



17th International Symposium on  
**LASER-AIDED PLASMA DIAGNOSTICS**  
Gateaux Kingdom Sapporo, Hokkaido, Japan, September 27 – October 1, 2015



16 March 2015

Dear Colleagues:

With this second announcement we invite you to participate in the 17th International Symposium on Laser-Aided Plasma Diagnostics (LAPD17). This Symposium is organized jointly by Hokkaido University and the National Institute for Fusion Science, and will take place from Sunday, 27 September 2015 (evening reception) to Thursday, 1 October 2015 at Gateaux Kingdom Sapporo in Hokkaido, Japan. The symposium website is at <http://lapd17.qe.eng.hokudai.ac.jp/>. The Local Organizing Committee welcomes inquiries about the symposium at [lapd17@qe.eng.hokudai.ac.jp](mailto:lapd17@qe.eng.hokudai.ac.jp).

The LAPD17 Symposium is the continuation of a biennial series that began at Kyushu University in 1983 (the origin of the symposium logo). It will bring together physicists and chemists in diverse areas of laser-based plasma diagnostics including the physics of nuclear fusion, laser physics and low-temperature plasma chemistry and physics. The symposium aims to promote cross-pollination of these fields via fruitful discussion, and covers all diagnostics using electromagnetic waves (lasers and microwaves) applied to fusion plasmas, industrial process plasmas, environmental plasmas, plasmas for medical applications, atmospheric plasmas, plasmas in liquids and other plasma applications. Topics on hardware developments related to laser-aided plasma diagnostics are also welcome.

***Abstract submission***

An abstract is required for each presentation. Please use the Word template (available at the LAPD17 website), then submit your abstract (in PDF form) via the website. The deadline for abstract submission is 26 June 2015. Contributed papers will take the form of either oral or poster presentations. Poster presentations will be accompanied by a very short oral introduction. A prize will be given for the best poster presented by a young scientist. The invited speakers (listed below) are also requested to submit abstracts.

***Symposium Proceedings***

The proceedings of the LAPD17 Symposium will be published in a special issue of the Journal of Instrumentation (JINST). All invited speakers and accepted presenters (oral or poster) are encouraged to submit their original papers to this special issue. Publication will be free of charge. All submissions to the proceedings will undergo the normal peer-review process, in accordance with the rules of the journal. The deadline for manuscript submission is the 18th September 2015. This deadline, prior to the conference, is necessary to allow the reviewing process to start during the conference. Further information about the manuscript submission process will be sent to abstract authors, and also posted on LAPD17 website.

***Invited Speakers***

***Akazaki Lecture***

|                 |            |                                                           |
|-----------------|------------|-----------------------------------------------------------|
| Shigeki Okajima | Chubu Univ | Development and Application of High Performance FIR Laser |
|-----------------|------------|-----------------------------------------------------------|

***Special Lecture***

|                   |          |                                                                                                      |
|-------------------|----------|------------------------------------------------------------------------------------------------------|
| Katsunori Muraoka | Plazwire | Short- and long-range energy strategies for Japan and the world after the Fukushima nuclear accident |
|-------------------|----------|------------------------------------------------------------------------------------------------------|

### *General Lectures*

|                  |                                      |                                                                                                            |
|------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------|
| Naota Akikusa    | Hamamatsu Photonics                  | Recent progress in Quantum Cascade Lasers as a mid-infrared laser source                                   |
| Michele Bassan   | ITER Organization                    | Thomson scattering diagnostics systems in ITER                                                             |
| Jie Chen         | Huazhong Univ Science and Technology | The three-wave laser polarimeter-interferometer on J-TEXT tokamak                                          |
| Haiqing Liu      | IPP, Chinese Academy of Science      | Internal magnetic field measurements by laser-based Polarimeter-INTERferometer (POINT) system on EAST      |
| Richard Miles    | Princeton Univ                       | The use of radar for the characterization of laser generated plasmas and for stand-off trace gas detection |
| Andy Ruth        | Univ College Cork                    | Laser-induced micro-plasmas in air for incoherent broadband cavity-enhanced absorption spectroscopy        |
| Kentaro Tomita   | Kyushu Univ                          | Collective Thomson scattering diagnostics of laser-produced plasmas at moderate temperatures               |
| Shinji Yoshimura | NIFS                                 | Application of optical vortex beams for laser absorption spectroscopy                                      |
| William Young    | Univ Wisconsin-Madison               | Thomson scattering measurements at 250 kHz                                                                 |

### *Topical Lectures*

|                          |                                                |                                                                                                                            |
|--------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Francois Anderegg        | UCSD                                           | Wave detection through laser thermal spectroscopy                                                                          |
| Theodore Biewer          | Oak Ridge National Lab                         | Initial results from laser-based diagnostics on the Prototype Material Plasma Exposure eXperiment (Proto-MPEX) at ORNL     |
| Petra Bilkova            | IPP, Academy of Sciences of the Czech Republic | Scaling Thomson scattering to big machines                                                                                 |
| Maria Antoaneta Bratescu | Nagoya Univ                                    | Analysis of the plasma decomposition of organic compounds in solution by coherent anti-stokes Raman spectroscopy           |
| Jérôme Bredin            | Univ York                                      | Picosecond TALIF in atmospheric pressure plasmas                                                                           |
| Olivier Guaitella        | Ecole Polytechnique                            | Absorption spectroscopy in CO <sub>2</sub> and air plasmas by QCL: from gas traces to vibrational excitation measurements  |
| Yuki Inada               | Univ Tokyo                                     | Two-dimensional electron density imaging of extinguishing arc discharges using Shack-Hartmann type laser wave-front sensor |
| Tsuyohito Ito            | Osaka Univ                                     | Sum-frequency generation spectroscopy of water surfaces influenced by plasma                                               |
| Daisuke Kuwahara         | Tokyo Univ Agriculture and Technology          | Development of a local oscillator integrated antenna array for microwave imaging diagnostics                               |
| Stephan Reuter           | INP Greifswald                                 | LIF spectroscopy on cold Plasma-jets for Plasmamedicine                                                                    |
| Ryo Yasuhara             | NIFS                                           | Development of multi path YAG Thomson scattering                                                                           |

### ***Registration***

To qualify for the early registration fee (JPY45,000), participants must register online at the LAPD17 website by 26 June 2015. After 26 June, registration will be accepted at a cost of JPY50,000. The registration fee covers attendance at all sessions, symposium materials including abstract book, welcome reception, banquet dinner, coffee breaks and excursion. If will be bringing an accompanying person please indicate this on the registration form; the accompanying person registration fee is JPY15,000. Accompanying persons are invited to attend the welcome reception, banquet dinner and

excursion. Any dietary restrictions should be indicated when registering. Registration on the LAPD17 website will open after 1 May 2015.

You will be informed of the acceptance of your abstract by email. At this time you will also be invited to follow the instructions to pay your registration fee by credit card via the conference website. All credit card details will be encrypted. If necessary you may instead make an international wire transfer, but your bank may charge a handling fee which you must cover. For the instructions concerning international wire transfers, please email us at [lapd17@qe.eng.hokudai.ac.jp](mailto:lapd17@qe.eng.hokudai.ac.jp).

If you require a formal invitation letter for your visa please email us at [lapd17@qe.eng.hokudai.ac.jp](mailto:lapd17@qe.eng.hokudai.ac.jp). Please specify any special requests.

### ***Accommodation***

A block of rooms is reserved for conference participants at the conference site, Gateaux Kingdom Sapporo, at special discount room rates of JPY8,500 for single occupancy and JPY6,000 per person for twin occupancy (i.e. JPY12,000 for a room occupied by two). Breakfast is included in this charge. The discount room rates are available only for bookings made through LAPD17 website. Participants who wish to stay at this hotel should indicate arrival and departure dates on their registration forms. If you prefer you can instead stay at a hotel in the city center, but the Local Organizing Committee will not take care of these arrangements.

### ***Social events***

#### ***Reception***

The welcome reception will be held from 19:00, 27 September. Light food and beverages will be served.

#### ***Excursion***

A half-day excursion is scheduled to the Shakotan Peninsula and the NikkaYoichi whisky distillery on the afternoon of the 30th September. This area is known for scenic headlands and inlets with an amazing azure sea. The Yoichi distillery was founded in 1934 by Masataka Taketsuru, who studied the art of whisky-making in Scotland. Nikka produces fine malt whisky and was crowned “The Worlds’ Best Single Malt” in 2008. The excursion includes a 40-minute cruise along the coastline of the Shakotan Peninsula on a ship with an underwater viewing gallery.

#### ***Symposium dinner***

The banquet dinner will take place at 19:30 on September 30th. The winner of the poster presentation award will be announced during this dinner.

### ***Venue and travel information***

#### ***Venue***

Gateaux Kingdom Sapporo (<http://www.gateauxkingdom.com/en/>) is a resort hotel located in the suburbs of the city of Sapporo. Although located away from the hustle and bustle of the city center, a shuttle bus service is offered free of charge from the hotel to downtown (limited service on weekdays). Sapporo is the capital of Hokkaido, the northernmost island of Japanese archipelago. The weather in Sapporo in September is generally mild, away from the heat of the rest of Japan.

#### ***Access to New Chitose (or Shin Chitose) Airport (CTS)***

The main international airports of Japan are Tokyo Narita (NRT), Tokyo Haneda (HND), and Osaka Kansai (KIX). Connecting domestic flights from these airports to New Chitose / Shin Chitose (CTS) are provided by JAL, ANA, and AirDo, along with no-frills airlines such as Peach Aviation, Vanilla Air, and Jetstar Japan. If you would like to come via one of the Asian capitals you can also fly directly into New Chitose from Seoul, Beijing, Shanghai, Hong Kong, Taipei, Kaohsiung and Bangkok.

#### ***Access to Sapporo from New Chitose Airport***

The JR rapid airport train “Kaisoku Airport” leaves the airport every 15 minutes, and takes 36-minutes

to Sapporo Station (Note: do not get off the train at “Shin-Sapporo”, one stop before “Sapporo”). An airport limousine bus service is also available: for bus fares and timetables, go to <http://www.new-chitose-airport.jp/en/access/bus/>. An alternative is a door-to-door private shuttle (Skybus). Advanced booking is required for Skybus via <http://skybus.co.jp/en/>.

*Access to the symposium venue, Gateaux Kingdom Sapporo*

A free shuttle bus service is provided between JR Sapporo Station (north exit) and Gateaux Kingdom Sapporo. The bus timetable and bus stop map is available at <http://www.gateauxkingdom.com/wp-content/themes/gateauxkingdom/images/parts/pdf/busTimetable20150601en.pdf>

*Courtesy bus service*

LAPD17 provides courtesy bus service (reservation required) between New Chitose Airport and Gateaux Kingdom Sapporo. Further information such as departure times will be provided nearer the date on LAPD17 website. Please advise on the registration form if you wish to use the courtesy bus service.

***Important dates***

- Abstract submission: 26 June 2015
- Registration at reduced fee of JPY45,000: 26 June 2015
- Manuscript submission for JINST: 18 September 2015
- LAPD symposium: 27 September (evening) – 1 October 2015

We look forward to welcoming you to Sapporo.

Koichi Sasaki, Hokkaido University  
Chair of the Local Organizing Committee of LAPD17  
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