

Final Call for Papers

MOC2023

28th MICROOPTICS CONFERENCE

<https://moc2023.com/>

Sponsored by **The Japan Society of Applied Physics (JSAP)**



Organized by **Microoptics Group, JSAP**



Technically co-sponsored by **IEEE Photonics Society**

In cooperation with

*Optica (formerly OSA) | The Optical Society of Japan | IEICE Electronics Society
IEEE Photonics Society Tokyo Section Chapter | IEEE Photonics Society Kansai Chapter
IEEE Photonics Society Fukuoka Chapter | The Chemical Society of Japan
The Society of Polymer Science, Japan | The Laser Society of Japan
Optoelectronics Industry and Technology Development Association
Japan Optomechatronics Association | Japan Photonics Council (Some organizations are under negotiation.)*

Sep. 24 (Sun.) - Sep. 27 (Wed.), 2023

**Seagaia Convention Center in "Phoenix Seagaia Resort",
Miyazaki, Japan**

Paper Deadline: April 28 (Fri.), 2023

PLENARY TALKS

Akihiko Kasukawa, *Furukawa Electric Co., Ltd.*

"Review of Semiconductor Lasers in Long Haul Optical Fiber Communications"

Marko Loncar, *Harvard University*

"Integrated Lithium Niobate Photonics and Applications"

Martin Wegener, *Karlsruhe Institute of Technology*

"3D Laser Micro- and Nanoprinting: Status and Perspectives"

INVITED TALKS

Yi-jen Chiu, *National Sun Yat-sen University*

"High-speed Optical Modulation through the Quantum Well Intermixing (QWI) Semiconductor Optical Amplifier (SOA)-Integration Electroabsorption Modulator (EAM)"

Yen-Hung Chen, *National Central University*

"Integrated Photonic Quantum Sources and Circuits in Lithium Niobate Platform"

Philippe Lalanne, *CNRS, Inst. d'Optique*

"New Appearances with Random Metasurfaces"

Arka Majumdar, *University of Washington*

"Non-volatile Programmable Photonics"

Vinod Menon, *The City College of New York*

"Strong Exciton-Photon Coupling in 2D Materials"

Aydogan Ozcan, *University of California, Los Angeles*

"Diffractive Optical Networks & Computational Imaging Without a Computer"

Jae-Hyeung Park, *Inha University*

"Near Eye Displays for AR with Focus Cue and Occlusion Support"

Paolo Pintus, *Karlsruhe Institute of Technology*

(Tentative) "An Integrated Magneto-Optic Modulator for Cryogenic Applications"

William Shieh, *University of Melbourne*

"Polarization-Multiplexing Short-Reach Optical Interconnects"

Yikai Su, *Shanghai Jiao Tong University*

"Scalability of Heterogeneous Photonic Integrated Circuits"

SUNDAY SPECIAL SESSION "Social Optics"

On Sunday afternoon of September 24th, a special session entitled "Social Optics" is scheduled.

Following distinguished speakers will deliver their talks focused on the mission of optics and related science and technology in our present society.

Shinji Matsuo, *NTT Device Technology Laboratory*

Koji Mori, *University of Miyazaki*

Satoshi Wada, *RIKEN*

OBJECTIVE

The 28th MICROOPTICS CONFERENCE (MOC2023) will be held at Seagaia Convention Center in Miyazaki Prefecture, Japan in a hybrid format from September 24 to 27, 2023. This conference is sponsored by the Japan Society of Applied Physics (JSAP) and organized by Microoptics Group and in cooperation with several academic societies and associations. The MOC2023 is intended to provide a central forum for an update and review of scientific and technical information covering a wide range of microoptics field from fundamental researches to systems and applications.

CATEGORY

The category of the conference covers the following subjects of microoptics;

1. Theory, Modeling, and Design

Aberrations, Dispersion, Beam optics, Guided-wave optics, Gradient-index optics, Diffractive optics, Photonic band, Slow light, Near-field optics, Nonlinear optics, Thermo-optics, Plasmonics, Metal optics, Quantum optics/photonics, Biomimetic optics, Metaoptics, Simulation and system design, etc.

2. Materials and Fabrication

Semiconductors, Crystals, Dielectric materials, Polymers, Liquid crystals, Nonlinear materials, Composite materials, Nano-materials, Transparent conductors, Magneto-optic materials, Spin-materials, Metamaterials, Nanocarbons, etc. Micro- and nano-fabrication, Nano-imprint, Laser processing, Heterogeneous bonding, 3D printing, Optical manipulation, etc.

3. Measurement and Sensing

Spectroscopy, Interferometry, Reflectometry, Ultrafast measurement, 3D measurement, Quantum measurement, LiDAR, etc.

4. EO/OE and Active Devices

Lasers, LEDs, VCSELs, Array lasers, Amplifiers, Photo detectors, Terahertz devices, Optical imaging sensors, Solar cells, Energy harvesting devices, etc.

5. Passive Devices

Fibers, Waveguides, Multi/demultiplexers, Add-drop multiplexers, Branching and mixing components, Photonic

crystals, Filters, Microlenses, Diffractive optical elements, Isolators, Polarizers, etc.

6. Dynamic and Functional Devices

MEMS, Switches, Modulators, Tunable devices, Wavelength converters, Nonlinear optical devices, Deflectors, Optical buffers, etc.

7. Integration, Packaging, and Si photonics

Monolithic and hybrid integration, Mounting and packaging, Micro-assembly, Wafer-level assembly, 3D integration, etc.

8. System and Design Conception

APPLICATION FIELD

The 28th MICROOPTICS CONFERENCE covers microoptics technologies in the following major topical fields;

A. Optical Communications

Photonic networks, Optical routing, Advanced multiplexing, LAN, FTTH, Wireless optical communication, etc.

B. Optical Interconnects

Chip/board/system interconnects, Active optical cable, etc.

C. Optoelectronic Equipment

Optical storages, Laser and LED printers, Smart sensors, Advanced cameras, Advanced microscopes, etc.

D. Optical Sensing and Processing

Optics for image recognition, Physical measurements, 3D measurements, Sensors and sensing systems, Security systems, Optical computing, Bio- and medical sensing, Tomography, etc.

E. Displays and Lighting

LCD, Laser/LED/EL displays, MEMS displays, 3D displays, Projection displays, μ -LED displays, Wearable displays, AR/VR-glass, head mounted displays, Flexible displays, Solid state lighting, Illuminations, Appearance design and control, etc.

F. New Applications and Emerging Technologies

Green photonics, Environmental and energy optics, Bio- and medical optics, Nano-photonics, Quantum systems, Next generation and intelligent microoptics, Car optics, Agricultural and fishery optics, Optical wireless power transmission, AI and IoT, etc.

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 category will be accepted for presentation by peer review by program committee members. A detailed instruction will be available from the following Web site. <https://moc2023.com/>

Papers should be submitted electronically no later than **April 28 (Fri.), 2023**. Authors will be requested to submit a **2-page paper** 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.

ORAL SESSION

Oral session will be conducted in a hybrid format with both on-site and virtual versions. The detailed information will be announced on the web site.

POSTER SESSION

In addition to regular oral presentation sessions, a 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. Online poster session is under consideration.

POST-DEADLINE PAPER

A limited number of post-deadline papers will be accepted for presentation at post-deadline sessions. The latest significant results obtained after the regular deadline are most welcome.

PAPER PUBLICATION

Accepted papers will be published in **IEEE Xplore** in addition to the conference technical digest. The authors would also have a chance to publish an extended, full-length version of the paper presented at MOC2023 in a **special issue of the JJAP**, which is an international journal published by the Japan Society of Applied Physics and IOP publishing. The special issue of the JJAP is planned to be published in 2024.

PAPER AWARDS

The MOC Paper Award will be given to several excellent contributed papers. Moreover, the MOC Student Award will be given to several students who presented excellent papers.

FINANCIAL SUPPORT FOR OVERSEAS STUDENTS

Limited financial support is considered for the presentations by students from overseas. Details will be announced on the website: <https://moc2023.com>

OFFICIAL LANGUAGE

The official language of MOC2023 is English.

CONFERENCE VENUE

The MOC2023 will take place at Seagaia Convention Center, Miyazaki, Japan.

Seagaia Convention Center, Phoenix Seagaia Resort

Hamayama Yamasaki-cho, Miyazaki City, Miyazaki

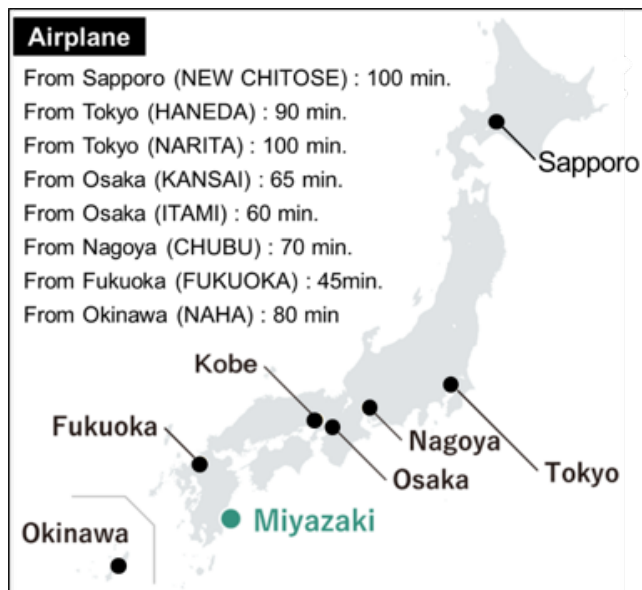
Prefecture, Japan

Tel +81 985 21 1111

<https://seagaia.co.jp/english/access/>

ACCESS

Miyazaki is approximately 90 minutes by air from Tokyo. The Seagaia Convention Center is a 25-minute taxi or bus ride from Miyazaki Airport.



REGISTRATION

Registration Fees

	Before/On Aug. 23	After Aug. 24
General	¥47,000	¥52,000
Student, Retiree	¥17,000	¥20,000

*The conference fee includes admission to MOC2023 and a Technical Digest.

*Additional fee is needed for the conference party.

Those who wish to attend MOC2023 should register online at <https://moc2023.com/>

All payment should be made in Japanese yen by one of the following methods:

1. Credit card

Master Card, VISA, American Express, Diners Club and JCB are available. Personal checks are NOT accepted. Pre-registration, by August 23, 2023, is encouraged and will be entitled to reduced fees. Upon receipt of registration information and payment, MOC2023 Registration Desk will send an e-mail of confirmation.

2. Bank transfer

(For domestic attendees only)

三井住友銀行 本店営業部

口座番号 : (普通) 200-4180310

口座名 : 公益社団法人応用物理学会 (コウエキ シヤダンホウジンオウヨウブツリガッカイ)

About Miyazaki

Miyazaki City is a resort spot on the southeast side of Kyushu Island. A beautiful coastline stretches out here. The mild climate makes it easy to spend time here all year round. Fans from all over the world visit the leading golf courses and surf spots of Japan. Legends of ancient Japan remain and the shrines are also a highlight. You will find plenty of tasty foods here. These include Miyazaki beef - the best beef in Japan - as well as charcoal grilled chicken and ripe mangos. For detail on sightseeing, visit the following website.

<https://visitmiyazaki.com>

REGISTRATION CANCELLATION POLICY

No refunds of the registration fee will be made for any reasons whatever. In case of registrant unable to attend the conference, Technical Digest (PDF format) will be sent after the conference.

CONTACT

MOC2023 Registration Desk

Secretariat of Microoptics Group

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E-mail: ogura@comemoc.com

FURTHER INFORMATION

The latest information will be also presented on the web site:

<https://moc2023.com/> (QR code)



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Some members are under negotiation.

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