

# Map for exploring ODF'22

All the oral talks are mapped and classified on Program-committee's authority. The map includes two plenary talks, 20 invited talks, and 29 contributed papers.

- Box color: Difference among four categories, a special session and a plenary
- Thick frame: Invited talk
- Red character: A key word chosen by Program committee

## Lens Design

Plenary2-03) David J Brady, "Lens design for parallel super cameras"

Plenary3) Masato Shibuya, "Lens Optics Brilliant Forever -- Introducing new theories related to imaging--"

## Imaging

### For Space

- OWP1A-01) Yi-chin Fang, **Satellite**, "FORMOSAT Satellites, Taiwan and Its Further"
- OTH1B-02) Daewook Kim, **Telescope**, "Modular Cross-Dispersion Spectrometer MOBIUS for Large Binocular Telescope"
- OFA2B-01) Olivier Guyon, **Telescope**, "The Search for Habitable Worlds around Nearby Stars with Large Telescopes and Infrared Spectroscopy"
- OFA2C-01) Mikio Kurita, **Mirror measurement**, "New profilometer and data stitching algorithm for large mirror measurement"
- OFA2B-02) Noboru Ebizuka, **Grating**, "Novel Transmission Gratings for Space Applications and Astronomical Observations"

- OTH1B-01) Richard N. Youngworth, **Optics Standards**, "Advances and Insights into Fundamental Optics Standards"
- OTH1B-03) Oliver Föhnle, **Optical fabrication**, "Modeling of optical fabrication chains during optics design"
- OTH4A-03) Toshiyuki Horiuchi, **Reflective optics**, "Stereophonic Lithography Using a Parabolic Mirror Projection System and One-sided Illumination"

- OWP1A-02) Hiroshi Ohno, **neural network**, "Gradient-index mapping method using neural network"
- OWP1A-03) Guillaume Druart, **Freeform surface**, "Freeform for visible and thermal infrared applications"
- OWP1A-05) Marcel Prochnau, **Industry4.0**, "Concept for Enabling Industry 4.0 in the Context of Digital Manufacturing"
- OTH1B-06) Mahito Negishi, **Alignment**, "Development of high-speed and high-precision alignment technology using the 3D chart"

### For Industry

#### For Automobile

- IWPK OWP-02) Guillaume Druart, **IR-Camera**, "Review of the development of infrared cameras for automotive applications in the automotive industry"
- IWPK OWP-04) Alfredo Rueda, **LiDAR**, "Long range automotive FMCW LiDAR with solid state scanning"

- OFP3B-04) Shigeru Takushima, **3D measurement**, "In-process Height Displacement Measurement System for 5-axis Process Control of Laser Wire Deposition"

## For Life Sciences

### Special Session

- OTH1B-04) Tatsuro Otaki, **Microscopy**, "Apodized Phase Contrast Microscopy Reveals Motion of Cellular Organelles"
- OFA3A-01) Masahito Yamanaka, **Deep tissue imaging**, "Deep tissue high-resolution optical imaging in the third near infrared window"
- OFA2B-03) Anh Nguyet Thi Nguyen, **Raman spectroscopy**, "DNA detection by SERS on InGaN quantum wells decorated with Al nanoparticles"
- OTH4B-03) Keita Hayashi, **Fluorescence tag**, "Experimental Verification of Fluorescence Tags Using FRET Networks Responding to Molecular Inputs"
- OFA3A-05) Tomoya Kitazaki, **Blood glucose sensing**, "Detection of Glucose-Induced Emission Spectra Based on Mid-Infrared Passive Spectroscopic Imaging for Blood Glucose Sensing"

- OFPSSA-01) Aydogan Ozcan, **Computational Microscopy**, "Deep Learning-enabled Computational Microscopy and Sensing"
- OFPSSA-02) Naoshi Kondo, **Sensing for Food**, "Optical sensing technologies for sustainable food production"
- OFPSSA-03) Rung-Ywan Tsai, **Optical pickup**, "Versatile Applications of Laser Scanning Based on the Optical Pickup Head Technology"
- OFPSSB-01) Kaoru Katoh, **Microscope**, "Observation of Fine Structures of the Cells with Optical Microscopes"
- OFPSSB-02) George C. Cardoso, **Optical Sensing**, "Low-cost optical sensing applied to life sciences"

## Computational Imaging

- OTH4B-04) Vijayakumar Anand, **Computational imaging**, "Extraordinary computational imaging technologies with ordinary optics"
- OTH4B-02) Shoma Kataoka, **Ghost imaging**, "Ghost Imaging with Complementary Correlation Calculations Using Deep Learning"
- OFA3A-02) Yasuhito Hashiba, **Coded exposure**, "Coded Exposure Imaging System for Crack Detection"
- OFA3A-03) Keita Yamaguchi, **Lensless**, "Phase Modulation Fresnel Zone Aperture for Image Reconstruction"
- OTH4B-05) Yifeng Shao, **EUV**, "Auto-differentiation based Computational Lensless Imaging for EUV metrology"

## Meta Surface

- OTH4A-01) Kentaro Iwami, **Metasurface**, "Dielectric metasurfaces for holography and focusing at visible wavelengths"
- OTH4A-02) Ming Lun Tseng, **Metalens**, "Vacuum Ultraviolet Light-Generating Metalens"
- OTH1B-05) Anh Igarashi, **Microring resonator**, "Si-microring resonator with sidewall nano-grating structures for high-Q resonance modes"

## Lightwave Circuit

- OTH2A-03) Hideaki Gomi, **Lightwave circuit**, "Planar Lightwave Circuit Digital Holography"
- OTH2A-04) Kenta Hayashi, **Lightwave circuit**, "Fast Phase-shift Control Method for a High-speed Lightwave Circuit"
- OTH2A-05) Quan-Hsiang Tseng, **Lightwave circuit**, "Integrated Broadband Tunable Electro-Optic Switch in Lithium Niobate Waveguide Circuits"
- OFA2C-03) Ryusei Momosaki, **Liquid crystal**, "Fabrication of polarization diffraction element by utilizing photoalignable polymer liquid crystal"

- OTH4A-04) Ching-Cherng Sun, **White LED**, "Enhancement of lighting quality for the product of phosphor converted white light emitting diodes"
- OTH2A-06) Kei Maruyama, **Birefringence**, "Optical birefringence arrangements using molecular diffusions under photopolymerization"
- OFA2C-02) Yeh-Wei Yu, **Interferometer**, "Double-Frequency-Grating Phase Shearing Interferometer used in the Holographic Data Storage"

- OTH2A-01) Hakan Ürey, **Holographic display**, "Computational Holographic Displays and Applications"
- OFA3A-04) Zhenwei Yao, **Eye tracking**, "An Eye Tracking Method to Extend the Viewing Zone in Multiview 3D Displays"
- OTH2A-02) Takumi Sakamoto, **Aerial display**, "Virtual Image Suppression in Aerial Display Using Volume HOE and DCRA"

## Display

- OFP3B-01) Bernard Kress, **AR**, "Hardware challenges for implementing metaverse-compatible use cases on smart glasses"
- OFP3B-02) Takuma Kuno, **HMD**, "Two-dimensional Beam Splitter Array Waveguide for High Luminance and Large Eye-box Head Mounted Display"
- OFP3B-03) Myeong-Ho Choi, **AR**, "Optical see-through near-eye display for augmented reality with focus cue support"

## Head Mount Display

- OTH4B-01) Liangcai Cao, **Colormeter**, "Ray files reconstruction based on the computational photometric calibration"
- OWP1A-04) Shuji Ono, **Multispectral**, "Snapshot multispectral imaging using a pixel-wise color polarization image"
- OFP3B-05) Laura Arévalo, **Spectroscopy**, "Bimodal Vibrational Spectroscopy for Simultaneously Operating Raman and FTIR"

## Color

## Optical Device