

CALL FOR PAPERS

LDC2023

12th Laser Display and Lighting Conference

<https://ldc.opicon.jp/>



Apr. 18 (Tue.) - Apr. 21 (Fri.), 2023

In-Person

PACIFICO Yokohama, Japan

Paper Deadline: ~~January 13 (Fri.), 2023~~

January 27 (Fri.), 2023 (EXTENDED)

Introduction

The Laser Display and Lighting Conference (LDC) is an international conference on laser displays, laser lighting, and related technologies. The 12th Laser Display and Lighting Conference (LDC2023) will be held in-person at PACIFICO Yokohama (Yokohama, Japan) on April 18 - April 21, 2023. This conference is sponsored by the Optical Society of Japan in cooperation with several academic societies and associations. The LDC2023 is intended to provide a central forum for the update and review of scientific and technical information on laser display and lighting covering a wide range of fields from fundamental research to systems and applications.

For details, please come to our website: <https://ldc.opicon.jp/>

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Sponsors

Sponsored by

The Optical Society of Japan

Organized by

Laser Display Technology Group (LDT) of Optical Society of Japan (OSJ)

In Cooperation with (under application)

The Laser Society of Japan

Consortium of Visible Laser Diode Applications (VLDAC)

International Display Workshops (IDW) PRJ-WS

*Some other organizations are under negotiation.

Co-located Conferences

Optics and Photonics International Congress (OPIC) 2023 is a five-days event, including thirteen cutting edge conferences. OPIC2023 provides access to the very latest products, research and initiatives in the optics and photonics sector. It also offers you the opportunity for the interaction with those driving the future of optics and photonics technology. And Optics and Photonics International Exhibition (OPIE) 2023, an exciting trade and technology exhibition featuring leading players from across the globe, will be held at the great hall next to the conference place. That may bring you good opportunities to touch the state of the art products and technologies in the sector. By registering for LDC2023, you can participate in all international conferences.

Important Deadlines

Regular Paper Submission: ~~13th January 2023~~ **27th January 2023 (EXTENDED)**
Post-deadline Paper Submission: 3rd March 2023

Contact Us

LDC2023 Secretariat Desk
ldc[at]opicon.jp

Scope

LDC2023 covers the laser display and lighting technology in the following major topical fields;

A. Light Sources and Components

Visible lasers, LED, solid-state light sources, phosphor, wavelength conversion materials, for displays and automotive applications. Optoelectronic components, such as spatial light modulators, high-speed scanners, MEMS, projection components, display drivers and interfaces are also included.

B. Imaging / Lighting

Physical display unit (projection, holography, light-field), Sensing and Imaging technologies (3D imaging by scanning, ghost imaging, imaging algorithm), Image acquisition by new technologies (Raman/ Nonlinear scattering, Photoacoustic imaging PAI...). Illumination and lighting including LIFI. Imaging Evaluation and Image processing for speckle reduction. Color management and image quality control. Laser safety and standardization.

C. Smart Systems

Intelligent Display systems and IoT systems for smart society, which are integrated with other functional devices or technologies, such as AI analysis / control, signal processing, various sensors (e.g., cameras, TOF and LiDAR), human interfaces, wired / wireless microwave / millimeter wave / optical communication devices or interfaces, or wired / wireless optical power supplies. Design, algorithm, or components particularly applied for the above smart systems are also included.

D. Metaverse Technologies including AR, MR, VR, ... XR

Metaverse platforms and related technologies such as AR (Augmented Reality), MR (Mixed Reality), and VR (Virtual Reality), XR technologies (relevant hardware, software and their applications): Those technologies expand human potential and have a great impact on lifestyle as well as opening a new market.

E. Laser Applications for Automotive

Lighting applications include headlights, rear lights, as well as other functional lighting devices for use in adverse weather conditions. Applications involving both lighting and display include road surface projectors. Sensing applications of particular attention are those for use in autonomous vehicles, such as ToF based LiDAR, as well as FMCW LiDAR. Light-based vehicle-to-vehicle communication will also be featured in this session.

F. Novel and Emerging Technologies

Novel and emerging technologies of laser display and lighting including components and optics. Their applications to entertainment, education, medical, social and other systems are also included.

Keynote Session

Bharath Rajagopalan, STMicronics
"LaSAR Alliance, our strategy and goal"

Yuzuru Takashima, University of Arizona
"Advanced Lidar and Display"

Invited Talks

Kyoji Matsushima, Kansai University
"Recent progress on large hologram for 3D display"

Hiroshi Yoshikawa, Nihon University
"Development of holographic video displays"

Makio Kurashige, Dai Nippon Printing Co., Ltd.
"Laser signal lighting for road applications"

Sunao Kurimura, NIMS
"Robust multi-color laser sources for bio-imaging"

Yasuaki Kumamoto, Osaka University
" (tentative) Laser imaging by Raman scattering spectroscopy"

Eiji Hase, Tokushima University
"Development of second-harmonic-generation microscopy and its application to human skin diagnostics"

Wesley A. Green, Breakthrough Initiatives
"Interstellar probes enabled by gigawatts of diodes"

Ken-Ichi Suzuki, Trimatiz Ltd.
"Development of underwater LiDAR for visualizing underwater environment"

Y. P. Chang, Taiwan Color Optics, Inc.
"Integrated the driving beam controller and LiDAR sensor into smart laser headlights for autonomous cars"

Kazuhiro Ohkawa, KAUST
"InGaN-based red emitters; toward lasers"

Hitoshi Nagai, Nichia Corp.
"Recent progress of green and blue GaN-based vertical-cavity surface-emitting lasers"

Satoshi Kawanaka, Ushio Inc.
"High power AlGaInP red laser diodes for projection applications"

Xun Tang, Kyushu University
"Molecular donor-acceptor interaction for realizing low threshold Near-Infrared (NIR) organic lasers"

Ryuji Hirayama, University College London
"Volumetric display by use of high-speed multipoint levitation"

Yasutaka Maeda, NHK Science & Technology Research Laboratories
"Development of a head-mounted display using light-field technology"

Akira Otomo, NICT
"EO polymers and high-speed manipulation devices for visible light"

Masaaki Mochimaru, AIST
"Interverse technologies to expand marketplace of virtual economy"

Toshio Ito, Shibaura Institute of Technology
"LiDAR Technologies for automated driving"

Kazuki Iwabata, Seiren KST Corp.
"Compact full color optical engine composed of RGB LD chips and silica waveguides"

Paper Publication

The abstract book of LDC2023 will be published in **SPIE. Digital Library** on June to August 2023 (Free Access). The special issue on Laser Displays will also be published in Nov./Dec., 2023 issue of **OPTICAL REVIEW**, the journal edited by the LDC committee and will be distributed by Springer. All the authors of LDC2023 are strongly encouraged to submit the original papers to the special issue. Please note that all submissions will be peer-reviewed following the editorial policy of OPTICAL REVIEW. The submissions from invited speakers are also welcome. Manuscript should follow Optical Review submission guidelines "Instructions for Preparation of Manuscript" and be submitted in the electronic form on the internet.

Submission Deadline: TBD (E. May, 2023)

A detailed instruction is available from the following website:

<http://myosj.or.jp/en/publication/optical-review/>

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