

Technical Sessions

Monday, 26 October

International Conference Room (5F)

9:00-9:15 Opening Remarks

Conference Co-chairs:

R. Katayama, *Fukuoka Inst. Tech.*

M. Itoh, *NTT Corp.*

9:15-10:45 Session A: Plenary

Chairs:

R. Katayama, *Fukuoka Inst. Tech.*

M. Itoh, *NTT Corp.*

A1 History and recent progress on LiNbO₃ modulators

9:15 (Plenary)

M. Izutsu, *JSPS / Waseda Univ.*

A2 Evolution of small lasers and resonators (Plenary)

9:45 Y.-H. Lee, *Korea Advanced Institute of Science and Technology (KAIST)*

A3 Emerging fibre technology for the Petabit/s era (Plenary)

10:15 D. Richardson, *Univ. Southampton*

Break (10:45-11:00)

11:00-12:45 Session B: Imaging and Sensing

Chairs:

E. Acosta, *Univ. Santiago de Compostela*

N. Mori, *Konica Minolta, Inc.*

B1 Optical manipulation with two beam traps in microfluidic polymer systems (Invited)

11:00

M. K. Arvelo^{1,2}, M. Matteucci², K. T. Sørensen², B. Bilenberg³, C. Vannahme², A. Kristensen², and K. Berg-Sørensen¹, ¹DTU Physics, *Technical University of Denmark*, ²DTU Nanotech, *Technical University of Denmark*, ³NIL Technology

B2 High-resolution and simultaneous measurement in the depth direction using virtual phase conjugation for optical tomography

11:30

Y. Goto¹, A. Okamoto¹, A. Shibukawa², A. Tomita¹, and M. Takabayashi³, ¹Hokkaido University, ²California Institute of Technology, ³Kyushu Institute of Technology

B3 In-vivo human skin imaging by monochromatic source optical coherence tomography

11:45

K. Osawa¹, H. Minemura¹, D. Tomita², T. Shimanaka², T. Suzuki², N. Matsuura², and K. Watanabe¹, ¹Hitachi, Ltd., ²Hitachi-LG Data Storage, Inc.

B4 Ultra-thin multi-aperture depth monitoring camera modules with megapixel resolution

12:00

A. Bräuer, A. Brückner, F. Wippermann, and A. Oberdörster, *Fraunhofer Institute IOF*

B5 Dual beam single-mode vertical cavity surface emitting lasers using high-index contrast grating

12:15

S. Inoue¹, A. Matsutani², H. Ohtsuki³, T. Miyashita³, and F. Koyama¹, ¹Photonics Integration System Research Center, *Tokyo Institute of Technology*, ²Semiconductor and MEMS Processing Center, *Technical Department, Tokyo Institute of Technology*, ³SAMCO, Inc.

Technical Sessions

Monday, 26 October

- B6** Speckle reduction using twin green laser diodes and oscillation of MEMS scanning mirror for pico-projector
12:30 J.-Y. Lee¹, T.-H. Kim², J.-U. Bu², and Y.-J. Kim¹, ¹Yonsei University, ²SenPlus Ltd.

Lunch (12:45-14:00)

14:00-16:00 Session C: Novel Devices and Applications

Chairs: Y.-J. Kim, *Yonsei Univ.*
S. Ura, *Kyoto Inst. Tech.*

- C1** Passive radiative cooling below ambient air temperature under direct sunlight (Invited)
14:00 S. Fan, *Stanford Univ.*

- C2** Lasing in a ZnO membrane microcavity with designable shape fabricated by focused ion beam milling
14:30 T.-C. Chang¹, Y.-Y. Lai¹, Y.-H. Chou^{1,2}, and T.-C. Lu¹, ¹Department of Photonics, National Chiao Tung University, ²Institute of Lighting and Energy Photonics, National Chiao Tung University

- C3** Parity-time optical metamaterial devices
14:45 Z. J. Wong¹, L. Feng¹, R.-M. Ma¹, Y. Wang^{1,2}, and X. Zhang^{1,2}, ¹University of California Berkeley, ²Lawrence Berkeley National Laboratory

- C4** Electrically driven surface plasmon polaritons circuits
15:00 K. Kwon, K. Choi, J.-B. You, J. Shin, and K. Yu, *Korea Advanced Institute of Science and Technology (KAIST)*

- C5** Tunable terahertz metamaterials based on ultra-subwavelength graphene-dielectric structures
15:15 L. Liu, H. and H. T. Hattori, *University of New South Wales*

- C6** Fabrication and measurement of vertical split-ring resonators for light manipulation and metasurface (Invited)
15:30 P. C. Wu¹, W.-L. Hsu¹, W. T. Chen¹, Y.-W. Huang¹, C. Y. Liao¹, W.-Y. Tsai¹, A. Q. Liu², N. I. Zheludev³, G. Sun⁴, and D. P. Tsai^{1,5}, ¹National Taiwan University, ²Nanyang Technological University, ³University of Southampton, ⁴University of Massachusetts Boston, ⁵Academia Sinica

Break (16:00-16:15)

16:15-17:45 Session D: Guided Optics

Chairs: A. Bräuer, *Fraunhofer IOF*
Y. Ando, *Fujikura Ltd.*

- D1** Photonic lanterns for mode-division multiplexing
16:15 (Invited)
S. G. Leon-Saval, *Sydney Univ.*

- D2** Full mode analysis of vector components of degenerated LP modes in few mode fibers from intensity profile through angled polarizer
16:45 Y. Kokubun¹, T. Watanabe², K. Morita³, and R. Kawata³, ¹Yokohama National University, Faculty of Eng., ²Yokohama National University, Graduate School of Eng., ³Yokohama National University, College of Engineering Sciences

Technical Sessions

Monday, 26 October

- D3** First demonstration of electrically controlled mode switching
17:00 R. Imansyah, L. Himbele, H. Jiang, and K. Hamamoto, *Kyushu University*
- D4** 1×8 silicon-silica hybrid thermo-optic switch with multi-chip configuration based on optical phased array
17:15 S. Katayose, Y. Hashizume, and M. Itoh, *NTT Corporation*
- D5** Demonstration of magneto-optical switch with amorphous silicon waveguides on magneto-optic garnet
17:30 E. Ishida¹, K. Miura¹, Y. Shoji², T. Mizumoto¹, N. Nishiyama¹, and S. Arai², ¹*Department of Electrical and Electronic Engineering, Tokyo Institute of Technology*, ²*Quantum Nanoelectronics Research Center, Tokyo Institute of Technology*

Break (17:45-18:00)

- 18:00-20:30** **Session E: Special Session**
"Challenge for novel organic optoelectronics - prospect for future organic lasers-"
Chairs: C. Adachi, *Kyushu Univ.*
S. Yokoyama, *Kyushu Univ.*
Y. Oki, *Kyushu Univ.*

- E1** Organic semiconductor lasers (Invited)
18:00 I. Samuel, *St Andrews Univ.*
- E2** Organic single-crystal light-emitting field-effect transistors (Invited)
18:30 S. Hotta, *Kyoto Inst. Tech.*
- E3** Light emitting transistor for lasers (Invited)
19:00 E. B. Namdas, *The University of Queensland*
- E4** Future prospects of organic and perovskite based solid-state lasers (Invited)
19:30 T. Riedl, *University of Wuppertal*
- E5** Recent progress in organic electronics and photonics: a perspective on the future of organic devices (Invited)
20:00 J.-L. Bredas, *King Abdullah University of Science and Technology*