

# **2021 26th Microoptics Conference (MOC 2021)**

**Virtual Conference  
26 – 29 September 2021**



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# MOC2021 TECHNICAL PROGRAM

**Sunday, 26 September**

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Moderators:

Y. Kokubun, *Inst. Technologist*  
Y. Takiguchi, *Hamamatsu Photonics K. K.*

## **13:00–17:05 Session SS: Special Symposium "Photonics Progress Review"**

### **SS-0 Introductory talk**

13:00 Y. Kawata, *Shizuoka Univ.*

### **SS-1 New photonics industries starting from Shizuoka, Japan.....1**

13:05 Y. Takiguchi, *The Graduate School for the Creation of New Photonics Industries*

### **SS-2 Multi-tap time-resolved CMOS image sensors and their applications.....3**

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### **SS-3 Photoniccrystal surface-emitting lasers and their application to LiDAR.....5**

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### **SS-4 Development of 20-inch photomultiplier tube for neutrino experiments.....7**

15:35 Y. Yoshizawa, *Hamamatsu Photonics K.K.*

### **SS-5 Clinical near-infrared spectroscopy and imaging.....9**

16:20 Y. Hoshi, *Hamamatsu Univ. School of Med.*

**Break (17:05–17:15)**

## **17:15–18:15+ Get Together Party**

### **#17:15 Open Door to Virtual Party on Zoom of MOC2021**

Background Music: From the Album of Duo21.

By Kenichi Iga and Genichi Hatakoshi

Note: Please be prepared with your own mag, glass, or cup to join “Kampai”.

### **#17:30-18:15+ Get-Together Party**

Moderator: Kiichi Hamamoto (MOC2014/2018 Conference Chair)

Welcome: Taro Arakawa (Conference Chair)

Kampai on Do: Kenichi Iga (General Chair of Microoptics Group)

Closing: Muneharu Kuwata (Conference Chair)

**9:00–9:15 Opening Remarks**

Conference Co-chairs:

T. Arakawa, *Yokohama National Univ.*  
M. Kuwata, *Mitsubishi Electric Corp.*

**9:15–10:45 Session PL1: Plenary Session 1**

Chairs: T. Arakawa, *Yokohama National Univ.*  
M. Kuwata, *Mitsubishi Electric Corp.*

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9:15 K. Kishino, *Sophia Univ.*

**PL1-2 Flat optics based on metasurfaces: from components to cameras.....13**

10:00 F. Capasso, *Harvard Univ.*

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K. Hamamoto, *Kyushu Univ.*

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11:00 Y. Kivshar, *Australian National Univ.*

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H. Tan, *Australian National Univ.*

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**B-3 MOEMS technology based compact and robust broadband wavelength-swept mid-infrared quantum cascade laser.....23**

14:15 N. Akikusa<sup>1</sup>, A. Sugiyama<sup>1</sup>, T. Ochiai<sup>1</sup>, T. Edamura<sup>1</sup>, and H. Furukawa<sup>2</sup>, <sup>1</sup>*Hamamatsu Photonics K.K.*, <sup>2</sup>*AIST*

**Break (14:30–14:45)**

**14:45–16:00 Session C: Microoptics for Sensing (2)**

Chairs: S. Iwamoto, *Univ. Tokyo*  
R. Katayama, *Fukuoka Inst. Tech.*

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14:45 W. Tang<sup>1,2</sup>, W. Lv<sup>1,2</sup>, J. Lu<sup>3</sup>, F. Liu<sup>1,2</sup>, J. Wang<sup>1,2</sup>, W. Yan<sup>1,2</sup>, and M. Qiu<sup>1,2</sup>, <sup>1</sup>*Westlake Univ.*, <sup>2</sup>*Westlake Institute for Advanced Study*, <sup>3</sup>*Zhejiang Univ.*

- C-2** **Hybridized plasmonic surface lattice resonance perovskite laser.....25**  
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- D-3** **Optoacoustic mode-locking based on micro-core photonic crystal fibre.....35**  
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<sup>2</sup>*Friedrich-Alexander Univ.*

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T. Miyamoto, *Tokyo Inst. Tech.*

- E-1 High-efficiency photovoltaic power converters and application to optical power transmission (Invited).....41**  
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- E-2 1fJ/bit coupling-based ITO monolithic modulator in integrated photonics.....43**  
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<sup>1</sup>*The Univ of Tokyo*, <sup>2</sup>*AIST*, <sup>3</sup>*Keio Univ.*

**Lunch (12:15–14:00)**

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