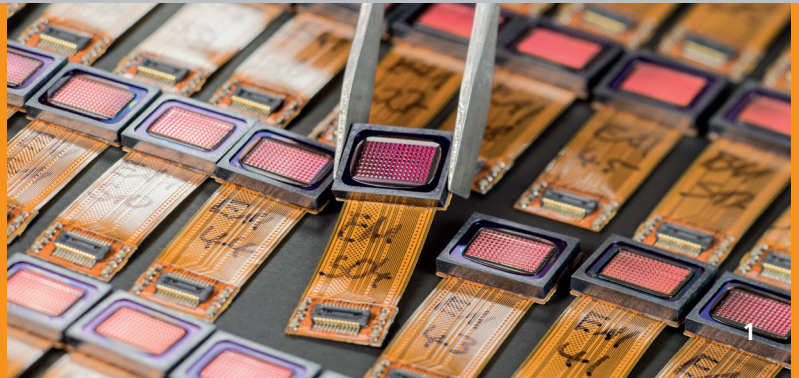




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1 *BIO-INSPIRED LENS
ARRAY CAMERAS FOR
ULTRA-COMPACT IMAG-
ING APPLICATIONS.*

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4TH FRAUNHOFER SYMPOSIUM TOKYO 2019 „DIGITAL PHOTO- NICS MADE IN GERMANY“

Date

October 9th, 2019
10.30 a.m. - 07.00 p.m.

Organizer

Fraunhofer Representative Office Japan
Phone: 03-3586-7104
E-mail: event@fraunhofer.jp

Participation

Pre-registration required,
Free of charge

Chair

Prof. Dr. rer. nat. Andreas Tünnermann,
Fraunhofer IOF

www.fraunhofer.jp

About the Symposium

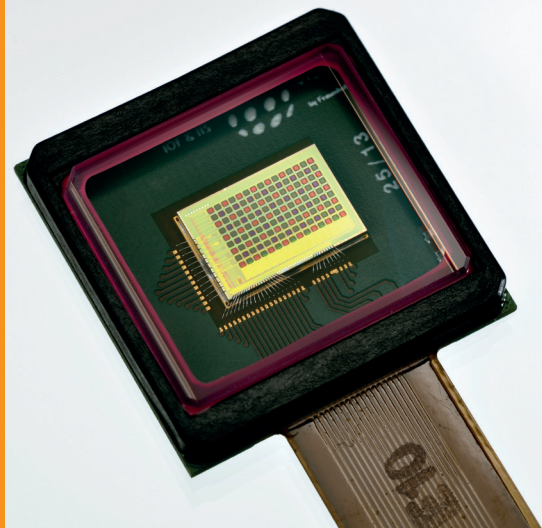
The „Fraunhofer Symposium“ is an exciting event initiative of Fraunhofer in Japan. The event is held every two years, showcasing cutting edge technologies, innovation and solutions with sustainable approaches. This year's symposium focuses on how to collaborate with Fraunhofer and Digital Photonics.

About Digital Photonics

Photonics is a central enabler and game changer of digitization. Due to its unique features as tool, sensor or for communication, it is a key factor in successfully facing the challenges of the future: digital transformation and industry 4.0, autonomous mobility and human-machine-interaction as well as smart homes and smart cities.

Current substantial progresses in both optical and computational technologies forebode fundamental revolutions in digital photonics, comparable to the development of microelectronics in the fifties. Crucial advances in nanotechnology, quantum technology and artificial intelligence empower the development of innovative applications. Based on these prospects, digital photonics allow for solutions for fundamental transformations in industry, environment and society. This session will provide insights into key technologies of future digital photonics, in particular regarding information technology such as LED backhaul and photonic integrated circuits, computational and biomedical imaging as well as bioinspired imaging optics. Moreover, innovative technologies for digital photonic production by additive and subtractive manufacturing and photon management for high efficiency photovoltaics will be presented.

PROGRAM



10:00 – 10:30 Registration

10:30 – 12:00 Opening Session on Innovation with Fraunhofer

10:30 – 10:40 Address of Welcome

Hideya Miki, Fraunhofer Representative Office Japan

10:40 – 10:45 Opening Remarks

Prof. Dr. rer. nat. Andreas Tünnermann, Fraunhofer IOF

10:45 – 11:00 The Fraunhofer Model and Introduction to Digital Photonics

Prof. Dr. rer. nat. Andreas Tünnermann, Fraunhofer IOF

11:00 – 11:30 EUV/DUV Source Development and its Collaboration with Germany

Dr. Hakaru Mizuguchi, CTO and Executive VP, Gigaphoton Inc.

11:30 – 12:20 Overview of Laser Processing Market in Japan and Activities to

Integrate Industrial and Scientific Laser Technology for Global Smart Manufacturing as well as Working Experience with Fraunhofer

Dr. Koji Yasui, Senior Chief Engineer Lasers, Mitsubishi Electric Corporation (MELCO)

12:20 – 13:30 Lunch Break

13:30 – 16:45 Technology Session on Digital Photonics

13:30 – 13:55 LED Backhaul and Photonic Integrated Circuits

Prof. Dr. rer. nat. Martin Schell, Fraunhofer HHI

13:55 – 14:20 Biomedical Imaging reinvented with AI

Prof. Dr. Horst Hahn, Fraunhofer MEVIS

14:20 – 14:45 Bioinspired Camera Solutions

Prof. Dr. rer. nat. Andreas Tünnermann, Fraunhofer IOF

14:45 – 15:15 Coffee Break

15:15 – 15:40 Computational Imaging based on Multi View Shots

Prof. Dr.-Ing. Albert Heuberger, Fraunhofer IIS

15:40 – 16:05 Photon Management enables High Efficiency Photovoltaics

Dr. rer. nat. Henning Helmers, Fraunhofer ISE

16:05 – 16:30 Digital Photonic Production – High Power Additive and Subtractive Manufacturing for Individualized Products

Dr.-Ing. Arnold Gillner, Fraunhofer ILT

16:30 – 16:45 Concluding Remarks

Prof. Dr. rer. nat. Andreas Tünnermann, Fraunhofer IOF

16:45 – 19:00 Reception

Contact

Fraunhofer Representative Office Japan

Phone: 03-3586-7104

E-mail: event@fraunhofer.jp

Location

Imperial Hotel Tokyo

1-1-1 Uchisaiwai-cho, Chiyoda-ku,
Tokyo 100-8558, Japan