

Room F (Sicily), 2F

Chair: Il-Sug Chung (UNIST)

**Th2F**

July 2 (Thu), 2026

LiDAR & Photonic Processors

10:15-11:45

**Th2F-1**

**10:15-10:30**

**Multiple-User OWC via Parallel Excited Optical Phased Arrays**

Caiming Sun, Jiarui Zhang  
The Chinese University of Hong Kong

Multiple-user optical wireless communications (OWC) are experimentally demonstrated with actively phase controlled and parallel excited optical phased arrays (OPA). The  $50^\circ \times 29.6^\circ$  angle coverage and 1-Gbps data rate are achieved with multi-wavelength multiplexing.

**Th2F-2**

**10:30-10:45**

**In-Situ Photoresistor Based Dual-Drop Port Microring Weight Bank**

Baojie Hou, Zichao Zhao, Qishen Liang, Haoran Ma, Bin Zhang, Lingzhi Yuan,  
Zhujun Wei, Ziyi Fu, Tingge Dai, Huihui Zhu, Yuehai Wang, Jianyi Yang  
Zhejiang University

We present a dual-drop weight bank incorporating in-situ photoresistor calibration, designed for photonic neural network processors. This structure realizes a tunable linear region for weight matrix mapping, with state calibration performed via in-situ resistors of dual microrings.

**Th2F-3**

**10:45-11:00**

**Sub-2 kHz Narrow-Linewidth 1550 nm DFB Laser for FMCW LiDAR Applications**

Te-Hua Liu, Yi-Hsuan Chen, Yen-Wei Li, Yu-Chun Chen, Chao-Hsin Wu  
National Taiwan University

A 600- $\mu\text{m}$ -cavity 1550-nm optimized DFB laser achieving 1.44-kHz Lorentzian linewidth, >53-dB SMSR, 50-mW output power, and 3.57-GHz chirp bandwidth under 100-kHz modulation is demonstrated for FMCW LiDAR.

**Th2F-4**

**11:00-11:15**

**Non-Volatile Micro-Ring Optical Switch on SiN-on-Glass for Panel-Level Interconnects**

SeongHyeok Bae, Taewon Jin, Simin Chen, Younghyun Kim  
Hanyang University

We propose a non-volatile ferroelectric-oxide-semiconductor micro-ring switch on SiN-on-glass for dense, low-power reconfigurable routing in large-scale packaging.

**Th2F-5 Invited**

**11:15-11:45**

**Scalable Optical Neural Network Chip based on Multi-Plane Light Conversion**

Takuo Tanemura, Chun Ren, Ryota Tanomura  
The University of Tokyo

Large-scale optical neural network processor based on multiplane light conversion (MPLC) is demonstrated on a silicon photonic chip. Strong nonlocal coherent coupling at each MPLC stage offers superior scalability for the number of phase shifters.