Call for Papers ***LIC2019***

The 7th Laser Ignition and Giant-microphotonics Conference 2019

Co-located with Optics & Photonics International Congress 2019

http://lic.opicon.jp/

April 22 (Mon.) – 26 (Fri.), 2019, Pacifico Yokohama, Yokohama, Japan

Paper Deadline: 30th Jan. 2019

Organizer of LIC

Ubiquitous Power Laser Technical Group of the Laser Society of Japan (LSJ)

About LIC

Laser Ignition and Giant-microphotonics Conference (LIC) is the international forum for discussion on various aspects of phenomena induced by ubiquitous power lasers. LIC aims to facilitate exchanging information on the latest developments in ubiquitous power lasers, related sciences and technologies extending from ignition to other new applications.

"Laser Ignition" and "Giant-microphotonics"

The word "laser ignition" means the laser induced breakdown ignition, and it also implies the induction of phenomena caused by the irradiation of high-brightness laser pulses.

The photonic innovation of "Giant-microphotonics" enables the generation of high-brightness laser pulses from the small-size devices. Tremendous benefits are accruable from these novel devices if they can be operated everywhere and anytime by everybody, and hence the name "ubiquitous power lasers". Giant-microphotonics is based on microdomain structure controlled materials, such as the transparent polycrystalline ceramics and artificially controlled nonlinear crystals. This innovation enhances optical effects for creation of new functions for diverse applications including imaging, analysis, biomedicine, materials processing, etc.

Location and schedule

The conference will be held at Pacifico Yokohama, Yokohama, Japan, on April 22- 26, 2019 in the frame of the OPTICS & PHOTONICS International Congress (OPIC2019). The exhibition (OPTICS & PHOTONICS International Exhibition, OPIE2019) will be co-located on April 24 (Wed) – 26 (Fri).

Oct. 1st, 2018:	**Submission site (in OPIC2019) opened.**
Dec. 17th, 2018:	**Registration site (in OPIC2019) opened.**
Jan. 30th, 2019:	**Submission deadline.**
Apr. 9th, 2019:	**Early bird registration will be closed.**
Apr. 22nd, 2019:	**Get-Together event (OPIC2019).**
Apr. 23rd, 2019:	**OPIC plenary sessions (morning), LIC sessions (afternoon).**
Apr. 24th, 2019:	**LIC sessions, OPIC2019 reception (evening).**
Apr. 25th, 2019:	**LIC sessions.**
Apr. 26th, 2019:	**Exhibition (OPIE2019) only.**

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SCOPE

This conference aims at collating the latest developments in power lasers and laser technologies that facilitate ubiquitous laser systems. Also, applications of ubiquitous power lasers will be discussed. Papers are solicited on, but not limited to, the following topics:

A. High brightness compact laser sources

- Micro solid-state photonics: Laser crystals, ceramics, and microdomain controlled materials.
- Giant micro-photonics: Giant pulse (peak power > 1 MWatt) generation from micro photonics.
- High power and reliable laser sources: VCSELs, DFB and VBG based diodes, fiber sources, etc.
- Other power lasers for ubiquitous use.
- High power laser designs: Cavity design, amplifier design, optics design

B. Laser ignitions and combustions

- Fundamental studies for ignition and combustion.
- Advanced ignition systems: Lean-burn, high EGR, dilute combustion, etc.
- Laser ignition in aerospace applications: Low-density combustion, hypersonics, etc.
- Laser ignition of energetic materials: Ignition of solid propellants using lasers, etc.
- Space / ballistic applications, etc.

C. Laser induced phenomena

- Detonation, ablation, breakdown, ultrasonic generation, etc.
- Frequency conversions: HHG, OPG, and the wave generation from VUV to THz region, etc.
- Laser damage: fundamental physics, practical systems.
- High power laser processes: large scale material polishing and coating, etc.

D. Novel Applications

- Energy: engine ignition in power plants, ignition for fusion, particle acceleration, etc.
- Manufacturing: laser peening, laser forming, laser polishing, and other advanced laser processes.
- Brain and Health: opto-genetics, therapy, drag delivery, etc.
- Sensing: LIDAR, LIBS, mass spectroscopy, gas sensing, mid-IR to THz imaging, etc.
- Space applications: space debris, rocket attitude control and driving, etc.

OPTICS & PHOTONICS International Congress 2019 (OPIC 2019)

Web site **LIC2019** <http://lic.opicon.jp/>, **OPIC2019** <http://opicon.jp/>