

Call for Paper, Submission starts on 1st October 2019



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OBJECTIVE

High energy density sciences based on high power lasers have been boosted recently with the mastering of high-power laser chains that deliver ultra-short and PW class laser beams. High energy particles, femtosecond duration mono-energetic electron beams and x-rays produced by the power laser system come to reality to give us new fundamental knowledge and unique instruments both for basic researches and for the industry. Progress of inertial confinement fusion (ICF), ultra-high-energy particle accelerators, and laboratory astrophysics attracts not only experts but also the general public.

Especially in ICF, the alpha-heating regime, where fusion self-heating is the dominant source of neutron yield, was achieved in National Ignition Facility (NIF). One of the crucial problems of the current central ignition scheme is the hot spark mixing with the cold and dense fuel because of significant growth of hydrodynamic instabilities during the implosion. Fast ignition was proposed as an alternative approach to the ICF ignition that avoids the ignition quench caused by the mixing because the hot spark is generated not by the adiabatic compression but by the external energy injection whose timescale is shorter than the hydrodynamic timescale. Prospects of the research in the US, EU, China, and Japan are of particular interest for discussion.

INTERNATIONAL CONFERENCE ON HIGH ENERGY DENSITY SCIENCES 2020 (HEDS2020) is being organized to share information on high energy density sciences and related technologies. The conference will be held at Pacifico Yokohama, Yokohama city, Japan, on April 20- 24, 2020 with the sponsorship of Laser Society of Japan, in cooperation with several academic societies and associations. The HEDS2020 is intended to provide a central forum for the update and review of scientific and technical information on high energy density sciences covering a wide range of fields from fundamental sciences to applications.

SCOPE

HEDS2020 covers the high energy density sciences with high power lasers and its application in the following major topical fields;

- A. Inertial Confinement Fusion Sciences
Central Ignition Scheme, Fast Ignition Scheme, Shock Ignition Scheme, Impact Ignition Scheme, Alternative Ignition Scheme, Hydrodynamics, Burning Plasma Physics, Inertial Fusion Energy Power Plant Technology
- B. High Energy Density Sciences
Atomic Physics, Equation of State, Laboratory Astrophysics, Condensed Matter Physics, Ultra-strong Fields, Kinetic Effects, Plasma Nuclear Sciences
- C. High Intensity Laser Matter (Plasma) interactions
Relativistic Laser-Matter interactions, Particle Generation and Applications, Radiation Sources and Applications
- D. Diagnostics
Ultra-Fast Imaging, Optical Diagnostics, Nuclear Diagnostics, X-ray Free Electron Laser

COMMITTEE MEMBERS

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REGISTRATION

Registration Fees (Membership)

	Before/On April 7, 2020	After April 7, 2020, and On-site
Conference (General)	¥56, 000	¥61, 000
(Student, Retiree)	¥19, 000	¥22, 000

Registration Fees (Nonmember)

	Before/On April 7, 2020	After April 7, 2020, and On-site
Conference (General)	¥66, 000	¥71, 000
(Student, Retiree)	¥22, 000	¥24, 000

OPTICS&PHOTONICS International Congress 2020 (OPIC2020) <https://opicon.jp/>

15 international conferences held simultaneously. By registering for this conference, you can participate in all international conferences.

- ALPS - The 9th Advanced Lasers and Photon Sources
- BISC - The 6th Biomedical Imaging and Sensing Conference
- HEDS - International Conference on High Energy Density Science 2020
- ICNN - International Conference on Nano-photonics and Nano-optoelectronics 2020
- IoT-SNAP - IoT Enabling Sensing/Network/AI and Photonics Conference 2020
- LDC - Laser Display and Lighting Conference 2020
- LEDIA - The 8th International Conference on Light-Emitting Devices and Their Industrial Applications
- LSC - Conference on Laser and Synchrotron Radiation Combination Experiment 2020
- LSSE - Laser Solutions for Space and the Earth 2020
- OMC - The 7th Optical Manipulation Conference
- OPTM - Optical Technology and Measurement for Industrial Applications 2020
- OWPT - Optical Wireless and Fiber Power Transmission Conference 2020
- PLD - Pacific Rim Laser Damage 2020
- SLPC - The 4th Smart Laser Processing Conference
- XOPT - International Conference on X-ray Optics and Applications 2020

Exhibition

OPTICS & PHOTONICS International Exhibition, OPIE'20 will be held simultaneously on April 20-24 at Pacifico Yokohama.

SUBMISSION OF PAPERS

A 300 word abstract and a contact information form should be submitted to the program committee by e-mail to "heds2020@lie.osaka-u.ac.jp". The abstract and the contact information template will be available through the Web site.

From October 1st, 2019 and the deadline is no later than January, 16 2020

POSTER SESSION

The author(s) of poster presentations will be informed of the size of bulletin board for displaying summary, figures, tables, etc., when selected as poster papers.

POST DEADLINE PAPERS

A limited number of post deadline papers will be accepted for presentation at post deadline sessions.

OFFICIAL LANGUAGE

The official language of HEDS2020 is English.

PLENARY, INVITED TALKS and FURTHER INFORMATION

The speaker and latest information on the conference will be presented on the Web site.

LOCATION OF CONFERENCE SITE

The HEDS2020 takes place at Pacifico Yokohama, Yokohama city, Kanagawa prefecture, JAPAN. Yokohama city, the center of Kanagawa prefecture is located south of Tokyo. Pacifico Yokohama is conveniently located about 40 min. by Limousine Bus from Haneda Airport and 90 min. from Narita Airport.

Pacifico Yokohama

1-1-1 Minato Mirai, Nishi-ku, Yokohama 220-0012, Japan

<http://www.pacifico.co.jp/english/index.html>

Transportation Guide: TEL +81-45-221-2166

Information: TEL +81-45-221-2155& FAX +81-45-221-2136



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