

# Final Call for Papers

# MOC2021

26th MICROOPTICS CONFERENCE

<http://moc2021.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***

The Optical Society of Japan

IEICE Electronics Society

IEEE Photonics Society Japan Chapter

IEEE Photonics Society Kansai 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

Hamamatsu City

Shizuoka University

**Sep. 26 (Sun.) - Sep. 29 (Wed.), 2021**

**Congress Center, ACT CITY Hamamatsu,  
Shizuoka, Japan**

**Paper Deadline: April 23 (Fri.), 2021**

## PLENARY TALKS

**Dieter Bimberg,** *CIOMP, CAS / TU Berlin*  
"Novel VCSEL Designs for the Next Generation of Photonic Systems"

**Federico Capasso,** *Harvard Univ.*  
"Multifunctional Flat Optics"

**Tsutomu Hara,** *Hamamatsu Photonics*  
"Exploring Photonics"

**Katsumi Kishino,** *Sophia Univ.*  
"InGaN-Based Nanocolumn Optical Devices"

## INVITED TALKS

**Kuo-Ping Chen,** *National Chiao Tung Univ.*  
"Structural Colors and Lasers by Lattice Resonance in Silicon Nitride Metasurfaces"

**Simon Fafard,** *Broadcom Semiconductors ULC*  
"High Efficiency Photovoltaic Power Converters and Application to Optical Power Transmission"

**Harald Haas,** *Univ. Strathclyde*  
"Recent Advancements in Optical Wireless Communications"

**Yuri Kivshar,** *Australian National Univ.*  
"Metaphotonics and Metasurfaces Governed by Mie Resonances"

**Jan Meijer,** *Univ. Leipzig*  
"Quantum Light Sources Using Color Centers in Diamond"

**Peter O'Brien,** *Tyndall National Institute*  
"Photonics Packaging for Integrated Photonics, from Research to Pilot-Scale Manufacturing"

**Wolfgang Osten,** *Univ. Stuttgart*  
"Optical Metrology and Sensing in Times of Digital Transition"

**Min Qiu,** *Westlake Univ.*  
"Microscale Opto-Thermo-Mechanical Actuation in the Adhesive Regime"

**Niels Quack,** *Ecole Polytech. Fédérale de Lausanne*  
"Microoptics in Single Crystal Diamond"

**Junsuk Rho,** *Pohang Univ. Sci. and Tech.*  
"Artificial Chirality Evolution in Micro-/Nano-Scale 3D  
Plasmonic Metamaterials"

**Fabio Sciarrino,** *Sapienza Univ. Roma*  
"Transmission of Vector Vortex Beams in Dispersive  
Media"

**Jim Tatum,** *Dallas Quantum Devices*  
"Commercialization of VCSELs"

**SPECIAL SYMPOSIUM on SUNDAY**  
**"Photonics Progress Review"**  
**Sep. 26 (Sun.) 13:00 – 17:05**

- 0) Introductory Talk  
**Yoshimasa Kawata,** *Shizuoka Univ.*
- 1) New Photonics Industries Starting from Shizuoka,  
JAPAN  
**Yoshihiro Takiguchi,** *The Graduate School  
for the Creation of New Photonics Industries*
- 2) Multi-Tap Time-Resolved CMOS Image Sensors  
and Their Applications  
**Shoji Kawahito,** *Shizuoka Univ.*
- 3) Photonic-Crystal Surface-Emitting Lasers and Their  
Application to LiDAR  
**Susumu Noda,** *Kyoto Univ.*
- 4) Development of 20-inch Photomultiplier Tube for  
Neutrino Experiments  
**Yuji Yoshizawa,** *Hamamatsu Photonics*
- 5) Clinical Near-Infrared Spectroscopy and Imaging  
**Yoko Hoshi,** *Hamamatsu Univ. School Med.*

## **OBJECTIVE**

The 26th MICROOPTICS CONFERENCE (MOC2021) will be held at Congress Center, ACT CITY Hamamatsu in Shizuoka Prefecture, Japan on September 26 – September 29, 2021. 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 MOC2021 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 research to systems and applications.

\* After careful consideration of the serious influence of COVID-19, the MOC committee has decided to hold this conference in a hybrid format with both on-site and virtual versions to encourage many more people to participate in MOC2021.

## **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 26th 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,  $\mu$ -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. A detailed instruction will be available on the following web site.

<http://moc2021.com/>

Papers should be submitted electronically no later than **April 23 (Fri.), 2021**. Authors will be requested to submit **2-page paper** written in English, including texts, figures, tables, and references within a frame of 17 cm x 24 cm. The paper template available through the above website must be used for compliance with JSAP and IEEE Xplore formats.

## **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 format of the 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 will also have a chance to publish an extended, full-length version of the paper presented at MOC2021 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 will be published in Aug. 2022.

## **PAPER AWARDS**

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

## **AWARD CEREMONY**

Award ceremony will be held at the end of the conference.

## **MICROCONCERT AND CONFERENCE PARTY**

Microconcert and conference party are under consideration for holding.

## **FINANCIAL SUPPORT FOR OVERSEAS STUDENTS**

Limited financial support is considered for the presentations by students from overseas. Details will be announced on the website:

<http://moc2021.com/>

## **OFFICIAL LANGUAGE**

The official language of MOC2021 is English.

## **CONTACT**

**MOC2021 Registration Desk**

**KINKI NIPPON TOURIST CORPORATE BUSINESS CO., LTD.**

Sumitomo-shoji Kanda-izumicho Bldg.13F, 1-13

Kanda-Izumi-cho, Chiyoda-ku, Tokyo 101-0024, Japan

Phone: +81-3-6891-9354

E-mail: [moc2021@or.knt.co.jp](mailto:moc2021@or.knt.co.jp)

## CONFERENCE VENUE

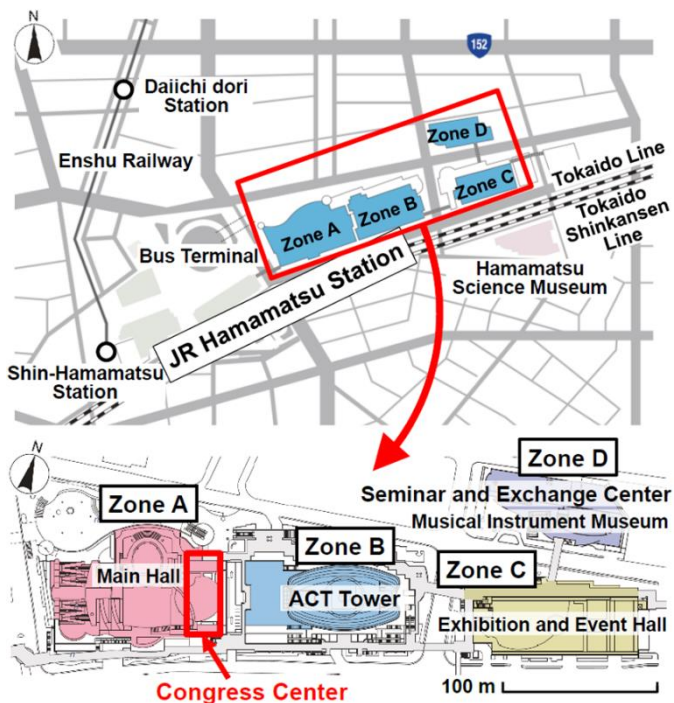
The MOC2021 will take place at Congress Center, ACT CITY Hamamatsu, Shizuoka, Japan. It is located adjacent to Hamamatsu Station, the gateway to the city of Hamamatsu.

### Congress Center, ACT CITY Hamamatsu

111-1 Itaya-machi, Naka-ku, Hamamatsu City,  
Shizuoka Prefecture, Japan

Tel +81 53 451 1111

[https://www.actcity.jp/pdf/actcity\\_pamphlet.pdf](https://www.actcity.jp/pdf/actcity_pamphlet.pdf)



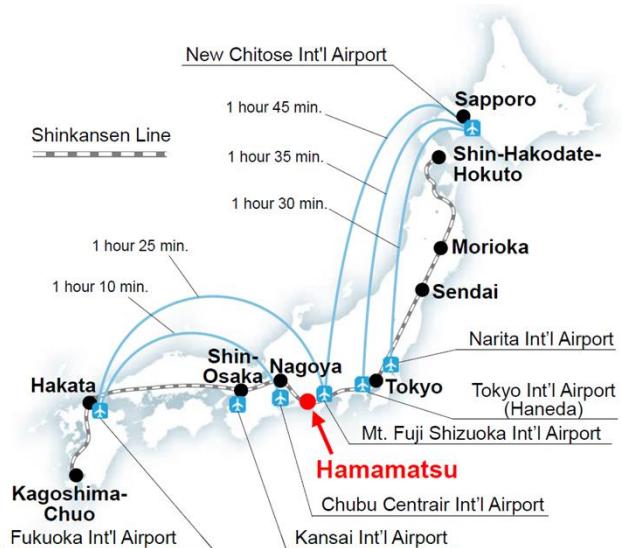


## About Hamamatsu

Hamamatsu is the largest city in Shizuoka Prefecture and located about halfway between the two metropolitan cities of Tokyo and Osaka. There are many tourist attractions of great historical and cultural significance including famous temples, historical landmarks, and Lake Hamana. A wide range of activities are also available at Hamamatsu: bathing in hot springs, cycling, marine sports, and industrial tours unique to the "City of Manufacturing." As for food, visitors will no doubt be satisfied with local specialty foods including gyoza dumplings, mikan oranges (mandarin oranges), and fresh local seafood like eels, oysters, and puffer fish. For detail on sightseeing, visit <https://hamanako-tourism.com/en/>

## ACCESS

Centrally located between Tokyo and Osaka, Hamamatsu is only about 90 minutes away from either of the cities by Shinkansen. ACT CITY, an event center offering direct Shinkansen access, can be easily reached on a day trip from major cities in Japan.



## FURTHER INFORMATION

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

<http://moc2021.com/>

# REGISTRATION

## Registration Fees

	Before/On Aug. 23, 2021	After Aug. 24, 2021
Conference (General)	¥47, 000	¥52, 000
(Student, Retiree)	¥17, 000	¥20, 000

\* The conference fee includes admission to MOC2021 and a Technical Digest.

\* Additional fee is needed for the conference party.

Those who wish to attend MOC2021 should register online at

<http://moc2021.com/>

MOC2021 Organizing Committee entrusts **KINKI NIPPON TOURIST CORPORATE BUSINESS CO., LTD.** with a part of the management.

If you have any questions, please contact

**MOC2021 Registration Desk**

**KINKI NIPPON TOURIST CORPORATE BUSINESS CO., LTD.**

Sumitomo-shoji Kanda-izumicho Bldg.13F, 1-13

Kanda-Izumi-cho, Chiyoda-ku, Tokyo 101-0024, Japan

Phone: +81-3-6891-9354

E-mail: [moc2021@or.knt.co.jp](mailto:moc2021@or.knt.co.jp)

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

### 1. Bank transfer

(For overseas attendees)

**Bank Name: Sumitomo Mitsui Banking Corporation  
Suzuran Branch (Branch Code: 760)**

**Account Name: Kinki Nippon Tourist Corporate  
Business Co., Ltd.**

**Account No.: Current Deposit No. 7300648**

**Swift Code: SMBCJPJT**

(For domestic attendees)

**三井住友銀行 すずらん支店 (店番号 760)**

**口座番号 : 当座 7300648**

**口座名 : 株式会社近畿日本ツーリストコーポレートビジネス  
カ) キンキニッポンツーリストコーポレートビジネス**

### 2. Credit card

Master Card, VISA, American Express, Diners Club and JCB are available. Personal checks are NOT accepted.

Pre-registration, by **August 23, 2021**, is encouraged and will be entitled to reduced fees. Upon receipt of registration information and payment, MOC2021 Registration Desk will send an e-mail of confirmation.

## **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.

## **HOTEL ACCOMMODATIONS**

**KINKI NIPPON TOURIST CORPORATE BUSINESS CO., LTD.** will be the official agent for hotel accommodations and other travel arrangements.

### **MOC2021 Accommodation Desk**

**KINKI NIPPON TOURIST CORPORATE BUSINESS CO., LTD.**

Open: Monday - Friday 9:30 am - 5:30 pm (Japan time)

Closed: Saturdays, Sundays, and National holidays

Phone: +81-3-6891-9354

E-mail: [moc2021@or.knt.co.jp](mailto:moc2021@or.knt.co.jp)

Reservation should be made online no later than **August 30, 2021** at <http://moc2021.com/>. Hotel accommodation fee should be settled in advance. Method of payment is via credit card (Master Card, VISA, American Express, Diners Club and JCB are available.) or bank transfer.

Detailed information about hotel accommodations will be presented on the web site:

<http://moc2021.com/>

# MOC2021 COMMITTEE MEMBERS

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\*All domestic members are also organizing committee members.

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