

Call for Papers

# LANE '13



## International Conference on Laser Applications in Nuclear Engineering

Co-located with Optics & Photonics International Congress 2013

<http://www.ilt.or.jp/event/lane13>

*Sponsored by*  
*The Laser Society of Japan*  
*The Atomic Energy Society of Japan*  
*Japan Laser Processing Society*

*In cooperation with*  
•Japan Atomic Energy Agency  
•Institute for Laser Technology  
(\*Some other societies and associations are under negotiation.)

**April 23 (Tue.) – 25 (Thu.), 2013**  
**Pacifico Yokohama**  
**Yokohama, Japan**

Paper Deadline: Dec. 20 (Thu.) 2012

## OBJECTIVE

Lasers are widely used in the field of nuclear engineering, and new applications have been developed. The purpose of this conference is to share the scientific and technical information on the update and review on laser applications in nuclear engineering. The conference will be held at Pacifico Yokohama, Yokohama, Japan, on April 23-25, 2013 with the sponsorship of The Laser Society of Japan, The Atomic Energy Society of Japan, and Japan Laser Processing Society in cooperation with several academic societies and associations.

## SCOPE

The Conference LANE'13 covers the laser technology in the following major topical fields;

- A. Laser decommissioning of nuclear power plant**
- B. Laser inspection and maintenance of nuclear power plant**
- C. Laser spectroscopy and remote sensing:**  
LIBS, Ionization Spectroscopy, Laser Ultrasonics, Fiber Sensors
- D. Laser processing:**  
Laser Cutting and Welding, Laser Cleaning, Laser Ablation, Laser Peening, Process Simulations
- E. Laser Compton gamma-rays and their applications**
- F. Laser-triggered nuclear reactions**
- G. Laser transmutation**
- H. Laser isotope separation**
- I. Lasers for nuclear engineering**
- K. Robotics for laser use in nuclear engineering**

## SUBMISSION OF PAPERS

Original papers that have not been previously presented and that describe new technical contributions to the areas covered by the technical descriptions in the aforementioned scope will be accepted for presentation.

A detailed instruction will be available from the following Web site:

<http://opicon.jp> and <http://opicon.jp/submit-a-paper.html>

Papers should be submitted electronically by e-mail to

[lane13@ilt.or.jp](mailto:lane13@ilt.or.jp) ,

**no later than Dec.20, 2012.** Authors will be requested to submit 1-page summary written in English, including text, figures, tables, and references within a frame of 17 cm x 24 cm. The paper template will be available through the Web site.

## POSTER SESSION

In addition to regular oral presentation sessions, poster presentation session will be planned to stimulate detailed explanation and discussion. The author(s) of papers will be informed of the size of bulletin board for displaying summary, figures, tables, etc., when selected as poster papers.

## OFFICIAL LANGUAGE

The official language of LANE'13 is English.

## PLENARY TALK

*"Lasers in Nuclear Engineering"*

Shigeo Nomura (JAEA, Japan), President of The Atomic Energy Society of Japan.

## INVITED TALKS (tentative)

### Decommissioning & Laser Processing

Paul Hilton (TWI, UK)

"Visualization and understanding of melt ejection dynamics during laser fusion cutting", Koji Hirano (Nippon Steel & Sumitomo Metal Corporation, Japan)

"Recent activities on laser peening and applications in nuclear industry", Yuji Sano (Toshiba, Japan)

"A numerical modeling and its applicability to the laser cutting of thick metal plates for nuclear reactor decommissioning", Kenta Sugihara (JAEA, Japan)

"Laser decontamination", Eisuke Minehara (WERC, Japan)  
Rob Buckingham (OC Robotics, UK)

### Laser Spectroscopy & Isotope Separation

James E. Barefield II (LANL, USA)

Tetsuo Iguchi (Nagoya Univ., Japan)

"Quantitative Analysis and Chemical Speciation of Uranium Using Laser Spectroscopic Methods", Euo Chang Jung (KAERI, Korea)

Alain Lebrun (IAEA)

Hideaki Niki (Fukui Univ., Japan)

Rick E. Russo (LBNL, USA)

Mohamad Sabsabi (NRC, Canada)

"Nonproliferation concern regarding laser technologies in isotope separation", Mitsutoshi Suzuki (JAEA, Japan)

Ikuo Wakaida (JAEA, Japan)

Klaus Wendt (Mainz Univ., Germany)

### Gamma ray and applications

Ryoichi Hajima (JAEA, Japan)

Shuji Miyamoto (Univ. Hyogo, Japan)

"Advanced high power lasers of KAERI for nuclear engineering", Changhwan Lim (KAERI, Korea)  
(TRINITI, Russia)

\* The invited speaker list will be updated in the conference website.

## REGISTRATION

### Registration Fees

#### *Members*

	Before/On Mar. 22, 2013	After Mar. 23, 2013
Conference (General)	¥35, 000	¥40, 000
(Student, Retiree)	¥15, 000	¥20, 000

#### *Non-Members*

	Before/On Mar. 22, 2013	After Mar. 23, 2013
Conference (General)	¥40, 000	¥45, 000
(Student, Retiree)	¥18, 000	¥23, 000

### OPTICS & PHOTONICS International Congress 2013 (OPIC 2013)

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

(Include the planned)

- The 2nd Advanced Laser & Photon Source (ALPS'13)
- The 2nd Laser Display Conference'13 (LDC'13)
- Conference on Laser Surgery and Medicine 2012 (CLSM2013)
- International Conference on High Energy Density Science 2013 (HEDS 2013)
- International Conference on Laser and Accelerator Neutron Sources and Applications 2013 (LANSA'13)
- International Symposium on Laser Processing for CFRP and Composite Materials 2013 (LPCC'13)
- International Conference on Laser Applications in Nuclear Engineering (LANE' 13)
- Laser Ignition
- LED and its Industrial Applications
- Food Inspection by Laser

OPIC2013 Web site <http://opicon.jp>

### EXHIBITION

OPTICS & PHOTONICS International 2013 Exhibition will be held simultaneously on April 24 (Wed)-26 (Fri) at Pacifico Yokohama.

### FURTHER INFORMATION

The latest information on the conference will be presented on the Web site:

<http://www.ilt.or.jp/event/lane13/>

## LANE '13 COMMITTEE MEMBERS

### CONFERENCE CHAIR

Hiroshi Horiike (Osaka Univ., Japan)

### CO-CHAIRS

Byung Heon Cha (KAERI, Korea)

Paul Hilton (TWI Inc., UK)

Eisuke Minehara (The Wakasa Wan Energy Research Center, Japan)

### STEERING AND PROGRAM COMMITTEE

#### *Chair*

Hiroyuki Daido (Japan Atomic Energy Agency)

#### *Co-Vice Chairs*

Takashi Fujii (Central Research Institute of Electric Power Industry)

Yasukazu Izawa (Institute for Laser Technology)

#### *Members*

Koichi Amaya (Matsuura Machinery Corp.)

Yoshihiro Deguchi (Tokushima Univ.)

Masayuki Fujita (Institute for Laser Technology)

Yasuyuki Fujiya (Mitsubishi Heavy Industries, Ltd.)

Kakeshi Fukuda (Osaka Univ.)

Manabu Heya (Osaka Sangyo Univ.)

Tadashi Kanabe (Fukui Univ.)

Junji Kawanaka (Osaka Univ.)

Toshiyuki Kawashima (Hamamatsu Photonics)

Hitoshi Nakano (Kinki Univ.)

Akihiko Nishimura (Japan Atomic Energy Agency)

Hiroaki Nishimura (Osaka Univ.)

Hideaki Sakai (Sugino Machine, Ltd.)

Katsunori Shiihara (Toshiba Corp.)

Akihiko Tsuboi (Laserx Co., Ltd.)

Mitsuru Uesaka (Univ. of Tokyo)

Ikuo Wakaida (Japan Atomic Energy Agency)

### SECRETARIAT

Sachiko Suzuki (Osaka Univ.)

Hiroaki Furuse (Institute for Laser Technology)

## LOCATION OF CONFERENCE SITE

The LANE'13 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

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