15-15:45 Break -----*

### CLES / LANSA <Room 416+417> 13:20-XX:XX:  
**Chair:** XXXXX  

**LN2-1 13:20 Invited**  
**Laser-driven neutron source: state of the art and applications on ILE**  
Akifumi Yogo$^{1,4}$, K. Koga$^{1}$, S. Tosaki$^{1}$, Y. Suzuki$^{1}$, K. Okamoto$^{1}$, Y. Arikawa$^{1}$, S. Fujioka$^{1}$, Y. Sentoku$^{1}$, Y. Abe$^{1}$, Y. Kato$^{1}$, M. Nakai$^{1}$, K. Mima$^{1,2}$, K. Yamanoi$^{1}$, T. Norimatsu$^{1}$, M. Kanasaki$^{3}$, K. Oda$^{3}$, T. Yamauchi$^{3}$, H. Azechi$^{1}$, H. Nishimura$^{1}$  
$^{1}$Institute of Laser Engineering (ILE), Osaka University, Japan, $^{2}$The Graduate School for the Creation of New Photonics Industries, Japan, $^{3}$Graduate School of Maritime Sciences, Kobe University, Japan, $^{4}$PRESTO, Japan Science and Technology Agency, Japan  

**LN2-2 14:00**  
**Ion acceleration and neutron production in different types of targets**  
Yutong Li$^{1,2,3}$, Yihang Zhang$^{1,2}$, Weimin Wang$^{1,3}$  
$^{1}$Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, China, $^{2}$School of Physical Sciences, University of Chinese Academy of Sciences, China, $^{3}$Collaborative Innovation Center of IFSA (CICIFSA), Shanghai Jiao Tong University, China  

**LN2-3 14:20**  
**Quasimonoenergetic proton production through the coulomb explosion of spherical nanostructures**  
Myles Allen H. Zosa, Masakatsu Murakami  
Institute of Laser Engineering, Osaka University, Japan  

**LN2-4 14:40**  
**Compact neutron source using coulomb-explosion-generated quasimonoenergetic protons**  
Masakatsu Murakami, Myles-Allen Zosa, Kazumasa Fujinohara  
Institute of Laser Engineering, Osaka University, Japan  

*----- 15:00-15:30 Break -----*

### ICNN <Room 414+415> 13:30-15:00:  
**Opening Remarks**  
Y. Arakawa  
The University of Tokyo  

**ICNN1-1 13:45**  
**On-chip Quantum Optics based on III-V Quantum Dots in Circuit Geometries**  
Maurice Skolnick$^{1,2}$  
$^{1}$Department of Physics and Astronomy, University of Sheffield, UK, $^{2}$University of Sheffield, UK  

**ICNN1-2 14:15**  
**Quantum dot-nanocavity-waveguide coupled systems fabricated by transfer printing**  
Ryota Katsumi$^{1}$, Yasutomo Ota$^{2}$, Kazuhiro Kuruma$^{1}$, Akhiho Tama$^{3}$, Masahiro Kakuda$^{2}$, Toshiyuki Miyazawa$^{3}$, Kazuya Takemoto$^{2}$, Satoshi Iwamoto$^{1}$, Yasuhiko Arakawa$^{1}$  
$^{1}$Institute of Industrial Science, The Univ. of Tokyo, Japan, $^{2}$Institute for Nano Quantum Information Electronics, The Univ. of Tokyo, Japan, $^{3}$Fujitsu Laboratories Ltd, Japan  

**ICNN1-3 14:30**  
**Adiabatic Wavelength Conversion Through Free-Carrier Depletion Using pn-Junction-Loaded Photonic Crystal Nanowaveguides**  
Keisuke Kondo, Toshikito Baba  
Yokohama Nat’l Univ., Japan  

**ICNN1-4 14:45**  
**A Scheme for Generating Optical Vortex from a Quantum Dot using Degenerate Photonic Crystal Nanocavity Modes**  
Satoshi Iwamoto, Yasutomo Ota, Yasuhiko Arakawa  
The University of Tokyo
### OPIC 2017

**Oral Program**

**Oral, Wednesday, April 19 PM**

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<th>Authors</th>
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<tr>
<td><strong>IP &lt;Room 413&gt;</strong></td>
<td>[IP-19PM-1]</td>
<td>13:30-15:30</td>
<td><strong>[Special Session] Photonic Intelligence</strong>&lt;br&gt;Chair: XXXXX&lt;br&gt;XXXXXX</td>
<td>Invited</td>
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<tr>
<td><strong>IP-19PM-1-1</strong></td>
<td>13:30</td>
<td>Invited</td>
<td><strong>A Coherent Ising Machine Based on Networked Optical Parametric Oscillators for Optimization Problems</strong>&lt;br&gt;Takahiro Inagaki, Yoshitaka Haribara, Koji Igarashi, Tomohiro Sonobe, Shuhei Tamate, Toshimori Honjo, Alireza Marandi, Peter McMahon, Takeshi Umeda, Koji Enbutsu, Osamu Tadanaga, Hirokazu Takensouchi, Kazuyuki Ashara, Ken-ichi Kawarabayashi, Kyo Inoue, Shoko Utsunomiya, Hiroki Takesue, NTT Basic Research Laboratories, Japan, The University of Tokyo, Japan, National Institute of Informatics, Japan, Osaka University, Japan, 1ST, Japan, Stanford University, USA, NTT Device Technology Laboratories, Japan</td>
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<tr>
<td><strong>IP-19PM-1-2</strong></td>
<td>14:00</td>
<td>Invited</td>
<td><strong>Solving Ising Problems with All-to-All Network of Time-Multiplexed Optical Parametric Oscillators</strong>&lt;br&gt;Ryan Hamerly, Peter McMahon, Alireza Marandi, Shoko Utsunomiya, Yoshitsune Yamamoto, National Institute of Informatics, Japan, Stanford University, USA, 1ST, Japan</td>
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<tr>
<td><strong>IP-19PM-1-3</strong></td>
<td>14:30</td>
<td>Invited</td>
<td><strong>Performance Improvement of Reservoir Computing by Using Two Temporal Outputs in Mutually Coupled Optoelectronic System</strong>&lt;br&gt;Kazutaka Kanno, Masatoshi Bunsen, Fukuoka University, Japan</td>
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<tr>
<td><strong>IP-19PM-1-4</strong></td>
<td>15:00</td>
<td>Invited</td>
<td><strong>Structure and Fundamental Processes of Photonic Intelligence</strong>&lt;br&gt;Hirokazu Hori, University of Yamanashi, Japan</td>
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--- 15:30-15:45 BREAK ---
<table>
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<tr>
<th>Room</th>
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<th>Authors/Institutions</th>
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<tbody>
<tr>
<td>ALPS</td>
<td>15:45-17:30</td>
<td>In vivo two-photon imaging of brain and neurons using high-peakpower gain-switched laser diode and adaptive optics</td>
<td>Tomomi Nemoto1,2, K. Nakamura, K. Iwata, A. Suda1,2</td>
</tr>
<tr>
<td>ALPS</td>
<td>16:30</td>
<td>Real Time Measurement of Formaldehyde Using 3μm Difference Frequency Laser</td>
<td>S. Sakai, A. Mose, N. Kamiyama, K. Iwata, A. Suda1,2</td>
</tr>
<tr>
<td>ALPS</td>
<td>16:45</td>
<td>Ultrahigh resolution OCT with broadband fiber lasers</td>
<td>N. Nishizawa, H. Kawagoe, M. Yamanaka1,2</td>
</tr>
<tr>
<td>ALPS</td>
<td>17:15</td>
<td>Ultrahigh speed en face optical coherence tomography using two KTN optical beam deflectors</td>
<td>M. Ohmi1, Y. Shinoya1, T. Tagashira1, T. Imai1, S. Tatsunmi2, S. Toyoda1, T. Sakamoto1</td>
</tr>
<tr>
<td>ICNN</td>
<td>15:45</td>
<td>Development and application of quasi-monoenergetic neutron/gamma sources from ion-driven nuclear reactions</td>
<td>Igor Jovanovic, University of Michigan, USA</td>
</tr>
<tr>
<td>ICNN</td>
<td>16:00</td>
<td>Development of neutron resonance transmission analysis as a non-destructive assay technique for nuclear nonproliferation</td>
<td>Harufumi Tsuchiya1, Fumito Kitatani1, Makoto Maeda1, Yoichi Ichinose1, Naoto Kume1, Yoshihiko Kato1</td>
</tr>
<tr>
<td>ICNN</td>
<td>16:15</td>
<td>Industrial applications of compact neutron radiography</td>
<td>Haruo Miyadera1, Koichi Nakayama1, Kei Takakura1, Tetsu Suga1, Kenichi Yoshioka1, Naoto Kume1, Yoshihiko Kato1</td>
</tr>
<tr>
<td>ICNN</td>
<td>16:45-17:00</td>
<td>Development of a portable neutron source based on inertial electrostatic confinement fusion and its application to active interrogation of special nuclear materials</td>
<td>Koichi Miyadera1, Tetsu Suga1, Kenichi Yoshioka1, Naoto Kume1, Yoshihiko Kato1, Norio Yamagaka2, Atsushi Matsuoka2, Institute of Advanced Energy1, University of Kyushu1, Research Reactor Institute1, Kyoto University1, Graduate School of Engineering1, Kyoto University1, 2Toshiba Corporation1, Japan2</td>
</tr>
<tr>
<td>ICNN</td>
<td>16:40-17:00</td>
<td>A waterproof palm-sized neutron generator using inertial electrostatic confinement (IEC) fusion</td>
<td>Kei Takakura1, Takayuki Iwai1, Haruo Miyadera1, Kenichi Yoshioka1, Yoshihiko Kato1, Daisuke Uematsu1, Tetsu Suga1, Kenichi Yoshioka1, Eiki Hotta2, Toshiba Corporation1, Tokyo Institute of Technology1</td>
</tr>
<tr>
<td>ICNN</td>
<td>17:20</td>
<td>Construction of a compact, low-inductance, 100 J dense plasma focus for yield optimization studies</td>
<td>Christopher Cooper, H. Holod, D. Higginson, A. Schmidt, L. Livermore National Laboratory1</td>
</tr>
<tr>
<td>OPIC</td>
<td>18:00-20:00</td>
<td>OPIC Reception</td>
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Oral, Wednesday, April 19 PM

**IP <Room 413>**

**IP-19PM-2-1** 15:45

**Widely Applicable Coding Method for Optical Correlators Based on an Autoencoder**

Hidenori Suzuki, Ikeda Kanami, Eriko Watanabe

University of Electro-Communications, Japan

**IP-19PM-2-2** 16:00

**Improvement of Response Time in Dual-Wavelength Spatial Light Modulators via Overdrive Method**

Hirotou Sakai, Yu Takiguchi, Naoya Matsumoto, Munenori Takami, Hiroshi Tanaka, Hirokazu Asai, Norhiro Fukuchi, Naoshka Mukozaka, Haruyoshi Toyoda

Hamamatsu Photonics K.K., Japan

**IP-19PM-2-3** 16:150

**Reference- and Lens-Free Single-Pixel Holographic Camera**

Ryoichi Horisaki, Hiroaki Matsui, Jun Taniida

Osaka University, Japan

**IP-19PM-2-4** 16:30

**Two-Parameter Analysis of the Signal’s Envelope as a Theoretical Basis for a New Trend in Optical Phase Measurements**

Tatiana Yakovleva

Federal Research Center "Computer Science and Control" of Russian Academy of Sciences, Russia

**IP-19PM-2-5** 16:45

**Optimization of Polynomial Order Based on Residuals of Interpolation in Higher-Order Transport of Intensity Phase Imaging**

Koshi Komuro, Takanori Nomura

Hamamatsu Photonics K.K., Japan

**IP-19PM-2-6** 17:00

**Point Spread Function Engineering for Snapshot Compressive Imaging**

Esteban Vera, Pablo Meza

1Pontificia Universidad Católica de Valparaíso, Chile, 2Universidad de la Frontera, Chile

**IP-19PM-2-7** 17:15

**An Aperture-Division Full-Stokes Vector Polarimetric Camera and its Polarimetric Imaging Applications**

Liyoung Ren, Wenlei Zhang, Jian Liang, Haijuan Ju, Zhaofeng Bai, Enshi Qu, Zhaoxin Wu

1Xi’an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, China, 2University of Chinese Academy of Sciences, China, 3Xi’an Jiaotong University, China

**LNPC <Room 317>**

**LNPC1-4** 15:50

**Production and evolution of axion dark matter in the early universe**

K. Saikawa, T. Hiramatsu, M. Kawasaki, A. Ringwald, T. Sekiguchi

1DESY, Germany, 2YITP, Kyoto Univ., Japan, 3Rikkyo Univ., Japan, 4ICRR, The univ. of Tokyo, Japan, 5Kavli IPMU, Japan, 6IBS, Korea

**LNPC1-5** 16:30

**Search for Axion-like Particles via optical-Parametric effects with High-Intensity laser in Empty Space over a wide mass range**

K. Homma

1Hiroshima Univ., Japan, 2IEST, Ecole Polytechnique, France

**LNPC1-6** 16:50

**Probing pseudo Nambu-Goldstone bosons by stimulated photon colliders in the mass range 0.1 eV to 10 keV**

Y. Toyota, K. Homma

1Hiroshima Univ., Japan, 2IEST, Ecole Polytechnique, France

**LNPC1-7** 17:10

**Preparatory experiments toward a search for sub-eV Dark Matter at Extreme Light Infrastructure-Nuclear Physics (ELI-NP)**


1ELI-NP, IFIN-HH, Romania, 2Kyoto Univ., Japan, 3Hiroshima Univ., Japan, 4IZEST, Ecole Polytechnique, France

**LSSE <Room 316>**

**LSSE4** 15:30

**Development of High-speed Defect Inspection Technique for Concrete Structure using Laser Hammering Method**

Shinti Kurahashi, Toshiyuki Kitamura, Hajime Okada, Shuji Kondo, Katsuhiko Mikami, Noboru Hasegawa, Masahara Nishikino, Yosinori Shimada

1Institute for laser technology, Japan, 2National Institutes for Quantum and Radiological Science and Technology, Japan

**LSSE4-1** 15:30

**Non-contact acoustic inspection method for civil engineering structure using airborne sound and laser Doppler vibrometer**

Tsuneoysu Sugimoto, Kazuho Sugimoto, Noriyuki Utagawa, Kagayoshi Katakura

1Toin University of Yokohama, Japan, 2SatoKogyo Co., Ltd, Japan, 3Metisoku Engineering Laboratory, Japan

**LSSE4-2** 16:00

**Development of Laser Cutting for Dismantling of Nuclear Facilities Using High Power Fiber Laser**

Shin-ichi Toyama, Ryoya Ishigami

The Wakasa Wan Energy Research Center, Japan

**LSSE4-3** 16:30

**Laser cleaning system using a kW-class fiber laser for maintenance of social infrastructures**

Kazuhisa Fujita, Kazuaki Toyosawa

1Hiroshima Univ., Japan, 2IZEST, Ecole Polytechnique, France

**LSSE4-4** 16:50

**Deployment of sensing technologies to promote human resource development in Naraha Remote Technology Development Center of JAEA**

Akihiko Nishimura, T. Shibata, H. Yatama, Y. Toyot a

1ELI-NP, IFIN-HH, Romania, 2Kyoto Univ., Japan, 3Rikkyo Univ., Japan, 4ICRR, The univ. of Tokyo, Japan, 5Kavli IPMU, Japan, 6IBS, Korea

**LSSE4-5** 17:20

**Deployment of sensing technologies to promote human resource development in Naraha Remote Technology Development Center of JAEA**

Akihiko Nishimura, T. Shibata, H. Yatama, Y. Toyot a

1ELI-NP, IFIN-HH, Romania, 2Kyoto Univ., Japan, 3Rikkyo Univ., Japan, 4ICRR, The univ. of Tokyo, Japan, 5Kavli IPMU, Japan, 6IBS, Korea

**Conference Program**
**Oral Program**

**Oral, Thursday, April 20 AM**

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<td><strong>ALPS &lt;Room 302&gt;</strong></td>
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<td>[ALPS10]</td>
<td>9:00-10:30</td>
<td>High power lasers</td>
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<td>Chair: Daniel Albach</td>
<td>Institute of Radiation Physics, HZDR, Germany</td>
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</table>
|             |               |         | **ALPS10-1 9:00**         | Invited High Average Power Petawatt Laser Systems enabling the transition from proof-of-principle experiments to commercial applications (tentative) | Constantin Haefner
|             |               |         | NIF Photon Science Lawrence Livermore National Laboratory, USA     |                                                                                                |
| **ALPS <Room 511+512>** |              | [ALPS11] | 9:00-10:30              | New Materials for Laser Control                                                                 | Invited Chair: Sunao Kurimura
|             |               |         | NIMS, Japan                                                          |                                                                                                |
| **BICS <Room 419>** |              | [BICS3]  | 9:00-10:15              | Brain Imaging and Raman Microscopy                                                              | Invited Chair: Osamu Matoba
|             |               |         | Kobe Univ., Japan                                                  |                                                                                                |


- T. Kurita
- Y. Kato
- T. Morita
- T. Iguchi
- T. Sekine
- V. Tamaoki
- Y. Takeuchi
- T. Kawashima

1Hamamatsu Photonics K.K., Japan, 2ImpACT Program, Japan

ALPS10-3 9:45 Recent progress on Kumgang Laser - Coherent Beam Combination Laser using Self-controlled Stimulated Brillouin Scattering Phase Conjugate Mirrors (SSBS-PCMs)

- H. I. Hong
- S. Park
- S. Cha
- S. Choi
- H. Lee
- J. Oh
- and J. S. Kim

1Dep. of Phys., KAIST, Korea, 2Laser Spectronix, Korea

ALPS10-4 10:00 Advanced Multi-pass Amplification System using Yb:YAG Thin-disk Device

- Y. Ochi
- K. Nagashima
- M. Maruyama
- R. Iakura
- Kansai Photon Sci. Inst., QST, Japan

ALPS10-5 10:15 Wavelength conversion of the 100 kHz, 100 W picosecond thin-disk laser from deep-UV to mid-IR

- O. Novák
- M. Vyšlečka
- H. Turčičová
- M. Smrž
- L. Rošková
- J. Můžik
- M. Komanec
- D. Sušová
- S. Zvárovčík
- A. Endo
- T. Mocek


ALPS11-1 9:00 New Bio-Based Crystals for Nonlinear Frequency Conversion in the Mid-IR


1Max-Born-Inst. for Nonlinear Optics and Ultrafast Spectroscopy, Germany, 2High Tech. Lab., Kuban State Univ., Russia, 3Inst. of Spectroscopy, Russian Academy of Sci., Russia, 4Astrophysika National Laser Centre, Russia, 5Leibniz Inst. for Crystal Growth, Germany, 6Univ. Grenoble Alpes, Inst. NEEL, France, 7CNRS, Inst. NEEL, France

ALPS11-2 9:30 Broadband ultrafast nonlinear photonics in nanocarbons

- Fabian Rotermund
- KAIST, Korea

ALPS11-3 10:00 Growing Carbon Nanotubes on a Silica Toroid Microcavity to Observe Saturable Absorption

- N. Hirota
- W. Yoshiki
- A. Hori
- K. Namiki
- K. Sato
- H. Maki
- T. Tanabe

- Keio Univ., Japan

ALPS11-4 10:15 Advanced Multi-pass Amplification System using Yb:YAG Thin-disk Device

- Y. Ochi
- K. Nagashima
- M. Maruyama
- R. Itakura

- Kansai Photon Sci. Inst., QST, Japan

ALPS11-5 10:15 Wavelength conversion of the 100 kHz, 100 W picosecond thin-disk laser from deep-UV to mid-IR

- O. Novák
- M. Vyšlečka
- H. Turčičová
- M. Smrž
- L. Rošková
- J. Můžik
- M. Komanec
- D. Sušová
- S. Zvárovčík
- A. Endo
- T. Mocek


----- 10:15-10:45 Coffee Break -----
### Oral, Thursday, April 20 AM

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<tr>
<td>CLES / LANSA &lt;Room 416+417&gt;</td>
<td>[FAC] 9:00-XX:XX</td>
<td>Invited</td>
<td>XXXXXXXXX</td>
<td>Hiroshi Takada, Japan Atomic Energy Agency, Japan</td>
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<tr>
<td></td>
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<td><strong>Current status of high intensity pulsed spallation neutron source of J-PARC</strong></td>
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<td>FAC-1 9:00</td>
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<td>FAC-3 10:20</td>
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<tr>
<td>HEDS &lt;Room 311+312&gt;</td>
<td>[HEDSS] 9:10-10:30 Plenary (ImPACT Session IV)</td>
<td>Plenary</td>
<td>E. Miura, AIST, Japan</td>
<td>Hitoshi Tanaka, JASRI, Japan</td>
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<td><strong>Integrating Advanced Accelerator and High-Power Laser Technologies to Overcome Current Limitations</strong></td>
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<td>HEDSS-2 9:50</td>
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<td>----- 10:30-11:00 Break -----</td>
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<tr>
<td>ICNN &lt;Room 414+415&gt;</td>
<td>[ICNN3] 9:00-10:30 Plenary Quantum light</td>
<td>Plenary</td>
<td>XXXXXXXXX</td>
<td>Sven Hoefling, Yu-Ming He, Stefan Gerhard, Sebastian Unleber, Oliver Ilf, Nils Lund, Christian Schneider, Wuerzburg University, Germany</td>
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<td><strong>Lifetime measurement of a single GaN fluctuation quantum dot based on its power dependent single photon emission dynamics</strong> Kang Gao, Mark Holmes, Munetaka Arita, Yasuhiko Arakawa, Institute of Industrial Science, The University of Tokyo, Japan, Institute for Nano Quantum Information Electronics (NanoQuine), The University of Tokyo, Japan</td>
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<td><strong>Spin-dependent Directional Emission from a Quantum Dot Ensemble Embedded in an Asymmetric Optical Waveguide</strong> Wenbo Lin, Yasutomo Ota, Satoshi Iwamoto, Yasuhiko Arakawa, Institute of Industrial Science, The University of Tokyo, Japan, Institute of Industrial Science, University of Tokyo, Japan, Institute of Industrial Science, University of Tokyo, Japan, UK</td>
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<td><strong>Observation of the Purcell effect in a plasmonic microring resonator embedding self-assembled quantum dots</strong> Akhito Tamada, Yasutomo Ota, Kazuhiro Kuruma, Jinfu Ho, Katsuyuki Watanabe, Satoshi Iwamoto, Yasuhiko Arakawa, Institute of Industrial Science, The University of Tokyo, Japan, Institute for Nano Quantum Information Electronics, The University of Tokyo, Japan</td>
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<td><strong>High-Q photonic crystal double-hetero structure nanocavity with Er,O-codoped GaAs</strong> Masayuki Ogawa, Natsuki Fujioka, Kanji Sakuragi, Tadaki Kushina, Takanori Kojima, Yasufumi Fujiiwara, Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Japan</td>
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<td>----- 10:30-11:00 Break -----</td>
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### Oral, Thursday, April 20 AM

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<tr>
<th>IP &lt;Room 413&gt;</th>
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<th>LEDIA &lt;Room 411+412&gt;</th>
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<tr>
<td><strong>IP-20AM-1</strong></td>
<td><strong>[LDC1]</strong> 9:10-10:30 Pleanary Session</td>
<td><strong>[LED1]</strong> 9:00-10:00 Characterizations</td>
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| **IP-20AM-1-1** 9:00 | | **Chairs:** Atsushi A. Yamaguchi  
  Kanazawa Institute of Technology, Japan  
  Young Joo Kim  
  Yonsei University, Korea |
| Single Pixel Imaging with 1-D Hadamard Transform and Frequency Multiplexing | **Co Chairs:** Tetsuya Yagi  
  Mitsubishi Electric Corp., Japan  
  Shevlin Fergal  
  Dyoptika, Ireland |
| Koichi Nitta, Kazuki Morimoto, Shinji Hayashi, Osamu Matoba  
  Kobe University, Japan | **The Initiatives of Market Direction and Activation of the Gallium Nitride Based Laser Diode for Laser Display** |
| **IP-20AM-1-2** 9:15 | | **Evaluation of Nitrides Semiconductors Using Terahertz Time-Domain Spectroscopic Ellipsometry**  
  Tsutomu Araki  
  Ritsumeikan University, Japan |
| Depth Extraction from Image Contrast using Retroreflective Structure | **Fei Hu**  
  Appotronics, China |
| Sungwun Choi, Sung-Wook Min, Junkyu Yim  
  Kyung Hee University, Republic of Korea | **Laser Phospher based projector** |
| **IP-20AM-1-3** 9:30 | | **IP-20AM-1-5** 10:00  
  **Elimination Method for the Zero-Order Term in Off-Axis Digital Holography Utilizing Spatial-Carrier Frequency Analysis**  
  Erkhembaatar Dashdavaa, Nam Kim  
  Chungbuk National University, Republic of Korea |
| Single-Shot Fast Phase Retrieval in the Holographic Data Storage | **Kouichi Nitta**, **Kazuki Morimoto**, **Shinji Hayashi**, **Osamu Matoba**  
  Kobe University, Japan  
  **IP-20AM-1-4** 9:45  
  **Elimination Method for the Zero-Order Term in Off-Axis Digital Holography Utilizing Spatial-Carrier Frequency Analysis**  
  Erkhembaatar Dashdavaa, Nam Kim  
  Chungbuk National University, Republic of Korea |
| Xiao Lui', **Tosutomu Shimura**', **Ryuji Fujimura**', **Yoshito Tanaka**', **Masao Endo**', **Jinpeng Liu**', **Jinyan Liu**', **Yong Huang', **Xiaodi Tan'**  
  'Beijing Institute of Technology, China  
  'The University of Tokyo, Japan  
  'Utsunomiya University, Japan | **Fei Hu**  
  Appotronics, China |
| **IP-20AM-1-6** 10:15 | | **IP-20AM-1-6** 10:15  
  **Inkjet-printed 3D Structure Projecting Multiple Full-Color Images**  
  Ryuji Hirayama', **Tomotaka Suzuki**', **Tomoyoshi Shimobaba', **Assushi Shiraki**', **Makoto Naruse', **Hirota Nakayama', **Takashii Kakue', **Tomoyoshi Ito'**  
  'Chiba University, Japan  
  'JIFS, Japan  
  'National Institute of Information and Communications Technology, Japan  
  'National Astronomical Observatory of Japan, Japan |
| **Design and Investigation of Computer-Generated Fourier Holograms of Colored 3D Objects**  
  Michael Golub, Michael Parchomovsky  
  Tel Aviv University, Israel | **Fei Hu**  
  Appotronics, China |
| | **Fei Hu**  
  Appotronics, China |

--- 10:30-11:00 BREAK ---
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<th>Room 418</th>
<th>Room 317</th>
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<tr>
<td>[XOPT]</td>
<td>[OMC]</td>
<td>[LNPC]</td>
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<tr>
<td>Opening Remarks Takashige Omatsu Chiba Univ., MCRC Chiba Univ., Japan</td>
<td>Opening Remarks Kazuto Yamauchi Osaka University, Japan</td>
<td>[Opening] 09:00-10:30 New gamma-ray sources Chair: Y. Nakamiya ICR, Kyoto Univ., Japan</td>
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<tr>
<td>[XOPT1]</td>
<td>[OMC1]</td>
<td>[LNPC2]</td>
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<tr>
<td>Imaging, microscopy &amp; ptychography (I) Chair: H. Mimura The University of Tokyo</td>
<td>Optical Manipulation I Chair: Keiji Sasaki Hokkaido Univ., Japan</td>
<td>Gamma-beam experiments at ELI-NP: The future is emerging D. L. Balabanski ELI-NP IFIN-HH, Romania</td>
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<tr>
<td>Invited</td>
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<td>LNPC2-1 09:00</td>
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<tr>
<td>Invited</td>
<td>LNPC2-2 09:30</td>
<td>The Gamma Factory initiative for CERN M. W. Krausy UPMC, France</td>
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<td></td>
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<td>1RIIS, Okayama Univ., Japan, 2RIKEN Nishina Center, Japan, 3Physics Research Unit, RIKEN, Japan, 4WIAS, Waseda Univ., Japan, 5KEK, Japan</td>
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<td>Invited</td>
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</table>
**ALPS <Room 302>**

**ALPS12-1 11:00**
**Semiconductor laser pumped visible rare-earth doped lasers**
Christian Kränkel1,2,3
1Zentrum für Lasermaterialien, Leibniz-Institut für Kristallzüchtung, Germany, 2Institut für Laser-Physik, Univ. Hamburg, Germany, 3The Hamburg Centre for Ultrafast Imaging, Germany

**ALPS12-2 11:30**
**Highly beam quality PCSEL pumped Yb:YAG laser with near theory limited slope efficiency**
X. Guo1,2, S. Tokita1, H. Nishida1, K. Hirose1, T. Sugiyma1, A. Watanabe1, K. Ishizaki1, S. Noda1, N. Miyanaga1, and J. Kawanaka1
1ILE, Osaka Univ., Japan, 2Hamamatsu Photonics K.K., Japan, 3Kyoto Univ., Japan

**ALPS12-3 11:45**
**New Concept on Thermal-Lens-Free Solid State Lasers – A Heat Capacitive Active Mirror Laser**
K. Ueda1,2,3,4,5,6

--- 12:00-13:15 Lunch Break ----

**ALPS <Room 511+512>**

**ALPS13-1 11:00**
**Photonic Dirac cones and relevant physics**
Kazuki Sakoda
NIMS, Japan

**ALPS13-2 11:30**
**Optical properties of large diameter CaF2 and Yb+-:CaF2 for high energy laser applications**
K. Inaba1, G. von der Gönna1, J. Körner2, and T. Töpfer1
1Hella Materials, Germany, 2Institute of Optics and Quantum Electronics, Germany

**ALPS13-3 11:45**
**Stable Amplified Spontaneous Emission from Perovskite CsPb2Br5 Microplate**
J. Du1, Z. Hu2, Z. Liu2, X. Tang2, Y. Leng2
1State Key Lab. of High Field Laser Phys., Shanghai Inst. of Opt. and Fine Mech., Chinese Acad. of Sci., China, 2Key Lab. of Optoelectronic Tech. and Sys. (Ministry of Ed.), College of Optoelectronic Eng., Chongqing Univ., China

--- 12:00-13:15 Lunch Break ----

**BICS <Room 419>**

**BICS4-1 10:45**
**Imaging in Turbid Media**
Chair: Eiji Okada
Keio Univ., Japan

**BICS4-2 11:15**
**Investigation of light scattering characteristics of individual leukocytes using three-dimensional refractive index maps**
Kung-Bin Sung
National Taiwan University, Taiwan

**BICS4-3 11:45**
**Fundamental study for scattering suppression in biological tissue using digital phase-conjugate light with intensity modulation**
Sogo Toda1, Yuji Kato1, Nobuki Kudo1, Koichi Shimizu1
1Inst. for Laser Tech., Japan, 2Kindai Univ., Japan

--- 12:00-13:30 Lunch ----

--- 12:15-13:15 Lunch Break ----

--- 12:15-13:15 Lunch Break ----
Gammas above neutron threshold experiments at extreme light infrastructure - nuclear physics

Dan Filipescu1,2, Gheorghe Ciocan1,2, Dan Ghita1,2, Ioana Gheorghe2,3, Tudor Glodaru1,2, Franco Camera4,5, Hiroaki Utsumoi6,7, Vladimir Varlamov8
1Extreme Light Infrastructure - Nuclear Physics, Romania, 2Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering, Bucharest-Magurele, Romania, 3University of Bucharest, Romania, 4University of Milano, Department of Physics, 5INFN section of Milano, Romania, 6Department of Physics, Konan University, 7Center for Nuclear Study, University of Tokyo, Romania, 8Skobeltsyn Institute of Nuclear Physics, Romania

Enhanced efficiency moderator-reflector systems for neutron sources

Ferenc Mezei
European Spallation Source ERIC/HAS Wigner Research Center for Physics, Sweden

Plasma devices for relativistic electron beams

Cédric Thaury
LOA, France

Progress of the COXINEL application of laser plasma acceleration

Marie-Emmanuelle Couprie
SOLEIL, France

Betatron x-ray radiation in the self-modulated acceleration regime

Félicie Albert
LLNL, USA

Dynamic Control of CQED Effects in Switched Optical Microcavities

Jean-Michel GERARD1,2, Emanuel PEINKE3, Tobias SATTLER2, Joel BLEUSE2, Julien CLAUDON4, Gaston HORNECKER2, Emre YUCE1, Henri Thyresson1, Willem L VOS1,2 CEA/INAC Grenoble, FRANCE, 3CEA/INAC, FRANCE, 4Twente Univ., The Netherlands

Hybrid Semiconductor-Superconductor Optoelectronic Devices

Alex Hayat, Dmitry Panna, Shlomi Bouscher, Leonid Rybak
Department of Electrical Engineering, Technion, Haifa 32000, Israel

Si-waveguide-integrated Superconducting Nanowire Single-photon Detector with Low-loss Spot-size Converter

Tatsuro Hiraki1, Tai Tsuchizawa1, Hiroyuki Shibata1, Shinji Matsuo2
1NTT Device Technology Laboratories, Japan, 2Kitami Institute of Technology, Japan

Oral, Thursday, April 20  AM
### Oral, Thursday, April 20 AM

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<td>LEDIA &lt;Room 411+412&gt;</td>
<td><strong>11:00-12:00</strong></td>
<td>Projection Technology</td>
<td>Co-Chairs: Satoshi Ouuchi (Hitachi, Ltd., Japan) and Jae Kwon (LG Electronics, Korea)</td>
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<tr>
<td>LDC &lt;Room 301&gt;</td>
<td><strong>11:00</strong></td>
<td>Performance of RGB Laser Based Projection for Video Walls</td>
<td>Peter Hickl (Barco, Germany)</td>
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<td>LDC &lt;Room 301&gt;</td>
<td><strong>11:15</strong></td>
<td>Laser Beam Scanning Short Throw Displays and an Exploration of Laser-Based Virtual Touchscreens</td>
<td>Jari O. Honkanen and P. Selvan Viswanathan (MicroVision Inc., USA)</td>
</tr>
<tr>
<td>LDC &lt;Room 301&gt;</td>
<td><strong>11:30</strong></td>
<td>Image Quality of Retinal Projection Laser Eyewear: How to Achieve High Resolution and Free Focus in Proper Balance</td>
<td>Makoto Suzuki, Kenji Yasui, Kinya Hasegawa, Nori Miyauchi and Mitsuru Sugawara (QDLaser, Inc., Japan)</td>
</tr>
<tr>
<td>LDC &lt;Room 301&gt;</td>
<td><strong>11:45</strong></td>
<td>Electro-Optic Bragg Diffraction Type Spatial Light Modulator Using Periodically Poled Structures for Laser Displays</td>
<td>Yuta Hayashi, Toshiyuki Inoue, Hiroshi Murata, Atsushi Sanada (Osaka Univ., Japan)</td>
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--- **11:57-13:15 Lunch** ---

### [IP-20AM-2] 11:00-12:00 Information Photonics Tutorial

Chair: XXXXX

**IP-20AM-2-1 11:00 Invited**

Marriage between Holography and Statistical Optics for Unconventional Imaging: Coherence Holography and Holographic Correloscoppy (A Tutorial)

Mitsuo Takeda

Utsumomiya University, Japan
### LNPC <Room 317>
**LNPC3-1** 10:50  **Invited**
**Neutrino decay to electron and W-boson in a superstrong magnetic field in the Early Universe**
A. Kuznetsov, A. Okrugin, A. Mosichkin, A. Shitova
Demidov Univ., Russia

**LNPC3-2** 11:30  **Invited**
**Interplay between strong fields in QED and QCD**
K. Itakura
KEK, Japan

### OMC <Room 418>
**OMC2-1** 11:00  **Invited**
**Photonic entanglement processing with a single sub-wavelength structure**
Gabriel Molina-Terriza, Mathieu Juan
Macquarie Univ, Australia

**OMC2-2** 11:30  **Invited**
**Single orbital angular momentum mode emission from vertical cavity surface emitting laser by optical feedback**
Yasunori Toda\(^1\), Kyohhei Shigematsu\(^1\), Keisaku Yamame\(^1\), Ryuji Morita\(^1\), Yoshinari Awaji\(^1\)
\(^1\)Hokkaido Univ, Japan, \(^2\)National Institute of Information and Communications Technologies, Japan

### XOPT <Room 313+314>
**XOPT2-1** 11:00
**Imaging, microscopy & ptychography (II)**
Chair: Y. Takahashi
Osaka University

**XOPT2-1** 11:00  **Invited**
**Progress in X-ray phase contrast imaging based on random modulation**
Sebastien Berujo, Eric Ziegler
ESRF, France

**XOPT2-2** 11:15
**Simultaneous Image Reconstruction of Attenuation, Scatter and Phase Using the Compressed Sensing in Sparse-View Phase CT**
Ryosuke Ueda, Hiroyuki Kudo
University of Tsukuba, Japan

**XOPT2-3** 11:30
**Achromatic and High-Resolution Full-Field X-ray Microscope and its Applications**
Satoshi Matsuyama\(^1\), Jumpei Yamada\(^1\), Shuhei Yasuda\(^1\), Yoshiki Kohmura\(^1\), Hiromi Okada\(^1\), Yosuke Sano\(^1\), Makina Yabashi\(^1\), Tetsuya Ishikawa\(^1\), Kazuto Yamauchi\(^1\)
\(^1\)Osaka University, Japan, \(^2\)RIKEN SPring-8 Center, Japan, \(^3\)National Astronomical Observatory, Japan

**XOPT2-4** 11:45
**Development of precision sub-arcsecond-resolution Wolter mirrors for future X-ray observations of the Sun**
Taro Sakao\(^1\), Satoshi Matsuyama\(^1\), Takumi Goto\(^1\), Jumpei Yamada\(^1\), Shuhei Yasuda\(^1\), Kazuto Yamauchi\(^1\), Yoshiki Kohmura\(^1\), Yoshinori Siematsu\(^2\)
\(^1\)ISAS/JAXA, Japan, \(^2\)Osaka University, Japan, \(^3\)RIKEN SPring-8 Center, Japan, \(^4\)National Astronomical Observatory, Japan

--- 12:00-13:30 Lunch Break ---
Oral, Thursday, April 20 PM

ALPS

[ALPSp14] 13:15-15:00
Poster Session
<Exhibition Hall A>
Poster session program p.XX

BICS <Room 419>

[BICS5] 13:30-15:00
Digital Holography and Microscopy
Chairs: Peter T. C. So
Massachusetts Institute of Technology, USA
Yuan Luo
National Taiwan Univ., Taiwan

BICS5-1 13:30
Holographic Techniques for Cellular Fluorescence Microscopy
Myung K. Kim
Univ. of South Florida, USA

BICS5-2 14:00
Three-dimensional imaging of microspecimen by optical scanning holography
Jung-Ping Liu, Cheng-Hao Tsou
Feng Chia Univ., Taiwan

BICS5-3 14:15
Microscopic video observation of capillary vessel systems using diffuse back lighting
Minako Sakai, Kiroki Azai, Toshiaki Iwai
Tokyo Univ. of Agriculture and Technology, Japan

BICS5-4 14:30
Defect inspection of actuator lenses using swept-source optical coherence tomography
Jaeyul Lee¹, Kiboom Park¹, Jaewon Song¹, Manhik Jeon¹, Jeeyun Kim¹
¹Kyungpook National Univ., Korea, Republic of, ²Ze-tec Co., Ltd., Korea, Republic of

BICS5-5 14:45
Absorption contrast imaging beyond the diffraction limit with electron-beam excitation assisted optical microscope
Wataru Inami¹, Masahiro Fukuta¹, Yoshimasa Kawata¹, Susumu Terakawa²
¹Shizuoka Univ., Japan, ²Tokoh Univ., Japan

15:00-15:20 Coffee Break

CLES / LANSA <Room 416+417>

[POS] 13:30-XX:XX
<Exhibition Hall A>
Poster session program p.XX

[ND1] 15:00-XX:XX
XXXXX
Chair: XXXXX

ND1-1 15:00
Techniques to measure absolute neutron spectrum and intensity for accelerator based neutron source for BNCT
Isao Murata, Shingo Tamaki, Yuuki Ohtani, Yuta Ohswawa, Yusuke Kashwag, Sachio Kasaka, Fuminobu Sato
Division of Sustainable Energy and Environmental Engineering, Graduate School of Engineering, Osaka University, Japan

ND1-2 15:20
Design of epi-thermal neutron flux intensity monitor for boron neutron capture therapy
Yusuke Kashwagi¹, Xingcai Guan², Isao Murata³
¹Osaka university, Japan, ²School of Nuclear Science and Technology, Lanzhou University, Japan, ³Division of Suitable Energy and Environment Engineering, Graduate School of Engineering, Osaka University, Murata Laboratory, Japan

ND1-3 15:40
Development of sealed-type capillary plate gas detector for neutron imaging
Haruyasu Kondo¹, Hiroki Sugiyama¹, Masahiro Hayashi¹, Tetsuya Okada¹, Fuyuki Tokarai¹, Takayuki Sumiyoshi¹, Ryutaru Ito¹, Satoshi Ishizawa¹, Yuichiro Inomata², Kento Suzuki³, Seiji Tasaki³, Fuminobu Sato³, Hironori Hirose⁴, Masahiro Hino³, Ryohei Hanayama³
¹Hamamatsu Photonics K.K, Japan, ²Yamagata University, Japan, ³Tokyo Metropolitan University, Japan, ⁴Kyoto University, Japan, ⁵The Graduate School for the Creation of New Photonics Industries, Japan
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<td>13:30</td>
<td>IP</td>
<td>Image-based Link Between Frequency Comb Profilometer and Optical Interferometer</td>
<td>Quang Duc Pham, Yoshio Hayasaki</td>
<td>Utsunomiya University, Japan</td>
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<td>13:45</td>
<td>IP</td>
<td>Exposure Fusion Based on Luminance and Contrast Evaluation</td>
<td>Kuo Chen, Zhong Qu, Shufang Xia</td>
<td>Chongqing University of Posts and Telecommunications, China</td>
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<tr>
<td>14:00</td>
<td>IP</td>
<td>Holographic Particle Sizing by Using Wigner-Ville Distribution of Flipped and Replicated Holograms</td>
<td>Porntip Chuamchaitrakool¹, Joewono Widjaja¹, Hiroyuki Yoshimura¹</td>
<td>Suranaree University of Technology, Thailand, Chiba University, Japan</td>
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<tr>
<td>14:15</td>
<td>IP</td>
<td>Multi-Layered Aerial LED Display by Double-Stage Polarized Aerial Imaging by Retro-Reflection</td>
<td>Nao Kurokawa, Kenta Onuki, Hirotugu Yamamoto</td>
<td>Utsunomiya University, Japan</td>
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<td>14:30</td>
<td>IP</td>
<td>Highly Concentration Phenanthrenequinone Doped Poly (MMA-Co-BzMA) for Thick Polarization Holography</td>
<td>Fenglan Fan, Ying Liu, Yilan Hong, Jinliang Zang, Tianbo Zhao, Xiaodi Tan</td>
<td>Beijing Institute of Technology, China</td>
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<td>14:45</td>
<td>IP</td>
<td>Full-Color Polygon Based Computer Holography for Real Objects Captured by a Depth Camera</td>
<td>Yu Zhao¹, Ki-Chul Kwon¹, Yan-ling Piao¹, Seok-Hee Jeon¹, Nam Kim¹</td>
<td>Chungbuk National University, Republic of Korea, Incheon National University, Republic of Korea</td>
<td></td>
</tr>
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</table>

----- 15:00-15:15 Break -----
[LDCp3] 13:00-15:00
<Exhibition Hall A>
Poster session program p.XX

Poster Session
<Exhibition Hall A>
Poster session program p.XX

[LNPC4] 14:00-16:15
Vacuum birefringence
Chair: A. Di Piazza
MPI, Germany

LNPC4-1  14:00  Invited
A fresh look on the Heisenberg-Euler effective action
F. Karbstein
HI Jena, Germany

LNPC4-2  14:30  Invited
Vacuum birefringence in high-energy laser-electron collisions
B. King1, N. Elkina2
1Plymouth Univ., UK, 2HI Jena, Germany

LNPC4-3  15:20
High-energy vacuum birefringence in an intense laser field
S. Bragin, S. Meuren, C. H. Keitel, A. Di Piazza
MPI, Germany

LNPC4-4  16:45  Invited
The possibility of observing resonant photon splitting and photon scattering in a strong electromagnetic field
A. Hartin
DESY, Germany

----- 16:30-16:45 Break -----
**Oral Program, Thursday, April 20 PM**

### LSSE <Room 316>

**LSSE5-1 13:30**

**A XCAN Laser for Small Space-Debris Mitigation**

Gérard Mourou, Jean Christophe Chanteloup
Ecole Polytechnique, France

### OMC <Room 418>

**OMC3-1 13:30**

**Light robotics: aiming towards all-optical nanorobotics**

Jesper Glückstad
Technical Univ. of Denmark, Denmark

**OMC3-2 14:00**

**Tailored vectorial light fields: flower, spider web and hybrid structures**

Eileen Otte, Christina Alpmann, Cornelia Denz
Westfälische Wilhelms-Univ. Münster, Germany

**OMC3-3 14:15**

**High average power ultraviolet picosecond optical vortex generation**

Yuta Sasaki, Maya Kowa, Koki Yamaguchi, Jun Shibakawa, Katsuhiko Miyamoto, Takahide Omatsu
Chiba Univ., Japan

**OMC3-4 14:30**

**Generation of intense ultrafast-rotating ring-shaped optical lattices with programmable control of rotational symmetry**

Keisaku Yamane, Kohei Iwasa, Kohei Kakizawa, Kazuhiro Oka, Yasunori Toda, Ryuji Morita, Hokkaido Univ., Japan

**OMC3-5 14:45**

**Astigmatism inducing the degenerate effect in nearly hemispherical cavities: generation of three-dimensional structured light**

Jung-Chen Tung, Hsing-Chih Liang, Kuan-Wei Su, Kai-Feng Huang, Yung-Fu Chen
National Chiao Tung University, Taiwan, National Taiwan Ocean University, Taiwan

----- 15:00-15:30 Coffee Break -----
Oral Program

**Oral, Thursday, April 20 PM**

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<tr>
<th>ALPS</th>
<th>BICS &lt;Room 419&gt;</th>
<th>CLES / LANSA &lt;Room 416+417&gt;</th>
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</table>
| **[BICS6]** 15:20-18:00 | **Beyond the Disturbance: High-Resolution Imaging Through Turbid Living Cells and Tissues**  
Chairs: Yosuke Tamada  
National Institute for Basic Biology, Japan  
Hideki Takami  
National Astronomical Observatory of Japan, Japan | **[PHS]** 16:00-XX:XX  
Chair: XXXXX  
XXXXX |

**Opening Remarks  15:20-15:25**  
Yosuke Tamada  
National Institute for Basic Biology, Japan

**BICS6-1 15:25 Invited**  
Adaptive optical microscope for brain imaging in vivo  
Kai Wang  
Institute of Neuroscience, Chinese Academy of Sciences, China

**BICS6-2 16:05 Invited**  
Current limitations in super-resolution fluorescence microscopy for biological specimens: how deep can we go from the coverglass?  
Yasushi Okada,1,2  
RIKEN Quantitative Biology Ctr., Japan,  
1The Univ. of Tokyo, Japan

**BICS6-3 16:35 Invited**  
Computational holographic imaging through random diffraction  
Ryosuke Horiuchi  
Osaka Univ., Japan

**BICS6-4 16:55 Invited**  
Adaptive optical imaging through complex living plant cells  
Yosuke Tamada,1 Yutaka Hayano,2 Shin Oya,1 Noriaki Miura,2 Yasuhiro Kamei,1,2 Masayuki Hattori1  
1National Institute for Basic Biology, Japan,  
2National Astronomical Observatory of Japan, Japan,  
3Kitami Institute of Technology, Japan

**BICS6-5 17:15 Invited**  
Ultra-fast 3D scanning and holographic illumination in non-linear microscopy using acousto-optic deflectors  
Laurent Bourdieu, Wåhker Akemann,  
Cathie Ventalon, Jean-Francois Léger,  
Stéphane Dieudonné, Baptiste Blochet,  
Benjamin Mathieu, Sylvain Gigan  
Ecole Normale Supérieure, France

**Closing Remarks  17:55-18:00**  
Hideki Takami  
National Astronomical Observatory of Japan, Japan

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| **PHS-1 16:00**  
Invited  
Status of fast ignition researches in china  
Feng Zhang, Yuqiu Gu, Baohan Zhang  
Science and Technology on Plasma Physics Laboratory, Laser Fusion Research Center, CAEP, China | **PHS-2 16:40**  
Measurement of proton and D+ stopping in plasma  
Zhe Zhang,1 Yihang Zhang,1,2 Lei Zhao,2,3 Yuichi Wu,3 Yuqiu Gu,3 Yutong Li,1  
1Institute of Physics, CAS, China,  
2Department of Physics, University of Mining and Technology of China, China,  
3National Key Laboratory of Laser Fusion, China

**PHS-3 17:00**  
Effect of external and self-generated magnetic field in formation of pre-plasma due to the pre-pulse of ultra-intense laser  
Hideo Nagatomo,1 Takashi Asahina,1 Atsushi Sunahara,2 Kunioki Mima,3 Ryohei Hanayama,3  
1Institute of Laser Engineering, Osaka University, Japan,  
2Institute for Laser Technology, Japan,  
3The Graduate School for the Creation of New Photonics Industries, Japan

**PHS-4 17:20**  
Colliding shock ion acceleration by multi laser beam irradiation  
Kunioki Mima,1 T. Asahina,2 A. Yogo,2 T. Jeubaka,1  
H. Nagatomo,1 T. Taguchi,1 Y. Sentoku,1 R. Hanayama,2 H. Nishimura2  
1The Graduate School for the Creation of New Photonics Industries, Japan,  
2School of Engineering, Hiroshima University, Japan,  
3Faculty of Engineering, Setusnans University, Japan

**PHS-5 17:40**  
The kinetic neutron production in indirect-drive fast ignition experiment  
Lianqiang Shan,1 Hongbo Cai,2 Wenshuai Zhang,3 Weimin Zhou,1 Shaoping Zhu,1 Yuqiu Gu3  
1Science and Technology on Plasma Physics Laboratory, Laser Fusion Research Center, CAEP, China,  
2Institute of Applied Physics and Computational Mathematics, China,  
3Graduate School, China Academy of Engineering Physics, China
### IP <Room 413>

**[IP-20PM-2]  15:30-18:00**  
[Special Session] Computational complex-amplitude imaging  
Chair: XXXXX  

- **[IP-20PM-2-1]  15:30**  
Invited  
Quantitative Single-Shot Phase Imaging for Phase Inspection  
Mikael Sjödahl¹, Per Bergström¹, Davood Khodadad², Per Gren¹, Eynas Amer², Erik Olsson¹  
¹Luleå University of Technology, Sweden, ²Linnaeus University, Sweden  

- **[IP-20PM-2-2]  16:00**  
Invited  
Three-Dimensional Pupil Holographic Imaging  
Yuan Luo  
National Taiwan University, Taiwan  

- **[IP-20PM-2-3]  16:30**  
Invited  
A Single Pixel Imaging for Digital Holography  
Min-Chul Park, Thibault Leportier  
Korea Institute of Science and Technology, Republic of Korea  

- **[IP-20PM-2-4]  17:00**  
Invited  
High-Speed Single-Pixel Digital Holography with Phase-Structured Illumination  
Luis Martínez-León¹, Humberto González¹, Pere Clemente², Fernando Soldevila¹, Eva Salvador-Balaguer¹, María Araiza-Esquível¹, Jesús Lancis¹, Enrique Tajahuerce¹  
¹Universitat Jaume I, Spain, ²Universidad de Zacatecas, México  

- **[IP-20PM-2-5]  17:30**  
Invited  
Cyphertext-Only Attack to Double Random-Phase Encoding: Experimental Demonstrations  
Guohai Situ, Guowei Li, Wanqin Yang, Dayan Li  
Shanghai Institute of Optics and Fine Mechanics, China, University of the Chinese Academy of Sciences, China  

### ICNN <Room 414+415>

**[ICNN5]  15:00-17:00**  
Plasmonic nanostructures  
Chair: XXXXX  

- **[ICNN5-1]  15:00**  
Invited  
Plasmon Enhanced Single-Molecule Electroluminescence and Beyond  
Zhenchao Dong  
University of Science and Technology of China, P. R. China  

- **[ICNN5-2]  15:30**  
Carrier-lifetime measurements of deep-subwavelength Si core plasmonic waveguide  
Hidetaka Nishi, Tai Tsuchizawa, Masaaki Ono, Masaya Notomi, Shinji Matsuo  
NTT, Japan  

- **[ICNN5-3]  15:45**  
Luminescent Silicon Nanocrystals: Physics and Applications  
Ilya Sychugov¹, Federico Pevere¹, Jun-Wei Luo¹, Jonathan Veinot¹, Alex Zunger¹, Jan Linarros¹  
¹KTH - Royal Institute of Technology, Sweden, ²State Key Laboratory for Superlattices and Microstructures, Chinese Academy of Science, China, ³University of Alberta, Edmonton, Canada, ⁴Renewable and Sustainable Energy Institute, University of Colorado, USA  

- **[ICNN5-4]  16:00**  
Surface plasmon-enhanced ultraviolet electroluminescence from an individual n-ZnO microrod/p-GaN heterostructured light-emitting diodes via controlling the size of Ag nanoparticles  
Hsu-Cheng Hsu, Dae-Hee Lim, Ching-Yen Wang, Bo-Lun Jiang  
Department of Photonics, National Cheng Kung University, Tainan, Taiwan  

- **[ICNN5-5]  16:15**  
Complex cavity photonic crystal surface emitting laser  
Yufei Wang, Xiaojie Guo, Wanhua Zheng  
Laboratory of Solid State Optoelectronics, Information Technology, Institute of Semiconductors, CAS, China  

- **[ICNN5-6]  16:30**  
A Single GaAs Nanowire Schottky Junction Photodetector  
Yanbin Luo, Bang Li, Xin Yan, Qichao Lu, Jiamin Wang, Xia Zhang  
State Key Laboratory of Information Photonics and Optical Communications, Beijing University of Posts and Telecommunications, China  

### HEDS <Room 311+312>

**[HEDS8]  15:15-16:15**  
High-Field Physics / Rad. Source  
Chair: K. Sueda  
Osaka Univ., Japan  

- **[HEDS8-1]  15:15**  
Invited  
Measuring lifespan of hot, relativistic electrons produced in ultra-intense laser-solid interactions  
G Ravindra Kumar  
TaTa Inst., India  

- **[HEDS8-2]  15:45**  
Invited  
High energy & high average power Pump Lasers... The route to High average power petawatt lasers  
Franck Falcoz  
Amplitude Tech., France  

### HEDS9 <Room 311+312>

**[HEDS9]  16:30-17:30**  
Business / Products  
Chair: J. Sasaki  
Japan Laser, Japan  

- **[HEDS9-1]  16:30**  
Invited  
Innovative Targetry for Laser-Plasma Interaction  
F. Sylla  
Source Lab., France  

- **[HEDS9-2]  17:00**  
Invited/Special  
Electron beam technology innovation by semiconductor photocathodes and its commercialization for startup  
Tomohiro Nishitani¹,², Takayuki Suzuki³  
¹Nagoya Univ., Japan, ²Photo electron Soul, Japan  

- **[HEDS9-3]  17:15**  
Invited/Special  
Silicon photonics platform and PDK of 300mm SOI for advanced optical integrated circuits  
Tohru Mogami¹, Tyuoshio Horikawa²,³, Keizo Kinoshita¹  
¹Photonics Electronics Technology Research Association (PETRA), Japan, ²National Institute of Advanced Industrial Science and Technology (AIST), Japan
### Oral Program, Thursday, April 20 PM

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<th>Session</th>
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<tr>
<td><strong>[LDC4] 15:30-17:00</strong></td>
<td>Laser Diode &amp; LED</td>
<td>Co Chairs: Tomoyuki Miyamoto, Meijo University, Japan; Charles Li, PlayNitride, Taiwan</td>
<td>LDC &lt;Room 301&gt;</td>
</tr>
<tr>
<td><strong>[LDC4]-1 15:30</strong></td>
<td>Invited</td>
<td>GaN-based VCSELs towards high efficiency</td>
<td>T. Takeuchi¹, S. Kamiyama², M. Iwaya², I. Akasaki¹,² Meijo Univ., Japan; Nagoya Univ., Japan</td>
</tr>
<tr>
<td><strong>[LDC4]-2 16:00</strong></td>
<td>High-Power and Highly-Reliable 638 nm Band BA-LD for CW Operation</td>
<td>T. Nishida, K. Kuramoto, S. Abe, M. Kusunoki, M. Miyashita, T. Yagi, Mitsubishi Electric Corp., Japan</td>
<td></td>
</tr>
<tr>
<td><strong>[LDC4]-4 16:30</strong></td>
<td>Improvement of WPE of Laser Diode by Conversion of Spontaneous Surface-emission to Edge-emission via Radiation Mode</td>
<td>Junichi Kinoshita, Osaka Univ., Japan</td>
<td></td>
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<tr>
<td><strong>[LDC4]-5 16:45</strong></td>
<td>Study on AlGaN-Based High-Voltage Ultraviolet Light-Emitting Diodes for White Light Applications</td>
<td>Ray-Hua Horng, Chen-Hao Kuo, Ching-Ho Tien, Dong-Sing Wu, National Chiao Tung Univ., Taiwan</td>
<td></td>
</tr>
<tr>
<td><strong>[LED4] 16:45-17:45</strong></td>
<td>Light Emitting Diodes-2</td>
<td>Chairs: Michael Krames, ARKNESSO, LLC, USA; Motoaki Iwaya, Meijo University, Japan</td>
<td>LEAN &lt;Room 411+412&gt;</td>
</tr>
<tr>
<td><strong>[LED4]-1 16:45</strong></td>
<td>Invited</td>
<td>Growth and Optical Characteristics of GaN-based LED on Cavity-Engineered Sapphire Substrate</td>
<td>Yongjo Park, Seoul National University, Korea</td>
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<tr>
<td><strong>[LED4]-2 17:15</strong></td>
<td>Temperature Dependence of Efficiency in IIInitride Light-emitting Diodes</td>
<td>S. Oh¹, J. Cho¹, E. F. Schubert², Chonbuk National University, Republic of Korea; Rensselaer Polytechnic Institute, USA</td>
<td></td>
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<tr>
<td><strong>[LED4]-3 17:30</strong></td>
<td>Semipolar (10-1-1) GaInN/GaN p-i-n light-emitting solar cells</td>
<td>Noboru Muramatsu¹, Tutomu Takenishi¹, Shun Mitsuhuji¹, Motoaki Iwaya¹, Tetsuya Takeuchi¹, Satoshi Kamiyama¹, Isamu Akasaki² Akasaki Research Center, Nagoya University, Japan</td>
<td></td>
</tr>
<tr>
<td><strong>[LNPC5] 16:15-17:45</strong></td>
<td>Laser-driven fundamental physics and technology</td>
<td>Chair: K Homma¹,² Hiroshima Univ., Japan; IZEST, Ecole Polytechnique, France</td>
<td>LNPC &lt;Room 317&gt;</td>
</tr>
<tr>
<td><strong>[LNPC5]-1 16:15</strong></td>
<td>Terahertz Photon Detectors</td>
<td>Y. Kawano, TITEC, Japan</td>
<td></td>
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<tr>
<td><strong>[LNPC5]-2 16:45</strong></td>
<td>Neutrino spectroscopy with atoms and laser - toward detection of relic neutrino</td>
<td>A. Yoshimi, RISS, Okayama Univ., Japan</td>
<td></td>
</tr>
<tr>
<td><strong>[LNPC5]-3 17:15</strong></td>
<td>Optical Cavity Tests of Lorentz Invariance</td>
<td>Y. Michimura¹, T. Takeda¹, Y. Sakai¹, N. Matsumoto³,¹⁴, M. Ando¹,¹⁴ The univ. of Tokyo, Japan; ²FRIS, Tohoku Univ., Japan; ³RIEC, Tohoku Univ., Japan; ¹⁴JST, PRESTO, Japan; ¹⁵NAOJ, Japan</td>
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### Oral, Thursday, April 20 PM

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<tr>
<td>OMC4</td>
<td>15:30</td>
<td>Invited</td>
<td>To be announced</td>
<td>Shuntaro Tani, The Univ. of Tokyo, Japan</td>
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<tr>
<td>OMC4-2</td>
<td>16:00</td>
<td>Invited</td>
<td>2-Dimensional VLS Gratings for X-ray Spectroscopy and Monochromators with Femtosecond Time Resolution</td>
<td>Thomas Gog, Jung Ho Kim, Diego M. Casa, Mary H. Upton, Ayman Said, XianRong Huang, Argonne National Laboratory, USA</td>
</tr>
<tr>
<td>OMC4-4</td>
<td>16:30</td>
<td>Invited</td>
<td>2-Dimensional VLS Gratings for X-ray Spectroscopy and Monochromators with Femtosecond Time Resolution</td>
<td>Alexei Erko, Helmholtz Zentrum Berlin, Deutschland</td>
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<tr>
<td>OMC4-6</td>
<td>17:00</td>
<td>Invited</td>
<td>An improved multi-channel multilayer-mirrors-based EUV/soft X-ray spectrometer developed for the dynamic hohlraum experiment</td>
<td>Qiang Yi, Yi Qin, Rongkun Xu, Taiping Peng, Qishui Huang, Zhanshang Wang, 1INPC, CAEP, China, 2Tongji University, China</td>
</tr>
<tr>
<td>OMC4-7</td>
<td>17:15</td>
<td>Invited</td>
<td>Creating a crystalline silicon (111) needle by optical vortex illumination</td>
<td>Kai Izumisawa, Abilmit Ablez, Yuri Nakamura, Tatsuyuki Sugimoto, Hanami Fujita, Katsuhiko Miyamoto, Ryuji Morita, Takashige Omatsu, 1Chiba Univ., Japan, 2Hokkaido Univ., Japan</td>
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<tr>
<td>XOPT</td>
<td>15:30</td>
<td>Invited</td>
<td>Inelastic scattering &amp; spectroscopy</td>
<td>M. Yabashi, RIKEN SPring-8 Center</td>
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<tr>
<td>XOPT-1</td>
<td>15:30</td>
<td>Invited</td>
<td>2-Dimensional VLS Gratings for X-ray Spectroscopy and Monochromators with Femtosecond Time Resolution</td>
<td>Alexei Erko, Helmholtz Zentrum Berlin, Deutschland</td>
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<td>XOPT-2</td>
<td>16:00</td>
<td>Invited</td>
<td>2-Dimensional VLS Gratings for X-ray Spectroscopy and Monochromators with Femtosecond Time Resolution</td>
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<td>Qiang Yi, Yi Qin, Rongkun Xu, Taiping Peng, Qishui Huang, Zhanshang Wang, 1INPC, CAEP, China, 2Tongji University, China</td>
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## Oral Program

### OPIC 2017

#### Oral Program

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| **BICS <Room 419>** | 9:00-12:00 | Invited | **Interdisciplinary Biomedical Imaging** | **Chair:** Tatsuki Tahara  
Kansai Univ., Japan |

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| **BICS7-1** | 9:00 | Invited | **High-speed bioimaging with frequency-division-multiplexed fluorescence confocal microscopy** | Hideharu Mikami, Jeffrey Harmon, Yasuyuki Ozeki, Kiseuke Goda  
The Univ. of Tokyo, Japan |

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| **BICS7-2** | 9:30 | Invited | **Observation of elastic wave propagation near tissue surface using swept-source optical coherence tomography** | Marie Tabaru  
Tokyo Institute of Technology, Japan |

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</table>
| **BICS7-3** | 10:00 | Invited | **Non-label bioimaging utilizing scattering lights** | Tomonobu M. Watanabe, Taro Ichimura, Hideaki Fujita  
1RIKEN Quantitative Biology Ctr., Japan, 2Osaka Univ., Japan |

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| **ALPS <Room 511+512>** | 9:00-10:30 | **Terahertz Technology 1** | **Chair:** Jinghua Teng  
Inst. of Materials Res. and Eng, Singapore |

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| **ALPS5-1** | 9:00 | Invited | **Development and Application of Terahertz Focal-Plane Imaging Technique** | Xinke Wang, Yan Zhang  
Dep. of Phys., Capital Normal Univ., Beijing Key Lab. of Metamaterials and Devices, and Key Lab. of Terahertz Optoelectronics, Ministry of Educ., China |

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| **ALPS5-2** | 9:30 | | **Carrier-Envelope Phase-Stable KTA-Based Optical Parametric Amplifiers at 3.3 μm** | F. M. Lu, T. Kanai, Y. Matsumoto, N. Ishii, and Y. Iitani  
The inst. for Solid State Phys., The Univ. of Tokyo, Japan |

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</table>
1Dep. Phys. and Astro., Shanghai Jiao Tong Univ., China, 2Collaborative Innovation Center of IFSA, Shanghai Jiao Tong Univ., China, 3Dep. Phys., SUPA, Univ. of Strathclyde, UK |

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| **ALPS5-4** | 10:00 | | **Enhanced Terahertz Emission from Micro Structure Fabricated from Silver Nanoparticles** | K. N. T. Phan, K. Kato, K. Takano, M. Yoshimura, H. Azechi, and M. Nakajima  
ILE, Osaka Univ., Japan |

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</table>
1Dep. of Elec. and Elec. Eng., Fukui Univ. of Tech., Japan, 2Res. Cent. for Dev. of Far-Infrared Reg., Univ. of Fukui, Japan, 3Fac. of Educ., Univ. of Fukui, Japan, 4Chair of Liberal Arts, Japan Coast Guard Academy, Japan, 5ILE, Osaka Univ., Japan |

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| **BICS <Room 419>** | 9:00-10:00 | Invited | **Interdisciplinary Biomedical Imaging** | **Chair:** Tatsuki Tahara  
Kansai Univ., Japan |

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</table>
| **BICS7-2** | 9:30 | Invited | **Observation of elastic wave propagation near tissue surface using swept-source optical coherence tomography** | Marie Tabaru  
Tokyo Institute of Technology, Japan |

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<thead>
<tr>
<th>Room</th>
<th>Time</th>
<th>Invited</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
</table>
| **BICS7-3** | 10:00 | Invited | **Non-label bioimaging utilizing scattering lights** | Tomonobu M. Watanabe, Taro Ichimura, Hideaki Fujita  
1RIKEN Quantitative Biology Ctr., Japan, 2Osaka Univ., Japan |

### Break Times

- 10:30-11:00 Coffee Break
- 10:30-11:00 Break
### Oral, Friday, April 21 AM

#### HEDS <Room 311+312>

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Title</th>
<th>Speaker(s)</th>
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</thead>
<tbody>
<tr>
<td>9:00-10:30</td>
<td>Relativistic electron beams driven by single-cycle laser pulses at kilohertz repetition rate</td>
<td>Jerome Faure, IOA, France</td>
</tr>
<tr>
<td>9:00</td>
<td>Dynamics of plasma mirrors driven by relativistic-intensity few-cycle pulses</td>
<td>Rodrigo Lopez-Martens, LOA, France</td>
</tr>
<tr>
<td>10:00</td>
<td>TBD</td>
<td>Mitsuhiro Yoshida, KEK, Japan</td>
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#### ICNN <Room 414+415>

<table>
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<tr>
<th>Schedule</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>9:00-10:30</td>
<td>Heterostructured III-V nanowires: opportunities and challenges</td>
<td>Vladimir Dubrovskii, St. Petersburg Academic University, Russia</td>
</tr>
<tr>
<td>9:00</td>
<td>Nanowire-quantum dot lasers on flexible substrates</td>
<td>Jun Tatebayashi¹, Yasutomo Otta¹, Satomi Ishida¹, Masao Nishioka¹, Satoshi Iwamoto¹, Yasuhiko Arakawa¹, NanoQuine, the Univ. of Tokyo, Japan, IIIS, the Univ. of Tokyo, Japan, NanoQuine and IIIS, the Univ. of Tokyo, Japan</td>
</tr>
<tr>
<td>9:45</td>
<td>A theoretical comparison study on threshold currents of III-nitride lasers with quantum dots and quantum wells</td>
<td>Renchun Tao¹, Yasuhiko Arakawa², ¹Institute for Nano Quantum Information Electronics, The University of Tokyo, Japan, ²Institute of Industrial Science, The University of Tokyo, Japan</td>
</tr>
<tr>
<td>10:00</td>
<td>Photonic Crystal Nanolaser Array with Ordered Lasing Wavelengths For High-Speed Cell Imaging</td>
<td>Hiroshi Abe, Satoshi Ota, Yasushi Takemura, Toshihiko Baba, Yokohama National University, Japan</td>
</tr>
<tr>
<td>10:15</td>
<td>Spectral control of near-field thermal radiation transfer using a Si photonic crystal thermal emitter</td>
<td>Takuya Inoue, Takashi Azano, Susumu Noda, Kyoto University, Japan</td>
</tr>
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#### IP <Room 413>

<table>
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<tr>
<th>Schedule</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>9:00-10:30</td>
<td>Recent Progress in Optical Scanning Holography</td>
<td>Jung-Ping Liu, Feng Chia University, Taiwan</td>
</tr>
<tr>
<td>9:30</td>
<td>Applications of Geometric Metasurface in Holography</td>
<td>Lingling Huang, Yongtian Wang, Beijing Institute of Technology, China</td>
</tr>
<tr>
<td>10:00</td>
<td>Holographic and Light Field Head Mounted Displays and Their Contents Synthesis</td>
<td>Jae-Hyeong Park, Inha University, Republic of Korea</td>
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------ 10:30-10:50 Break ------
<table>
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<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>LDC5</td>
<td>9:00</td>
<td>Direct Measurement of Color Speckle II</td>
<td>Modification of 2D Colorimeter</td>
<td>Kazuo Kuroda, Junichi Kinoshita, Hiroshi Tanaka, Ryushi Fujimura, Kazuhisa Yamamoto</td>
</tr>
<tr>
<td></td>
<td>9:45</td>
<td>Measurement of Angular Characteristics</td>
<td>of Speckle Contrast</td>
<td>Shogo Kubota, Makio Kurashige, Kazutoshi Ishida, Dai Nippon Printing Co., Ltd., Japan</td>
</tr>
<tr>
<td>LED5</td>
<td>9:00</td>
<td>Growth and Characterization of (Al,Ga)2O3-Based Alloy and Heterostructures</td>
<td></td>
<td>Takayoshi Oshima, Saga University, Japan</td>
</tr>
<tr>
<td></td>
<td>9:30</td>
<td>HVPE as a method for crystallizing GaN with low background impurity concentration with controllable doping - highly conductive n-type and semi-insulating material</td>
<td></td>
<td>Malgorzata Iwinska, Michal Bockowski, Institute of High Pressure Physics PAS, Poland</td>
</tr>
<tr>
<td></td>
<td>10:00</td>
<td>Novel doping techniques during MOVPE of GaN</td>
<td></td>
<td>Christoph Berger, Andreas Lesnik, Silvio Neugebauer, Armin Dadgar, Marc Hoffmann, Aqdas Fariza, Florian Hörich, Jürgen Blasing, Hartmut Witte, Peter Veit, Jürgen Christen, André Strittmatter, Otto-von-Guericke-University Magdeburg, Germany</td>
</tr>
<tr>
<td></td>
<td>10:15</td>
<td>Effect of gaseous carbon addition in GaN crystal growth by Na-flux method</td>
<td></td>
<td>Naoki Takeda, Masayuki Imanishi, Kouyou Murakami, Masatoshi Hayashi, Mamoru Imade, Masashi Yoshimura, Yusuke Mori, Osaka University, Japan</td>
</tr>
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----- 10:30-10:45 Break -----
## Oral Program

**Oral, Friday, April 21 AM**

### LSSE <Room 302>

**LSSE6-1 9:30**

Photocatalysis and Light Guide Pipe  
Akira Fujishima  
Tokyo University of Science, Japan

### OMC <Room 418>

**OMC5-1 9:00**

To be announced  
Stephen H. Simpson  
Institute of Scientific Instruments of the ASCR, v.v.i., Czech Republic

**OMC5-2 9:30**

Optical binding of two microparticles levitated in vacuum  
Yoshihiko Arita1, Ewan Wright2, Kishan Dholakia3  
1Univ. of St. Andrews, UK, 2College of Optical Sciences, The Univ. of Arizona, USA

**OMC5-3 9:45**

Nano-ring arrays for sub-micron particle trapping  
Xue Han, Viet Giang Truong, Síle Nic Chormaic  
Okinawa Institute of Science and Technology Graduate Univ., Japan

**OMC5-4 10:00**

Rotational dynamics and heating of trapped nanovaterite particles  
Yoshihiko Arita1, Joseph M. Richards2, Michael Manzi3, Gabriel C. Spalding3, Susan E. Slepevetsva3, Kishan Dholakia2  
1Univ. of St Andrews, UK, 2Illinois Wesleyan Univ., USA

**OMC5-5 10:15**

Optical binding of particles in the evanescent field of microfiber modes  
Maimaiti Ali1, Viet Giang Truong, Síle Nic Chormaic  
OIST Graduate Univ., Japan

----- 10:30-11:00 Coffee Break -----
## Oral, Friday, April 21 AM

### ALPS <Room 511+512>

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<tbody>
<tr>
<td>ALPS16-1</td>
<td>11:00</td>
<td>Tunable and reconfigurable THz devices&lt;br&gt;Jinghua Teng&lt;br&gt;Inst. of Materials Res. and Eng. Agency for Sci., Tech. and Res. (A*STAR), Singapore</td>
</tr>
<tr>
<td>ALPS16-2</td>
<td>11:30</td>
<td>Simultaneous Generation and Detection of Multi-wavelength Terahertz Waves by Parametric Wavelength Conversion&lt;br&gt;K. Murata¹, K. Maeda¹, S. Hayashi¹, K. Kawase¹&lt;br&gt;¹Nagoya Univ., Japan, ²JSPS, Japan, ³National Inst. of Info. and Commun. Tech., Japan</td>
</tr>
<tr>
<td>ALPS16-3</td>
<td>11:45</td>
<td>Characterization of Unexplored Second-order Nonlinear Optical Coefficients of organic DAST Crystal&lt;br&gt;T. Notake, K. Nawata, Y. Takida, Y. Tokizane, Z. Han, M. Koyama, A. K. D. Bosco, and H. Minamide&lt;br&gt;RIKEN RAP, Teraphotonics Team, Japan</td>
</tr>
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</table>

#### 12:00-13:15 Lunch Break

### BICS <Room 419>

<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BICS7-4</td>
<td>11:00</td>
<td>Cell tracking for cell image analysis&lt;br&gt;Ryoma Bise¹, Yoichi Sato¹&lt;br&gt;¹National Institute of Informatics, Japan, ²The Univ. of Tokyo, Japan</td>
</tr>
<tr>
<td>BICS7-5</td>
<td>11:30</td>
<td>Requirement of spatiotemporal resolution for imaging intracellular temperature distribution&lt;br&gt;Noriko Hiroi, Ryuichi Tanimoto, Kaito Ii, Mitsunori Ozeki, Kota Mashimo, Akira Funahashi&lt;br&gt;Koio Univ., Japan</td>
</tr>
</tbody>
</table>

#### 12:00-13:00 Lunch Break

### CLES / LANSA <Room 416+417>

<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
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<tbody>
<tr>
<td>[AP2]</td>
<td>10:40-XX:XX</td>
<td>Study of nuclear structure by measuring neutrons from photodisintegration reactions with linear polarized gamma-ray beam&lt;br&gt;Takehito Hayakawa¹, Toshiyuki Shirzuma¹, Akinori Takemoto¹, Masashi Yamaguchi¹, Ken Horikawa¹, Shuji Miyamoto¹, Shou Amano¹, Satoshi Chiba¹, Hitotsubashi Akimune¹, Kazuyuki Ogata¹, Mamoru Fujiwara¹&lt;br&gt;¹National Institutes for Quantum and Radiological Science and Technology, Japan, ²Japan</td>
</tr>
<tr>
<td>AP2-2</td>
<td>11:20</td>
<td>Development of a neutron flat panel detector&lt;br&gt;Hiroaki Takahashi&lt;br&gt;The University of Tokyo, Japan</td>
</tr>
<tr>
<td>AP2-3</td>
<td>12:00</td>
<td>Study for non-destructive detection of salt inside concrete using neutron-captured prompt-gamma rays at RANS&lt;br&gt;Yasuho Wakahayashi¹, Yuichi Yoshimura¹, Tomohiro Kobayashi¹, Maki Mizuta¹, Atsushi Taketani¹, Yoshimasa Ikeda¹, Takao Hashiguchi¹, Shinzo Yagamachi¹, Hideyuki Sunaga¹, Yujiro Ikeda¹², Yoshie Otake¹&lt;br&gt;¹RIKEN Center for Advanced Photonics, RIKEN, Japan, ²Tokyo Institute of Technology, Japan, ³J-PARC Center, Japan Atomic Energy Agency, Japan</td>
</tr>
<tr>
<td>AP2-4</td>
<td>12:20</td>
<td>Optimization of experimental system design for benchmarking of large angle scattering reaction cross section at 14 MeV using two shadow bars&lt;br&gt;Naoya Hayashi, Seiki Ohnishi, Yuki Fujiwara, Sachie Kusaka, Fuminobu Satô, Isao Murata&lt;br&gt;Department of Sustainable Energy and Environmental Engineering, School of Engineering, Osaka University, Japan</td>
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</table>
### OPIC 2017 • April 18-21, 2017

#### Oral, Friday, April 21 AM

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<th>Session</th>
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<tbody>
<tr>
<td>HEDS &lt;Room 311+312&gt;</td>
<td>10:50-12:00</td>
<td>Beams (ImpACT Session VII)</td>
<td>J. Faure, LOA, France</td>
<td>Invited&lt;br&gt;High energy electron accelerator platform at ELI Beamline, ultra-stable pointing investigations&lt;br&gt;C. Lazzarini, Tadzio Levato, ELI Beamlines, Czech Rep.</td>
</tr>
<tr>
<td>HEDS11-1</td>
<td>10:50</td>
<td>Invited&lt;br&gt;Nanophotonics in low dimensions&lt;br&gt;Alexey Nikitin, CIC NAnogune, Ikerbasque, Spain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEDS11-2</td>
<td>11:20</td>
<td>Experimental investigation of sheath asymmetry effects on proton beam spatial profile in high intensity laser solid interactions&lt;br&gt;Nicolas P. Dover, QST, Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEDS11-3</td>
<td>11:40</td>
<td>Study of Laser Wakefield Acceleration via Single-shot Non-destructive Electro-optic Sampling Diagnostics&lt;br&gt;Huang Kai, QST, Japan</td>
<td></td>
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</tbody>
</table>

| ICNN <Room 414+415> | 11:00-12:00 | Low dimensional nanophotonics | XXXXX | Invited<br>The optical response of a two-dimensional crystal<br>Michele Merano, Università degli studi di Padova, Italy |
| ICNN7-1-1 | 11:00 | Invited<br>Growth and structure of In0.5Ga0.5Sb quantum dots on GaP(001) for nanomemories<br>Elisa M. Sala1, Gernot Stracke2, Sören Selve3, Tore Niermann1, Michael Lehmann1, Sarah Schlüchting1, Felix Nipper2, Gordon Callsen1, André Strittmatter1, Dieter Bimberg1<br>1Institute of Solid State Physics, Technical University of Berlin, Germany, 2Center for Electron Microscopy (ZELMI), Technical University of Berlin, Germany, 3Institute of Optics and Atomic Physics (IOAP), Technical University of Berlin, Germany, 4Institute of Experimental Physics, Otto-von-Guericke University Magdeburg, Germany |

| IP <Room 413> | 11:00-11:30 | Holography | XXXXX | Invited<br>3D Physically Based Rendering of Computer Generated Holograms by Orthographic Ray-Sampling<br>Shunsuke Igarashi1, Tomoya Nakamura1, Masahiro Yamaguchi1, Kyoji Matsushima1, Masahiro Yamaguchi1<br>1Tokyo Institute of Technology, Japan, 2PRESTO, JST, Japan, 3Kansai University, Japan |
| IP-21AM-2-1 | 11:00 | Optical Fabrication of DNA Hydrogel Using Holographic Pattern<br>Suguru Shimomura, Takahiro Nishimura, Yusuke Ogura, Jun Tanida, Osaka University, Japan |

----- 12:00-13:30 Lunch Break -----
Oral, Friday, April 21 AM

LDC <Room 401+412>

[LED6] 10:45-12:15
Laser Diodes
Chairs: Jaehee Cho
Chonbuk National University, Korea
Kazunobu Koijima
Tohoku University, Japan

LED6-1 10:45  Invited
Advances in AlGaN-Based Laser Diodes
Zlatko Sitar
North Carolina State University, USA

LED6-2 11:15
Influence of the Quantum Well Width on the Optical Properties of AlGaN-based Light Emitters in the Deep UV Spectral Range
Christoph Reich1, Martin Feneberg1, Martin Guttmann1, Johannes Enslin1, Frank Menke1, Christian Kuhn1, Tim Wernicke1, Michael Knies1
1Technische Universität Berlin, Germany, 2Otto-von-Guericke-Universität, Germany

LED6-3 11:30  Invited
Recent Progress in Quantum Dot Lasers
Takeo Kageyama1, Mitsuru Sugawara1, Yasuhiko Arakawa1
1Nanofracture, The University of Tokyo, Japan, 2QD laser, Japan, 3IES, The University of Tokyo, Japan

LED6-4 12:00
GaAsP quantum well tunable single-mode semiconductor lasers with deeply etched periodic structures
Masahiro Uemukai, Akihiro Yamashita, So Kusumoto, Ryuji Katayama
Osaka University, Japan

LNPC <Room 317>

LNPC6-5 10:45
Gamma Polari-Calorimeter: an instrument for gamma ray polarimetry using the pair production process
M. Cuciu1, S. Ataman1, L. D’Alles1, K. Homma2, T. Moritaka1, Y. Nakamiya3, M. Rou1, K. Seto1, O. Tesileanu1
1ELI-NP, IFIN-HH, Romania, 2Hiroshima Univ., Japan, 3UZEST, Ecole Polytechnique, France, 4National Central Univ., Taiwan, 5ICR, Kyoto Univ., Japan

LNPC6-6 11:05
Search for Vacuum Magnetic Birefringence With Pulsed Magnet and Fabry-Pérot Cavity
S. Kamioka1, X. Fan1, T. Inada1, T. Yamazaki2, T. Namba1, S. Asai1, J. Omachi1, K. Yoshio1, M. Kikuta-Gonokami1, A. Matsuo1, K. Kindo1, H. Nojiri1
1The univ. of Tokyo, Japan, 2ICEPP, The univ. of Tokyo, Japan, 3PSC, The univ. of Tokyo, Japan, 4ISSP, The univ. of Tokyo, Japan, 5MR, Tohoku Univ., Japan

LNPC6-7 11:25
Search for Vacuum Diffraction Using high power laser and X-ray Free Electron Laser SACLA
1The univ. of Tokyo, Japan, 2ICEPP, The univ. of Tokyo, Japan, 3RIKEN, Springer, Japan, 4JASRI, Japan

LDC6-1 10:45
Simulation and Fabrication to the Speckle Reduction in Compact Optical Engine for Laser Projection Displays
Young Jo Kim, Jae-Yong Lee, Se-Hwan Jang, Sungbin Jeon, No-Cheol Park
Yonsei Univ., Korea

LDC6-2 11:15
Speckle Contrast Measurement Rigorously in Human Eye Response Time
Koji Suzuki, Shigeki Kubota
Oxide Corp., Japan

LDC6-3 11:30
Laser Speckle Reduction by Using Motionless Image Conduits
Zhaomin Tong1, Wenzhi Cheng1, Shaohua Song1, Zhaoming Cai1, Yifei Ma1, Xuanuan Chen1,2, Wei Guang Ma1, Lian Tian Xiao1, Suotang Jia1
1Shanxi Univ., Republic of China, 2Univ. College of Southeast Norway, Norway

LNPC6-5 10:45
Gamma Polari-Calorimeter: an instrument for gamma ray polarimetry using the pair production process
M. Cuciu1, S. Ataman1, L. D’Alles1, K. Homma2, T. Moritaka1, Y. Nakamiya3, M. Rou1, K. Seto1, O. Tesileanu1
1ELI-NP, IFIN-HH, Romania, 2Hiroshima Univ., Japan, 3UZEST, Ecole Polytechnique, France, 4National Central Univ., Taiwan, 5ICR, Kyoto Univ., Japan

LNPC6-6 11:05
Search for Vacuum Magnetic Birefringence With Pulsed Magnet and Fabry-Pérot Cavity
S. Kamioka1, X. Fan1, T. Inada1, T. Yamazaki2, T. Namba1, S. Asai1, J. Omachi1, K. Yoshio1, M. Kikuta-Gonokami1, A. Matsuo1, K. Kindo1, H. Nojiri1
1The univ. of Tokyo, Japan, 2ICEPP, The univ. of Tokyo, Japan, 3PSC, The univ. of Tokyo, Japan, 4ISSP, The univ. of Tokyo, Japan, 5MR, Tohoku Univ., Japan

LNPC6-7 11:25
Search for Vacuum Diffraction Using high power laser and X-ray Free Electron Laser SACLA
1The univ. of Tokyo, Japan, 2ICEPP, The univ. of Tokyo, Japan, 3RIKEN, Springer, Japan, 4JASRI, Japan

----- 12:15-13:15 Lunch -----
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<tr>
<td>11:00</td>
<td>XOPT &lt;Room 313+314&gt;</td>
<td>Photon diagnostic &amp; new techniques</td>
<td>Chair: Y. Inubushi, JASRI</td>
</tr>
<tr>
<td>11:00</td>
<td>XOPT &lt;Room 418&gt;</td>
<td>Determination of XFEL pulse duration via X-ray intensity interferometry</td>
<td>Ichiro Inoue, Toru Hara, Yuichi Inubushi, Kensuke Tono, Makina Yabashi, RIKEN SPring-8 Center, Japan</td>
</tr>
<tr>
<td>11:00</td>
<td>XOPT &lt;Room 418&gt;</td>
<td>Tunable Young’s double pinhole system coupled with lens for hard X-ray spatial coherence characterization.</td>
<td>Irina Snigireva, Mikhail Lyubomirskiy, Anatoly Snigirev, ESRF, France, DESY, Germany, Baltic Federal University, Russia</td>
</tr>
<tr>
<td>11:00</td>
<td>XOPT &lt;Room 313+314&gt;</td>
<td>Single bunch extraction by SAW driven bunch chopper</td>
<td>Simone Vadilonga, Ivo Zizak, Andrei Petsiuk, Dmitry Roschupkin, Igor Dolbnya, Kavai Sawhney, Alexei Erko, Helmholtz Zentrum Berlin, Germany, Institute of Microelectronics Technology and High Purity Materials, Russian Academy of Sciences, Russia, Diamond Light Source, England</td>
</tr>
<tr>
<td>11:00</td>
<td>XOPT &lt;Room 418&gt;</td>
<td>New design of environmental cells as a first step toward 3D imaging in solution by X-ray laser diffraction</td>
<td>Akihiko Suzuki, Tatsuro Tachibana, Naoya Tani, Yasumasa Joti, Yoshitaka Bessho, Takashi Kimura, Yoshinori Nishino, Hokkaido University, Japan, JASRI, Japan, Academia Sinica, Taiwan</td>
</tr>
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</table>
ALPS <Room 511+512>

[ALPS17] 13:15-15:30
Short wavelength
Chairs: Yutaka Nagata
RIKEN, Japan
Nobuhisa Ishii
The Univ. of Tokyo, Japan

ALPS17-1 13:15
kW-class picosecond thin-disk pre-pulse laser Perla for efficient EUV generation
Martin Smrž1, J. Muzík2, O. Novák2, M. Chyla3, A. Endo4, T. Mocák5
1HiLASE Centre, Inst. of Phys. AS CR, Czech Republic, 2Faculty of Nuclear Sci. and Phys. Eng., Czech Technical Univ. in Prague, Czech Republic

ALPS17-2 13:45
Development of 250 W LPP EUV Light Source for HVM Lithography
Tatsuya Yanagida
Gigaphoton Inc., Japan

ALPS17-3 14:15
Few cycle pulse generation from a bandwidth-optimized high energy Yb-doped fiber laser source
L. Lavenu1, M. Natlé2, F. Guichard1, O. Mocaer1, Y. Zawert1, M. Hanna2, E. Mottay3, and P. Georges4
1L’Institut d’Optique, CNRS, France, 2Amplitude Sys., France, 3Amplitude Tech., France, 4ILIAD, CEA, France

ALPS17-4 14:30
Time-Resolved VUV Reflection Spectroscopy for Spatio-Temporal Diagnosis of Ultrafast Plasma Formation
R. Itakura, H. Akagi, Y. Wada, and T. Otobe
KPSI, QST, Japan

ALPS17-5 14:45
Development of Multi-fragment Momentum Imaging Method for Attosecond-Pump Attosecond-Probe of Ultrafast Dynamics of Polyatomic Molecules
T. Okino1, Y. Nabeokawa1, K. Midorikawa1
1RIKEN Cent. for Adv. Photonics, Japan, JST PRESTO, Japan

ALPS17-6 15:00
UV-driven harmonic generation for time-resolved ultraviolet photoelectron spectroscopy of polyatomic molecules
S. Adachi, M. Sato, and T. Suzuki
Grad. Sch. of Sci., Kyoto Univ., Japan

ALPS17-7 15:15
Self-compression of sub-mJ, 14 fs pulses in a deep ultraviolet filament
S. Adachi, T. Suzuki
Grad. Sch. of Sci., Kyoto Univ., Japan

BICS <Room 419>

[BICS8] 13:00-14:00
Posters-Friday
<Exhibition Hall A>
Poster session program p.XX

----- 14:00-14:15 Break -----
### Oral, Friday, April 21 PM

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<td><strong>HEDS12</strong></td>
<td><strong>ICNN8</strong></td>
<td><strong>[IP-21PM-1]</strong></td>
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<tr>
<td><strong>HEDS12-1 15:50</strong></td>
<td><strong>ICNN8-1 13:30</strong></td>
<td><strong>13:00-15:00</strong></td>
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<tr>
<td>Invited</td>
<td>32 Gbps Operation in Si Photonic Crystal Slow Light Modulator</td>
<td>INFORMATION PHOTONICS POSTER SESSION</td>
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<tr>
<td>Nuclear Fusion in Laser-Driven Counter-Stream Collisionless Plasmas</td>
<td>Yosuke Terada, Tomoki Tatebe, Yosuke Hinakura, Toshihiko Baba</td>
<td>&lt;Exhibition Hall A&gt;</td>
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<td>Liming Chen</td>
<td>Yokohama National University, Japan</td>
<td>Poster session program p.XX</td>
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<tr>
<td>UCLA, USA</td>
<td></td>
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<tr>
<td><strong>HEDS12-2 14:00</strong></td>
<td><strong>ICNN8-2 13:45</strong></td>
<td></td>
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<tr>
<td>Nonlinear inverse Compton scattering experiment in BNL ATF</td>
<td>Design of Double-slotted Photonic Crystal Nanocavity Robust to Structural Fluctuations</td>
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<tr>
<td>Yusuke Sakai</td>
<td>Masahiro Nakadai, Ryotaro Konoike, Yoshinori Tanaka, Takashi Asano, Susumu Noda</td>
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<tr>
<td>UCLA, USA</td>
<td>Department of Electronic Science and Engineering, Kyoto University, Japan</td>
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<tr>
<td><strong>HEDS12-3 14:20</strong></td>
<td><strong>ICNN8-3 14:00</strong></td>
<td></td>
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<tr>
<td><strong>BISER: Burst Intensification by Singularity Emitting Radiation</strong></td>
<td>Photonic Crystal Nanocavity Photodetector Integrated with p-i-n Junction Fabricated by Photolithography Process.</td>
<td></td>
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<tr>
<td>Alexander Pirozhkov</td>
<td>Nurul Ashikin Binti Daud, Yuta Ooka, Tomohiro Tetsumoto, Takasumi Tanabe</td>
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<tr>
<td>QST, Japan</td>
<td>Keio University, Japan</td>
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<tr>
<td><strong>HEDS12-4 14:40</strong></td>
<td><strong>ICNN8-4 14:15</strong></td>
<td></td>
</tr>
<tr>
<td>Status and perspective of an experimental platform for high-energy density science at SACLAL</td>
<td>Ultra-miniaturized optoelectronic system for rapid quantitative label-free detection of harmful species in food</td>
<td></td>
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<tr>
<td>Akira Kon</td>
<td>Ioannis Raptis(^1), Konstantinos Misakos(^1), Eleni Makarona(^1), Alexandros Salpatas(^1), Panagiotis Petrou(^1), Evangelos Valamonter(^1), Sotiros Kakahakos, Romanos Fryogenis(^3), Dimitrios Goustouridis(^3)</td>
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<tr>
<td>JASRI, Japan</td>
<td>(^1)NCSR Demokritos, Greece, (^2)TEI of Athens, Greece, (^3)ThetaMetris SA, Greece</td>
<td></td>
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</tbody>
</table>

----- 15:00-15:30 Break -----

| **ICNN8-5 14:30** | **ICNN8-6 14:45** | **ICNN8-7 15:00** |
| Two mode channel switchable hybrid grating assisted contra-directional coupler | Novel Silicon-Organic Hybrid Micro-Ring Modulator | Enhanced Light-Coupling in Laser-Crystallised Silicon Thin-Film Solar Cells on Glass by Moth-Eye Anti-Reflection Foil |
| Xiangjie Zhao, Yuxi Wang, Qingzhong Huang, Jinseong Xia Wuhan National Laboratory for Optoelectronics, China | Feng Qiu, Shiyoshi Yokoyama Kyushu University, Japan | Mehran Pakhuruddin\(^1\), Sven Kuhnappel\(^2\), Jialiang Huang\(^1\), Jonathan Dore\(^1\), Stefan Gall\(^1\), Sergey Varlamov\(^3\) |
| Wuhan National Laboratory for Optoelectronics, China | School of Photovoltaic and Renewable Energy Engineering, University of New South Wales, Sydney 2052, Australia, Malaysia, School of Photovoltaic and Renewable Energy Engineering, University of New South Wales, Sydney 2052, Australia, Helmholtz-Zentrum Berlin, Institute for Silicon-Photovoltaics, Kekulestr. 5, D-12489 Berlin, Germany | School of Photovoltaic and Renewable Energy Engineering, University of New South Wales, Sydney 2052, Australia, Helmholtz-Zentrum Berlin, Institute for Silicon-Photovoltaics, Kekulestr. 5, D-12489 Berlin, Germany |

**[Closing]** 15:15-15:30

Closing Remarks

Y. Arakawa
The University of Tokyo, Japan
### LEDIA <Room 411+412>

**LDC7-1** 13:15

**Invited**

**Compact RGB laser sources**
K. Paschke, G. Blume, N. Werner, J. Hofmann, R. Bege, D. Fesse, A. Sahm
Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik, Germany

**LDC7-2** 13:45

**30 W CW Red fiber Laser for RGB laser system**
Surin A.A., Borisenko T.E., Stirmanov Y.S.
"IRE-Polus" Ltd (IPG Photonics Russian department), Russia

--- **Break** ---

### LDC <Room 301>

**LDC7-3** 14:15

**Compact Microchip-seeded Multistage MOPA System for Laser Induced Breakdown Applications**
V. Yahia, T. Taira
Institute for Molecular Science, Japan

**LDC7-4** 14:15

**Invited**

**Evolution of Free Carrier Concentration within Core-Shell Microrod LEDs: Nanometer-resolved Correlation of Cathodoluminescence and μ-Raman**
Frank Bertram¹, Marcus Müller¹, Peter Veit¹, Christian Nenstiel¹, Gordon Callsen¹, Axel Hofmann¹, Juergen Christen¹, Andreas Waag¹, Martin Mohajerani¹, Jana Hartmann¹, Hao Zhou¹, Hergo H. Wehman¹
¹University of Magdeburg, Germany, ¹TU Berlin, Germany, ¹TU Braunschweig, Germany

--- **Break** ---

### LEDA <Room 411+412>

**LED7-1** 13:15

**Invited**

**Classical and Quantum Light Generation Using Nano- and Micro-Structured Nitride Semiconductors**
Yonghoon Cho
Korea Advanced Institute of Science and Technology (KAIST), Korea

**LED7-2** 13:45

**Invited**

**Nano-scale correlation of the optical, structural, and compositional properties of InGaN/GaN core-shell nanorod LEDs**
Marcus Müller¹, Sebastian Metzner¹, Peter Veit¹, Florian Krause¹, Frank Bertram¹, Tilman Schimpke¹, Adrian Avramescu¹, Martin Strassburg¹, Andreas Rosenaer¹, Jürgen Christen¹
¹Otto-von-Guericke-University Magdeburg, Germany, ¹University of Bremen, Germany, ¹OSRAM Opto Semiconductors GmbH, Germany

**LED7-3** 14:15

**InGaN nanowires for light emitting diodes applications**
Xin Zhang¹, Benedikt Haas², Marion Gruart², Eric Robin², Bruno Gayral², Catherine Bougerol², Jean-Luc Rouvière², Bruno Daudin²
¹CEA-Grenoble and Aledia, France, ²CEA-Grenoble, France, ³CNRS-Institut Néel, France

--- **Break** ---

### LNPC <Room 317>

**LNPC7-1** 13:15

**Invited**

**Radiation dominated nonlinear Compton scattering: signatures of quantum dynamics and attosecond gamma-bursts**
K. Z. Hatsagortsyan, J.-X. Li, C. H. Keitel
MPI, Germany

**LNPC7-2** 13:45

**Non-perceptive aspects of Intense Field QED**
A. M. Fedotov, A. A. Mironov
MEPhI, Russia

**LNPC7-3** 14:15

**New exact solutions for QED in external fields**
A. Ildelton, T. Heinzel
Plymouth Univ., UK

**LNPC7-4** 14:45

**Radiation reaction on a Brownian scalar electron in high-intensity laser**
K. Seto
ELI-NP, IFIN-HH, Romania
### Oral, Friday, April 21 PM

<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSSE6-4</td>
<td>13:10</td>
<td>Recent R&amp;D Status of Solar Power Satellite with Wireless Power Transfer</td>
<td>Naoki Shinohara, Kyushu University, Japan</td>
</tr>
<tr>
<td>LSSE6-5</td>
<td>13:40</td>
<td>Super high efficiency concentrator photovoltaic system and its application to make hydrogen</td>
<td>Kesenuke Nishioka, University of Miyazaki, Japan</td>
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</table>

### OMC <Room 418>

<table>
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<tr>
<th>Session</th>
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<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>OMCp7</td>
<td>13:00-14:00</td>
<td>Poster-Friday</td>
<td>Poster session program p.XX</td>
</tr>
<tr>
<td>OMC8</td>
<td>14:00-15:30</td>
<td>Optical Manipulation VII</td>
<td>Chair: Alexander B. Stilgoe, The Univ. of Queensland, Australia</td>
</tr>
<tr>
<td>OMC8-1</td>
<td>14:00-14:30</td>
<td>Dynamic optics for microscopy and photonic engineering</td>
<td>Martin J. Booth, Friedrich-Alexander, Univ. of Oxford, UK, Univ. Erlangen-Nürnberg, Germany</td>
</tr>
<tr>
<td>OMC8-2</td>
<td>14:30</td>
<td>Near-field optical forces-assisted molecular nanoparticle deposition in the nanogap of plasmonic nanoantennas</td>
<td>Christophe Pin, Shuataro Ishida, Genta Takahashi, Tsuyoshi Fukamimoto, Keiji Sasaki, Hokkaido Univ., Japan, Kumamoto Univ., Japan</td>
</tr>
<tr>
<td>OMC8-3</td>
<td>14:45</td>
<td>Analysis of a nano-particle rotation using a plasmonic trimer nano-structure</td>
<td>Shuataro Ishida, Keiji Sasaki, Hokkaido University, Japan</td>
</tr>
<tr>
<td>OMC8-4</td>
<td>15:00</td>
<td>Temperature measurement of the metal particle during laser-induced migration in the glass</td>
<td>Nobuyasu Nishioka, Hirofumi Hidai, Souta Matusaka, Akira Chiba, Noboru Morita, Chiba Univ., Japan</td>
</tr>
<tr>
<td>OMC8-5</td>
<td>15:15</td>
<td>On-chip photonic tweezers for photonics, microfluidics, and biology</td>
<td>Christophe Pin, Claude Renaud, Manon Tardif, Jean-Baptiste Jager, Eric Delamadeline, Emmanuel Picard, David Peyrade, Emmanuel Hadji, Frédéric de Fornel, Benoit Cluzel</td>
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</thead>
<tbody>
<tr>
<td>OMC8-6</td>
<td>15:30</td>
<td>X-ray Kinoflare Beamsplitters</td>
<td>Maxime Lebugle, Felix Marschall, Gediminas Seniutinas, Vitaliy A. Guzenko, Daniel Groilmund, Christian David, Paul Scherrer Institut, Switzerland</td>
</tr>
<tr>
<td>OMC8-7</td>
<td>15:45</td>
<td>Development of X-ray optics for DLSRs</td>
<td>Makina Yabashi, RIKEN SPring-8 Center, Japan</td>
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</tbody>
</table>

### XOPT <Room 313+314>

<table>
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<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>[XOPT9]</td>
<td>14:45-16:00</td>
<td>Diffractive X-ray Optics: Opportunities for Photon Science at Large Scale Facilities</td>
<td>Christian David, Paul Scherrer Institut, Switzerland</td>
</tr>
<tr>
<td>XOPT1</td>
<td>14:45-15:15</td>
<td>Multilayer based monochromators for upgraded ESRF beamlines</td>
<td>Christian Morawe, Jean-Christophe Pefien, ESRF, France</td>
</tr>
<tr>
<td>XOPT2</td>
<td>15:15-16:30</td>
<td>X-ray Kinoflare Beamsplitters</td>
<td>Maxime Lebugle, Felix Marschall, Gediminas Seniutinas, Vitaliy A. Guzenko, Daniel Groilmund, Christian David, Paul Scherrer Institut, Switzerland</td>
</tr>
<tr>
<td>XOPT3</td>
<td>15:45-16:00</td>
<td>Development of X-ray optics for DLSRs</td>
<td>Makina Yabashi, RIKEN SPring-8 Center, Japan</td>
</tr>
</tbody>
</table>

### Coffee Breaks

- 15:30-16:00

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OPIC 2017 • April 18-21, 2017
### Computational Imaging

**BICS10-1  16:00**

*Invited*

**Advancements in remote physiological measurement and applications in human-computer interaction**

Daniel McDuff\(^1,2\)

\(^1\)Microsoft Research Cambridge, USA, \(^2\)MIT Media Lab., USA

**BICS10-2  16:30**

**Three-dimensional movement analysis for near infrared system using stereo vision and optical flow techniques**

Geliztule A. Parra Escamilla,

David Ignacio Serrano-García, Yukitoshi Otani

Utsunomiya Univ., Japan

**BICS10-3  16:45**

**In vivo imaging of spontaneous low-frequency oscillations in cerebral hemodynamics with a digital red-green-blue camera**

Afrina Mustari

Tokyo Univ. of Agriculture and Technology, Japan

**BICS10-4  17:00**

**Simultaneous three-dimensional Imaging of multi-focal microscopy**

Chen Yen Lin, National Taiwan Univ., Taiwan

**BICS10-5  17:15**

**Bayesian based fluorescence coded imaging using quantum dots**

Takahiro Nishimura, Hitoshi Kimura,

Yusuke Ogura, Jun Tanida

Osaka Univ., Japan
## Oral, Friday, April 21 PM

### HEDS <Room 311+312>

**HEDS13**  15:30-17:00  
**Beams/ R Rad. Source**  
Chair: A. Pirozhkov  
QST, Japan  

**HEDS13-1**  15:30  
Intense surface wave excitation on a metal wire by intense laser interaction with a foil target  
Kensuke Teramoto  
Kyoto Univ., Japan  

**HEDS13-2**  15:50  
Grating-based dielectric laser accelerator for subrelativistic electrons  
Zhaofu Chen  
The University of Tokyo, Japan  

**HEDS13-3**  16:10  
Laser-filament-induced discharges for electron wake field acceleration by PW class laser pulses  
Alexei Zhidkov  
Osaka Univ., Japan  

### ICNN <Room 414+415>

### IP <Room 413>

**IP-21PM-2**  15:30-16:30  
**Imaging and Display**  
Chair: XXXXX  
XXXXX  

**IP-21PM-2-1**  15:30  
About Resolution of Refocused Image and Generated 3D Image from Data Acquired by Light-Field Camera  
Toru Iwane  
NIKON Corporation, Japan  

**IP-21PM-2-2**  15:45  
Graphene Based LC Devices for Near Infrared Image Processing  
Vera Marinova1,2, Shiuan H Lin1, Stefan Petrov1, Chia M Chang1, Yi H Lin1, Ken Y Hsu1  
1National Chiao Tung University, Taiwan, 2Institute of Optical Materials and Technologies, Bulgaria  

**IP-21PM-2-3**  16:00  
Analysis of Three-Dimensional Screen Composed of Lens Array and Retroreflector Sheet and its Implementation with Projection-Type Integral Imaging  
Young Min Kim, Sung-Wook Min, Seunghwi Ryu, Hyeongkyu Do  
Kyung Hee University, Republic of Korea  

**IP-21PM-2-4**  16:15  
Holographic Accesses for Volumetric Bubble Display  
Kota Kumagai, Yoshio Hayasaki  
Utsunomiya University, Japan  

### [Closing]  16:30-16:45  
**Closing Remarks**  16:30  
S.V. Bulanov  
QST, Japan  

### [HEDS13]  15:30-17:00  
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Osaka Univ., Japan  

### [Closing]  16:30-16:45  
**Closing Remarks**  16:30  
S.V. Bulanov  
QST, Japan
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<th>Session</th>
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<th>Chair(s)</th>
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<tr>
<td>LDC8</td>
<td>Postdeadline session</td>
<td>15:30-15:50</td>
<td>Multicolor &amp; White LEDs</td>
<td>Yonghoon Cho</td>
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<td>Chairs: Yonghoon Cho</td>
<td>National Inst. for Materials Science, Japan</td>
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<td>Korea Advanced Institute of Science and Technology (KAIST), Korea</td>
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<td>Narihiro Okada</td>
<td>Yamaguchi University, Japan</td>
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<tr>
<td>LDC8-1</td>
<td>15:40</td>
<td>Multi-color Flexible LED Based on Nitride Nanowires</td>
<td>Christophe Durand</td>
<td>Centre National de la Recherche Scientifique (CNRS), France</td>
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<tr>
<td>LDC8-2</td>
<td>15:45</td>
<td>Phosphor-free broadband light-emitting diode</td>
<td>Hoi Wai Choi</td>
<td>The University of Hong Kong, Hong Kong</td>
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<tr>
<td>LDC8-3</td>
<td>16:00</td>
<td>Colour-crafted phosphor-free white light emitters via in-situ nanostructure engineering</td>
<td>Daehong Min, Donghye Park, Kyuseung Lee, Okhyun Nam</td>
<td>Korea Polytechnic University, Korea</td>
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<tr>
<td>LED8</td>
<td>15:45-17:00</td>
<td>Tutorial Session</td>
<td>Akira Uedono</td>
<td>University of Tsukuba, Japan</td>
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<tr>
<td>LED8-1</td>
<td>15:45</td>
<td>Study of Point Defects in Nitrides and Oxides by Means of Positron Annihilation</td>
<td>Akira Uedono</td>
<td>University of Tsukuba, Japan</td>
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<tr>
<td>LED8-2</td>
<td>16:15</td>
<td>Prospects of laser-driven ultra-dense ion bunches for the generation of extremely neutron-rich isotopes</td>
<td>P. G. Thirolf</td>
<td>LMU, Germany</td>
</tr>
<tr>
<td>LED9</td>
<td>17:00-17:30</td>
<td>Laser Driven Nuclear Astrophysics Studies at ELI-NP</td>
<td>F. Negoita</td>
<td>ELI-NP , IFIN-HH, Romania</td>
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<tr>
<td>LED9-1</td>
<td>17:00</td>
<td>Study of Point Defects in Nitrides and Oxides by Means of Positron Annihilation</td>
<td>Akira Uedono</td>
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**Closing Remarks**

- **Closing Remarks**
  - Akira Uedono
    - University of Tsukuba, Japan
  - Hiroshima Univ., Japan
  - IZEST, Ecole Polytechnique, France
  - Konan Univ., Japan
  - F. Negoita
    - ELI-NP, IFIN-HH, Romania
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<td>LSSE &lt;Room 316&gt;</td>
<td>15:30</td>
<td>LSSE7-3</td>
<td>Study on the Earth's metallic layers using optical remote sensing observations</td>
<td>Takuji Nakamura, Motoyuki Kikuchi, Tatsuo Shima, Chiba University, Japan</td>
</tr>
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<td></td>
<td>15:50</td>
<td>LSSE7-4</td>
<td>Observations of the upper atmosphere using resonance scatter lidars</td>
<td>Takuji Nakamura, Mitsuhiro K. Ejiri, Makoto Abo, Tatsuo Shima, Chiba University, Japan</td>
</tr>
<tr>
<td></td>
<td>16:20</td>
<td>LSSE7-5</td>
<td>High-speed and high-resolution LED mini-lidar on planet</td>
<td>Tatsuo Shima, Chiba University, Japan</td>
</tr>
<tr>
<td>OMC &lt;Room 418&gt;</td>
<td>16:00-17:30</td>
<td>OMC9</td>
<td>Optical Manipulation VIII</td>
<td>Chair: Hiromi Okamoto, Institute for Molecular Science, Japan</td>
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<td></td>
<td>16:00</td>
<td>OMC9-1</td>
<td>To be announced</td>
<td>Hajime Ishihara, Osaka Prefecture Univ., Japan</td>
</tr>
<tr>
<td></td>
<td>16:30</td>
<td>OMC9-2</td>
<td>Generation of chiral optical near-fields with non-chiral metallic nanostructures and linearly polarized light</td>
<td>Shun Hashiyada, Tetsuya Narushima, Hiromi Okamoto, Institute for Molecular Science, Japan, Japan</td>
</tr>
<tr>
<td></td>
<td>17:00</td>
<td>OMC9-3</td>
<td>Enhancement of linear/nonlinear optical responses of molecular vibrations using metal nanoantennas</td>
<td>Ikki Morichika, Fumiyasu Kasa, Akinobu Takegami, Satoshi Ashihara, Tokyo Univ., Japan</td>
</tr>
<tr>
<td>XOPT &lt;Room 313+314&gt;</td>
<td>16:15-17:45</td>
<td>XOPT10</td>
<td>Optical components &amp; systems (IV)</td>
<td>Chair: H. Sinn, European XFEL</td>
</tr>
<tr>
<td></td>
<td>16:15</td>
<td>XOPT10-1</td>
<td>Future directions in X-ray Optics at Diamond</td>
<td>Kawal Sawhney, Diamond Light Source, UK</td>
</tr>
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<td></td>
<td>16:45-17:00</td>
<td>XOPT10-2</td>
<td>Variable Resolving Power Soft X-ray Self-Seeding Optical Design</td>
<td>Yingping Feng, Gabriel Marcus, Tor Raubenheimer, SLAC National Accelerator Laboratory, USA</td>
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<td></td>
<td>17:00-17:15</td>
<td>XOPT10-3</td>
<td>Overcoming the Limits of Mirror Performance at LCLS</td>
<td>Corey Hardin, Venkat Srinivasan, Nicholas Kelez, Daniel Morton, Peter Stefan, Josep Nicolas, Lin Zheng, Daniele Cocco, SLAC National Accelerator Laboratory, USA</td>
</tr>
<tr>
<td></td>
<td>17:15-17:30</td>
<td>XOPT10-4</td>
<td>KB Mirror Design for the LCLS-II SXR Beam Line</td>
<td>Daniel Morton, Daniele Cocco, Nicholas Kelez, Lin Zhang, Linac Coherent Light Source, SLAC National Accelerator Laboratory, USA</td>
</tr>
<tr>
<td></td>
<td>17:30-17:45</td>
<td>XOPT10-5</td>
<td>Studies of diamond endurance to irradiation with X-ray beams of multi kW/mm^2 power densities for XFEL application</td>
<td>Tomasz Kolodziej, Kwang Je Kim, Deming Shu, Steven Kearney, Stanislav Stoupia, Wenjun Liu, Thomas Gog, Donald Walko, Jin Wang, Ayman Said, Wenge Yang, Maria Baldini, Vladimir Blank, Sergey Terentyev, Yuri Shvyd'ko, Argonne National Laboratory, Advanced Photon Source, USA, Dynamic Compression Sector, Washington State University, USA, HPSynC, Advanced Photon Source, USA, Technological Institute for Superhard and Novel Carbon Materials, Russia</td>
</tr>
<tr>
<td>LSSE &lt;Room 316&gt;</td>
<td>16:50-16:55</td>
<td>Closing</td>
<td>LSSE Closing Remarks</td>
<td>Toshikazu Ebisuzaki, Conference Chair of LSSE 2017, Chief Scientist, Computational Astrophysics Laboratory, RIKEN, Japan</td>
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<tr>
<td>OMC &lt;Room 418&gt;</td>
<td>17:30-17:45</td>
<td>Closing</td>
<td>OMC Closing Remarks</td>
<td>Toshikazu Ebisuzaki, Conference Chair of LSSE 2017, Chief Scientist, Computational Astrophysics Laboratory, RIKEN, Japan</td>
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<td>Closing</td>
<td>XOPT Closing Remarks</td>
<td>Toshikazu Ebisuzaki, Conference Chair of LSSE 2017, Chief Scientist, Computational Astrophysics Laboratory, RIKEN, Japan</td>
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