MOC2025 TECHNICAL PROGRAM

Sunday, 12 October

Satellite Event: High School Session
10:00–11:00 Poster Session
11:00–12:30 Tutorial Talks

Photonics integration and devices by semiconductor material
Y. Chiu, *National Sun Yat-sen Univ. (Taiwan)*

The history of telescopes and binoculars
T. Yatagai, *Utsunomiya Univ. and Univ. of Tsukuba (Japan)*

12:30–13:00 Award Ceremony for High Schools

Lunch (13:00–14:00)

14:00–16:30 Session SS: Special Session “Microoptics for Sustainable Society ~ Green Photonics"
Chairs: Y. Kokubun, *Institute of Technologists*
O. Sugihara, *Utsunomiya Univ.*

SS-1 Creating innovations to realize Society 5.0 and beyond
14:00 K. Kyuma, *National Agriculture and Food Research Organization (Japan)*

SS-2 Opportunities and challenges of photonics as sustainable infrastructure
14:45 S. Namiki, *AIST (Japan)*

Break (15:15–15:30)

SS-3 TBD
15:30 S. Hirai, *Canon Inc. (Japan)*

SS-4 Green photonics initiatives at Utsunomiya University
16:00 N. Hagan, *Utsunomiya Univ. (Japan)*

Break (16:30–17:00)

17:00–19:00 Welcome Party

9:00–9:15 Opening Remarks

Conference Co-chairs:
S. Kimura, *Toshiba Corp.*
K. Ogawa, *Japan Women's Univ.*

9:15–12:30 Session PS: Plenary Session

Chairs: S. Kimura, *Toshiba Corp.*
K. Ogawa, *Japan Women's Univ.*

PS-1 Nanostructured photonic devices and circuits
9:15 T. Baba, *Yokohama National Univ. (Japan)*

PS-2 VCSEL progress - High power and array -
10:00 K. Choquette, *Univ. of Illinois (USA)*

Break (10:45–11:00)

PS-3 Revolution of nanophotonics, silicon photonics
11:00 M. Lipson, *Columbia Univ. (USA)*

PS-4 Next-generation sensing with micro-optics
11:45 H. Ottevaere, *Vrije Universiteit Brussel (Belgium)*

12:30–12:45 MOC Award Ceremony

Lunch (12:45–13:45)

13:45–15:30 Session A: Integrated Nonlinear and Topological Photonics

Chairs: TBD
TBD

A-1 TBD (Invited)
13:45 A. L. Gaeta, *Columbia Univ. (USA)*

A-2 Monolithically integrated terahertz light source (Invited)
14:15 M. Jarrahi, *Univ. of California, Los Angeles (USA)*

A-3 On-chip pulse analyzer implemented on a silicon photonics chip
14:45 K. Kondo, R. Hayama, and O. Sugihara, *Utsunomiya Univ. (Japan)*

A-4 Observation of lasing in chiral edge states induced by synthetic gauge fields in photonic crystals
15:00 C. H. Jeng, Y. H. Chen, J. S. Wu, and T. C. Lu, *National Yang Ming Chiao Tung Univ. (Taiwan)*

A-5 Observed peculiarities of high-speed dynamics of the Kerr effect and two-photon absorption in
15:15 **silicon nanowire waveguides**
S. Heinsalu, V. Zayets, and A. Noriki, *AIST (Japan)*

15:30–17:30 Session PO: Poster Session

Chairs: H. Ishii, *Furukawa Electric Co., Ltd.*
T. Kita, *Waseda Univ.*

(15:30–16:30) Even numbers
(16:30–17:30) Odd numbers

PO-1 Evaluation of laguerre–gaussian beam propagation under rain using split-step beam propagation and phase screen methods
A. Onoe, M. Teranishi, and K. Ogawa, *Japan Women's Univ. (Japan)*

PO-2 A six-port Si_3N_4 resonant filter design with bus waveguides vertically and sideways coupled to a microring resonator for 3D photonic networks-on-chip
W. Zhou and S. Lam, *Xi'an Jiaotong-Liverpool Univ. (China)*

PO-3 Differentiable design of freeform projector with spatial light modulator
H. Wang[1], J. Liu[2], and Y. Luo[2], [1]*Shenzhen Univ. (China),* [2]*Tsinghua Univ. (China)*

PO-4 Molecular dynamics-based modeling of infrared absorption in acetone under varying concentrations
C. Y. Shin[1], B. S. Shin[2], and K. Hamamoto[1], [1]*Pusan National Univ. (Korea),* [2]*Kyushu Univ. (Japan)*

PO-5 Near infrared emission enhancement of quantum emitter embedded in SiC pillar-based lattice
M. A. Ahamad and F. A. Inam, *Aligarh Muslim Univ. (India)*

PO-6 Dielectric dipole nanoantenna design for enhanced and directional emission from SiV color centers
M. A. Ahamad, *Aligarh Muslim Univ. (India)*

PO-7 Detachable light-induced self-written optical waveguides and optical self-couplings
M. Ichioka, T. Takizawa, H. Terasawa, S. Tamesue, O. Sugihara, and H. Kakurai, *Utsunomiya Univ. (Japan)*

PO-8 Fabrication of curved optical waveguide by light-induced self-written method with camera film mask
M. Tomiki, *Shizuoka Univ. (Japan)*

PO-9 Design of polarization and intensity distribution for laser drilling of an odd-shaped hole using deep learning-based surrogate model
A. Mizutani and A. Kitamura, *Osaka Metropolitan Univ. (Japan)*

PO-10 Optical properties of temperature-dependent polymer dispersed liquid crystal based on observation of internal microstructures
A. Ogiwara[1] and H. Kakiuchida[2], [1]*Kobe City College of Technology (Japan),* [2]*AIST (Japan)*

PO-11 Study on the temperature and injection-current dependences of electroluminescence from GaN-based optoelectronic devices
C.-H. Wu, J.-C. Wu, and Y.-F. Wu, *Ming Chi Univ. of Tech. (Taiwan)*

PO-12 Tuning the optical properties of metallic nanostructures by sputtering current
D. D. P. W. Patabendige, *Utsunomiya Univ. (Japan)*

PO-13 Brillouin optical correlation-domain reflectometry based on convexity extraction algorithm
R. Inoue[1], Y. Kosaka[1], R. Mogami[1], K. Kikuchi[1], Y. Mizuno[2], and H. Lee[1], [1]*Shibaura Inst. of Tech. (Japan),* [2]*Yokohama National Univ. (Japan)*

PO-14 Diagnosis of temporomandibular joint disorders using second harmonic imaging of collagen fibers with multivariate curve analysis
C. Wang[1], H.-C. Chui[1], Z. Xiao[2], and R. Li[1], [1]*Dalian Univ. of Technology (China),* [2]*First Affiliated Hospital of Dalian Medical Univ. (China)*

PO-15 Design of high-efficiency Nb_2O_5-based grating coupler in integrated LDV for 3D velocity distribution measurement
I. Hamada[1], K. Maru[1], K. Nakatsuhara[2], and Y. Hayama[2], [1]*Kagawa Univ. (Japan),* [2]*Kanagawa Inst. of Tech. (Japan)*

PO-16 Tapering acrylic plastic optical fibers with hot water: transmission loss behavior under tension
S. Tsurugai[1], R. Yamamoto[1], K. Kikuchi[1], Y. Mizuno[2], and H. Lee[1], [1]*Shibaura Inst. of Tech. (Japan),* [2]*Yokohama National Univ. (Japan)*

PO-17 Spectral limits of the rainbow
N. Hagen, Y. Yamamoto, and R. Ranjan, *Utsunomiya Univ. (Japan)*

PO-18 Temperature sensing based on multimodal interference in highly nonlinear fibers
S. Tanaka[1], K. Kikuchi[1], Y. Mizuno[2], and H. Lee[1], [1]*Shibaura Inst. of Tech. (Japan),* [2]*Yokohama National Univ. (Japan)*

PO-19 Influence of systematic core offset variation on sensitivity in SNS fiber sensor
A. Majee[1], K. Dey[2], and S. Roy[1], [1]*National Inst. of Tech. Warangal (India),* [2]*Missouri Univ. of Sci. and Tech. (USA)*

PO-20 Adapting a conventional microscope for multimodal 2D+1D imaging and spectral analysis of biological tissue
P. Thonglim, R. Ranjan, and N. Hagen, *Utsunomiya Univ. (Japan)*

PO-21 Spectral domain optical coherence tomography using multi-wavelength light sources for simultaneous water sensing applications
T. Kono and N. Ozaki, *Wakayama Univ. (Japan)*

PO-22 In-process mesurement of photodetector photocurrent during femtosecond laser surface structuring
Y. Someta and Y. Hayasaki, *Utsunomiya Univ. (Japan)*

PO-23 Evaluating noise profiles in femtosecond stimulated Raman scattering: A triple-laser approach
R. Ranjan, *Utsunomiya Univ. (Japan)*

PO-24 Axial strain sensing utilizing In-Fiber microcavity interrogated by OTDR
A. Majee[1], K. Dey[2], and S. Roy[1], [1]*National Inst. of Technology Warangal (India),* [2]*Missouri Univ. of Sci. and Tech. (USA)*

PO-25 Development and evaluation of a spectral color management system for identifying colors in a small area
T. Nakayama[1], N. Hashimoto[1], C. Okawa[1], G. Shinya[1], K. Kodate[1,2], R. Tabata[3], and M. Kubo[3], [1]*Photonic System Solutions Inc. (Japan),* [2]*Japan Women's Univ. (Japan),* [3]*Shogakukan Music & Digital Entertainment Co., Ltd. (Japan)*

PO-26 Optimization of detection area for detecting disease symptoms of mango stem-end rot by fluorescence using blue LED and hyperspectral camera
A. Ohkubo, K. Makinose, Y. Iwakiri, and M. Arai, *Miyazaki Univ. (Japan)*

PO-27 Design of a microring resonator using Nb_2O_5 horizontal slot waveguides for sensing devices
Y. Shimamura, U. Endo, H. Kinoshita, Y. Hayama, and K. Nakatsuhara, *Kanagawa Inst. of Tech. (Japan)*

PO-28 Structural optical flow calibrated volumetric phase compensation for high-resolution optical coherence elastography
S. Satpathy and R. Poddar, *Birla Inst. of Tech. (India)*

PO-29 Influence of LiDAR optical window on acquired information
K. Muro, *Teikyo Univ. (Japan)*

PO-30 Withdrawn

PO-31 Non-destructive honey quality control through dynamic laser speckle particle counting
H. B. Patel and A. K. Nirala, *Indian Inst. of Tech. (ISM) DHANBAD (India)*

PO-32 Evaluation of velocity mismatch in a traveling-wave lithium niobate modulator integrated with an electro-optic equalizer for 100 GHz bandwidth
S. Takano[1,2], S. Hirata[2], Y. Kataoka[2], J. Ichikawa[2], R. Shimizu[2], Y. Yamaguchi[3], K. Akabane[3], and R. Takigawa[1], [1]*Kyushu Univ. (Japan),* [2]*Sumitomo Osaka Cement Co., Ltd. (Japan),* [3]*NICT (Japan)*

PO-33 Proposal and design of a novel Built-in Channel Waveguide (BCW) laser
A. Albert[1], Z.-J. Sun[1], I. Novitasari[1], A. Kasukawa[1,2,3], and S.-L. Lee[1,3], [1]*National Taiwan Univ. of Sci. and Tech. (Taiwan),* [2]*Yushan Fellow, Ministry of Education (Taiwan),* [3]*Heterogeneously-integrated Silicon Photonic Integration Center (Taiwan)*

PO-34 High-efficiency device structure of n-type InP/electro-optic polymer hybrid optical modulator
K. Ikai and J. Fujikata, *Tokushima Univ. (Japan)*

PO-35 Improvement of optical isolation in GaN-based monolithically integrated Micro-LEDs
J. Keller, I. Sato, H. Shibano, T. Onuma, T. Yamaguchi, and T. Honda, *Kogakuin Univ. (Japan)*

PO-36 Single-mode wide-width waveguides enabled by photonic graphene ribbons with air claddings
C. Zhang, N. Ishida, and S. Iwamoto, *The Univ. of Tokyo (Japan)*

PO-37 A study of coupling characteristics of holographic optical element as a multi-mode fiber coupler for underwater optical receiver
T. Manabe[1,2], S. Motoyama[1,2], H. Yamashita[2], Y. Ichihashi[2], K. Wakunami[2], R. Oi[2], and Y. Takayama[1], [1]*Tokai Univ. (Japan),* [2]*NICT (Japan)*

PO-38 Directionality improvement of grating coupler by reflective layer cladding
Y. Mima[1], K. Ozawa[1], J. Inoue[1], K. Kintaka[2], and S. Ura[1], [1]*Kyoto Inst. Tech. (Japan),* [2]*AIST (Japan)*

PO-39 Self-written optical waveguide and optical self-coupling using 2 μm laser light
M. Shiba, H. Terasawa, K. Kondo, and O. Sugihara, *Utsunomiya Univ. (Japan)*

PO-40 Design of a multi-focal fresnel lens employing liquid crystal loaded metasurface
T. Nishitake[1], K. Nakamura[1], R. Naka[1], S. Fukushima[1], T. Nagayama[1], T. Watanabe[1], and H. Kikuchi[2], [1]*Kagoshima Univ. (Japan),* [2]*Kyushu Univ. (Japan)*

PO-41 Compact and low-loss silicon photonic polarization beam splitter designed by auto-differentiation
H. Soda, *Independent Consultant (Japan)*

PO-42 Electromagnetic analysis of chiral metasurface structure and its nonlinear effect on optical reservoir computing, compared with ring resonator
N. Ru, J. Fujikata, and S. Akito, *Tokushima Univ. (Japan)*

PO-43 Properties of the optical connectors using ball lenses for connecting single-mode optical fibres exposed to gamma radiation
V. Prajzler[1], M. Zikmund[1], and J. Stefl[2], [1]*Czech Technical Univ. in Prague (Czech Republic),* [2]*OPTOKON, a.s. (Czech Republic)*

PO-44 Highly energy-efficient photonic modulator based on directional coupler
J. Ye, T. Wu, C. Patil, Q. Cai, A. Bazammul, E. Heidari, and H. Dalir, *Univ. of Florida (USA)*

PO-45 Ultrasound-induced control in liquid crystal structures
J. Onaka[1], Y. Kim[1], D. Koyama[2], N. Hagen[1], and Y. Otani[1], [1]*Utsunomiya Univ. (Japan),* [2]*Doshisha Univ. (Japan)*

PO-46 3-stage Mach-Zehnder interferometer optical switch with ripple-free response
T. Watanabe, D. Ishio, T. Nagayama, and S. Fukushima, *Kagoshima Univ. (Japan)*

PO-47 Dual-input electro-optic modulator with ultralow energy consumption for monolithic integrated photonics
T. Wu, C. Patil, J. Ye, Q. Cai, B. Jahannia, E. Heidari, and H. Dalir, *Univ. of Florida (USA)*

PO-48 Numerical analyses of QPM-tuning characteristics of PPLN-based all-optical ultra-fast 3R circuits
Y. Fukuchi, D. Shiratori, T. Kimura, K. Hirata, and J. Maeda, *Tokyo Univ. of Science (Japan)*

PO-49 Resolution enhancement of passive optical phased arrays using a star coupler
M. Komoda, R. Taniguchi, and T. Kita, *Waseda Univ. (Japan)*

PO-50 A proposal for technique of light-induced self-written waveguide formation using a lasing mechanism
S. Watanabe, K. Kondo, H. Terasawa, and O. Sugihara, *Utsunomiya Univ. (Japan)*

PO-51 A compact multi-mode-interferometer (MMI) based 4 x 4 Mode-Division-Multiplexing (MDM) mode switch on silicon photonics platform
T.-Y. Hung and C.-W. Chow, *National Yang Ming Chiao Tung Univ. (Taiwan)*

PO-52 Structural design of hybrid periodically poled TFLN waveguide inducing multi-nonlinear optical effects
Y. Kitamura[1,2], R. Kou[2], T. Kita[3], N. Yamamoto[2], C. Guangwei[2], K. Yamada[2], and A. Ishizawa[1], [1]*Nihon Univ. (Japan),* [2]*AIST (Japan),* [3]*Waseda Univ. (Japan)*

PO-53 Bidirectional Optical Wireless Communication (OWC) using Unmanned-Aerial-Vehicle (UAV) with improved reliability
Y.-H. Chang[1,2], C.-W. Chow[1], C.-H. Yeh[3], Y.-H. Hong[2], and H.-C. Kuo[2], [1]*National Yang Ming Chiao Tung Univ. (Taiwan),* [2]*Hon Hai Research Inst. (Taiwan),* [3]*Feng Chia Univ. (Taiwan)*

PO-54 Holographic laser processing for the fabrication of micro-optical devices
H. Fujiki, Y. Hayasaki, and S. Hasegawa, *Utsunomiya Univ. (Japan)*

PO-55 Evaluation of transmitter-side phase correction filters for long-range laser wireless power transmission using laguerre-gaussian beams
S. Terauchi and K. Ogawa, *Japan Women's Univ. (Japan)*

PO-56 Investigation of free-space optical communication (FSOC) under turbulence over single-mode fiber and multi-mode fiber connected receivers at different wavelengths
B.-H. Lin, P.-L. Chiu, Y.-Z. Lin, Y.-H. Jian, and C.-W. Chow, *National Yang Ming Chiao Tung Univ. (Taiwan)*

PO-57 Performance evaluation of LG beams in strong underwater turbulence with pix2pix-based phase compensation filter
M. Teranishi, K. Takeuchi, and K. Ogawa, *Japan Women's Univ. (Japan)*

PO-58 Computer generated hologram optimized using laser-generated luminescence in holographic laser processing machine
K. Takahashi, S. Hasegawa, and Y. Hayasaki, *Utsunomiya Univ. (Japan)*

PO-59 Compensation for positional and angular errors on mode sorting for orbital angular momentum optical beam
K. Mitani[1], H. Kishikawa[1], S.-K. Liaw[2], and J.-Y. Sung[2], [1]*Tokushima Univ. (Japan),* [2]*National Taiwan Univ. Sci. and Tech. (Taiwan)*

PO-60 Filter comparison of wavelength routers in wavelength routing networks
K. Oguchi, C.-C. Chung, and B.-S. Yang, *National Taiwan Univ. of Sci. and Tech. (Taiwan)*

PO-61 Effect of temporal coherence on mode separation in multiplexed OAM beams
T. Hamada and H. Kishikawa, *Tokushima Univ. (Japan)*

17:30–18:30 The 25th Microconcert

9:00–10:30 Session B: Optical Sensing and Imaging Technologies

Chairs: TBD
TBD

B-1 **Computational imaging through scattering media with synthetic waves (Invited)**
9:00 F. Willomitzer, *Univ. of Arizona (USA)*

B-2 **Monolithically integrated 4×1 surface-grating VCSEL array scanner for compact solid-state LiDAR**
9:30 **applications**
A. M. A. Hassan[1,2], F. Koyama[1], and X. Gu[1,3], [1]*Science Tokyo (Japan),* [2]*Al-Azhar Univ. Assuit (Egypt),* [3]*Ambition Photonics Inc. (Japan)*

B-3 **Ultra-high-resolution linear scale using circular optical system -design of an optical system for**
9:45 **enhanced subdivision-**
T. Zhou, S. Masui, M. Michihata, and S. Takahashi, *The Univ. of Tokyo (Japan)*

B-4 **Liquid-crystal-layer thickness-distribution measurement by scaling-factor determination with full-**
10:00 **voltage-range retardation curves**
N. Kato, Y. Takiguchi, K. Nakamura, and H. Tanaka, *Hamamatsu Photonics K.K. (Japan)*

B-5 **Areal surface texture measurement with film thickness calibration using two fluorescence intensity**
10:15 **ratio**
S. Fujii, S. Masui, M. Michihata, and S. Takahashi, *The Univ. of Tokyo (Japan)*

Break (10:30–11:00)

11:00–12:30 Session C: Optical Sensing Enabled by Integrated Photonics

Chairs: TBD
TBD

C-1 **Free-form nanostructured optical fibers: the state of the art and future perspectives (Invited)**
11:00 R. Buczynski, *Univ. of Warsaw (Porland)*

C-2 **Silicon photonics based interferometric fiber optic gyroscope with hybrid integrated III-V photodiode**
11:30 **and miniaturized thermoelectric cooler**
S.-T. Yang, W.-X. Chen, and Y.-J. Hung, *National Sun Yat-sen Univ. (Taiwan)*

C-3 **Group birefringence measurement of a polarization-maintaining fiber using a chip-based Sagnac**
11:45 **interferometer with grating couplers**
Y.-M. Lin, W.-X. Chen, and Y.-J. Hung, *National Sun Yat-sen Univ. (Taiwan)*

C-4 **Smartphone-integrated optical biosensor based on gradient guided-mode resonance**
12:00 C.-S. Huang, Y.-P. Lei, and T.-Z. Lin, *National Yang Ming Chiao Tung Univ. (Taiwan)*

C-5 **Demonstration of optical hydrogen sensor based on silicon microring resonator with Pt/WO_3-SiO_2**
12:15 **film**
A. Sato, Y. Eto, S. Okazaki, Y. Nishijima, and T. Arakawa, *Yokohama National Univ. (Japan)*

Lunch (12:30–14:00)

14:00–15:45 Session D: VCSELs and High-Density Optical Communication Devices

Chairs: TBD
TBD

D-1 **High-speed VCSELs and APDs arrays for free-space optical communications (Invited)**
14:00 J.-W. Shi, *National Central Univ. (Taiwan)*

D-2 14:30 **Membrane surface-emitting lasers with distributed reflectors exhibiting highly-efficient single-mode lasing in O-band**
T. Tsurugaya[1], Y. Maeda[1], T. Aihara[1], T. Fujii[1], E. Kanno[1], K. Takeda[1], T. Sato[1], F. Koyama[2], and S. Matsuo[1], [1]*NTT Corp. (Japan),* [2]*Science Tokyo (Japan)*

D-3 14:45 **Single-mode 48-channel 1060nm metal aperture VCSEL array enabling 9.6Tbps data throughput**
H. R. Ibrahim[1,2], A. Hassan[1,3], C. Ge[1], X. Gu[1,4], and F. Koyama[1], [1]*Science Tokyo (Japan),* [2]*Minia Univ. (Egypt),* [3]*Al-Azhar Univ. (Egypt),* [4]*Ambition Photonics Inc. (Japan)*

D-4 15:00 **Development of high power DFB lasers with high power conversion efficiency for external laser sources**
T. Yoshida, G. Kobayashi, A. Imamura, and H. Ishii, *Furukawa Electric Co., Ltd. (Japan)*

D-5 15:15 **Optical pigtailing 64 channel silicon photonics grating couplers through a two-dimensional fiber array for co-packaged optics applications**
C.-H. Shih and Y.-J. Hung, *National Sun Yat-sen Univ. (Taiwan)*

D-6 15:30 **Enabling wavelength tunability in 980-nm vertical-cavity surface-emitting lasers utilizing exceptional points**
T. Wu, Q. Cai, J. Ye, B. Jahannia, H. Dalir, and E. Heidari, *Univ. of Florida (USA)*

Break (15:45–16:00)

16:00–17:00 Session E: Photonic Signal Processing and Acceleration Technologies
Chairs: TBD
TBD

E-1 16:00 **Boosting photonic computing efficiency with photonic memory and energy efficient ADC/DAC design (Invited)**
H. Dalir, *Univ. of Florida (USA)*

E-2 16:30 **High-dimensional quantum random number generation by metalens array**
S. Chen, Y. Fan, and D. P. Tsai, *City Univ. of Hong Kong (Hong Kong)*

E-3 16:45 **Photonic data encoding/decoding using hybrid fourier phase shift neural network**
T. Wu, J. Ye, A. S. Bazammul, Q. Cai, B. Jahannia, H. Dalir, and E. Heidari, *Univ. of Florida (USA)*

Break (17:00–17:15)

17:15–18:30 Session F: Novel Nanophotonic Structures
Chairs: TBD
TBD

F-1 17:15 **Waveguide integration and micro-LED-on-CMOS optical pumping of micron-scale photonic devices on-chip (Invited)**
M. Strain, *University of Strathclyde (UK)*

F-2 17:45 **Analysis of oblique-incidence effects on metasurface beam shaper for optical wireless power transmission**
N. Ochiai[1,2], Y. Toriumi[1], M. Takahashi[1], and S. Iwamoto[2], [1]*NTT Space Environment and Energy Labs. (Japan),* [2]*The Univ. of Tokyo (Japan)*

F-3 18:00 **Nonlocal meta-lens for high-quality-factor wavefront shaping**
R. Lin, J. Yao, and D. P. Tsai, *City Univ. of Hong Kong (Hong Kong)*

F-4 18:15 **Demostration of ultra-compact nano-pixel optical mode switch**
Y. Xie, P. Lin, H. Jiang, and K. Hamamoto, *Kyushu Univ. (Japan)*

Banquet (19:00–21:00)

9:00–10:30 Session G: Terahertz Photonics and Innovations in Spatial Beam Control

Chairs: TBD
TBD

G-1 9:00 **Generation of frequency-spacing tunable and bandwidth enhanced OFC signals using nonlinear semiconductor laser dynamics in a 3-stage cascaded optical injection system**
H.-T. Tang and Y.-H. Hung, *National Sun Yat-sen Univ. (Taiwan)*

G-2 9:15 **Polarization-division multiplexed terahertz transmission with a photonic dual-feed 2D array antenna**
M. Kawano, Y. Kamiura, R. Kaide, S. Iwamoto, Y. Mikami, and K. Kato, *Kyushu Univ. (Japan)*

G-3 9:30 **Generation of modulated THz waves using a two-wavelength tunable silicon photonics heterogeneous laser diode**
K. Tsujishita, S. Kawano, and T. Kita, *Waseda Univ. (Japan)*

G-4 9:45 **Cost-effective photonics-based THz frequency-division multiplexer by electro-optically tunable RTF lasers**
S. Ye[1], Y. Wang[1], B. Li[1], R. Kaide[1], Y. Mikami[1], Y. Ueda[2], and K. Kato[1], [1]*Kyushu Univ. (Japan),* [2]*NTT Device Technology Labs. (Japan)*

G-5 10:00 **Vision-kinematic fusion approach for real-time safety of steerable beams in optical wireless power transmission**
C. Zuo and T. Miyamoto, *Science Tokyo (Japan)*

G-6 10:15 **High-sensitivity on-chip autocorrelator with two-photon absorption avalanche photodiode array**
N. Koyama, O. Sugihara, and K. Kondo, *Utsunomiya Univ. (Japan)*

Break (10:30–11:00)

11:00–12:30 Session H: Materials for Functional Photonic Devices

Chairs: TBD
TBD

H-1 11:00 **TBD (Invited)**
A. A. High, *Argonne National Laboratory (USA)*

H-2 11:30 **Reflective plasmonic fano sensor using a double-layer Au diffraction–grating structure**
A. Motogaito[1], K. Ukai[1], T. Nabuchi[1], T. Kato[2], and K. Hiramatsu[1], [1]*Mie Univ. (Japan),* [2]*Nagoya Univ. (Japan)*

H-3 11:45 **Photo and electro switchable guest-host cholesteric liquid crystals**
W.-H. Wu[1], Y.-Y. Chen[2], L.-M. Chang[1], W.-C. Lin[1], H.-H. Chen[2], and C.-T. Wang[1], [1]*National Sun Yat-Sen Univ. (Taiwan),* [2]*National Taipei Univ. of Tech. (Taiwan)*

H-4 12:00 **Broadband and polarization-selective reflection from a single-layer cholesteric liquid crystal film**
P.-C. Shih[1], Y.-M. Huang[1], C.-T. Chen[1], C.-C. Li[2], K.-W. Lin[2], W.-C. Lin[1], and C.-T. Wang[1], [1]*National Sun Yat-Sen Univ. (Taiwan),* [2]*Brilliant Optronics Co., Ltd. (Taiwan)*

H-5 12:15 **Flexible light-induced self-written optical waveguide with cladding fabricated by advanced selective polymerization process**
R. Futawatari[1,2], H. Terasawa[2], K. Kondo[2], and O. Sugihara[2], [1]*Orbray Co., Ltd. (Japan),* [2]*Utsunomiya Univ. (Japan)*

Lunch (12:30–13:30)

13:30–15:00 Session I: Photonic Integration for Communication Systems

Chairs: TBD
TBD

I-1 **Erbium-doped photonic integrated circuits and applications (Invited)**
13:30 Y. Liu, *Huazhong Univ. of Science and Technology (China)*

I-2 **Cascaded triple ring resonators with low-loss waveguide bends for dense wavelength division (de)**
14:00 **multiplexing**
Y.-M. Lee, P.-C. Hung, C.-H. Chen, and Y.-J. Hung, *National Sun Yat-sen Univ. (Taiwan)*

I-3 **The influence of rear facet phase fluctuations on the linewidth characteristics of high-power MSPCG**
14:15 **DFB lasers**
S. Sulikhah[1,2], H.-C. Chou[1], and S.-L. Lee[1,2], [1]*National Taiwan Univ. of Science and Technology (Taiwan),* [2]*Heterogeneously-integrated Silicon Photonic Integration Center (Taiwan)*

I-4 **Wavelength and free-spectral-range control of a silicon nitride based Mach-Zehnder interferometer**
14:30 **for DWDM applications**
C. Chien, C. Chen, and Y. Hung, *National Sun Yat-sen Univ. (Taiwan)*

I-5 **Photonic crystal nanolasers wedged into silicon waveguides**
14:45 T.-W. Lu, H.-C. Chen, C.-W. Chen, and P.-T. Lee, *National Yang Ming Chiao Tung Univ. (Taiwan)*

Break (15:00–15:30)

15:30–16:15 Session PD: Postdeadline Session

Chairs: H. Ishii, *Furukawa Electric Co., Ltd.*
T. Kita, *Waseda Univ.*

PD-1 **TBD**
15:30 TBD, *TBD*

PD-2 **TBD**
15:45 TBD, *TBD*

PD-3 **TBD**
16:00 TBD, *TBD*

16:15–16:45 Paper Award Ceremony / Closing Remarks

Program Co-chairs: H. Ishii, *Furukawa Electric Co., Ltd.*
T. Kita, *Waseda Univ.*