

Grand Ballroom 4 (Grand Ballroom 4), 2F

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Poster Session III

July 1 (Wed), 2026

10:00-11:45

P3-1 10:00-11:45

A Modified CMOS SPAD Structure for Improved Detection Probability and Jitter Performance

Liang-Jheng Chen, Jia-Heng Zhan, Jau-Yang Wu
National Taiwan University of Science and Technology

P3-2 10:00-11:45

Wavelength Demultiplexing Enabled by Guided-Mode Coupling Ge Photodetectors for Chip-Level Optical Interconnects

Ching-Yu Hsu¹, Xin-Yu Xie², Zingway Pei², Jia-Ming Liu^{1,2,3}
¹National Yang Ming Chiao Tung University, ²National Chung Hsing University, ³University of California

P3-3 10:00-11:45

Integrated 1535-nm Tx/Rx and High-Peak-Current Driver for Kilometer-Class Single-Point dToF LiDAR

Jui-Chuan Liu¹, Chien-Wei Huang¹, Chun-Nien Liu¹, Zing-way Pei¹, Cheng-Mu Tsai¹, Zhi-Ting Ye², Chun-Wei Tsai³, Wood-Hi Cheng¹
¹National Chung Hsing University, ²National Chung Cheng University, ³National United University

P3-4 10:00-11:45

High-Responsivity Blue Photodetectors based on n-ZnSe:Al/p-CuSCN Heterojunctions

Fang-Hsing Wang, Zhi-Xian Lin
National Chung Hsing University

P3-5 10:00-11:45

A High-Power Ge/Si Photodetector based on Hybrid Butt-and-Side-Coupling

Di Xu, Yuhang Wan, Jingyuan Hu, Zheng Zheng
Beihang University

P3-6 10:00-11:45

Active Pupil-Steering Module for Eyebow Expansion in Holographic Near-Eye Displays

Erkhembatar Dashdavaa, Erdenebayar Bayarsaikhan, Munkh-Uchral Erdenebat, MinSeok Kim, Ji-Sub Park, Hak-Rin Kim
Kyungpook National University

P3-7 10:00-11:45

Broadband High-Efficiency SPAD in 180 nm BCD Technology

Hyun-Seung Choi¹, Doyoon Eom¹, Injun Park², Young-Jin Woo², Youngcheol Chae^{1,2}, Myung-Jae Lee¹
¹Yonsei University, ²XO Semiconductor Inc.

P3-8 10:00-11:45

Design and Optimization of 3D-Stacked Backside-Illuminated SPADs

Hyo-Sung Park¹, Woo-Young Choi¹, Myung-Jae Lee^{1,2}
¹Yonsei University, ²TruPixel, Inc.

P3-9 **10:00-11:45**

Two-Dimensional Beam Steering and Phase Calibration of 32- and 128-Channel Optical Phased Arrays Using the REV Algorithm

Aibek Bekbergen, Il-Sug Chung
Ulsan National Institute of Science and Technology

P3-10 **10:00-11:45**

Deep Neural Network-Based Beam Routing for a Silicon Photonic Focal Plane Array

Yun-Jae Kwon, Jun-Cheol Kim, Yoon-Ho Sunwoo, Sang-Shin Lee
Kwangwoon University

P3-11 **10:00-11:45**

Inductive Peaking Enhanced 3-dB Bandwidth InGaAs PIN Photodiode for 200G PAM4 Operation

Shinmo An, Duk-Jun Kim, Seok-Jun Yun, Dong-Hun Lee, Young-Tak Han
Electronics and Telecommunications Research Institute

P3-12 **10:00-11:45**

Full-Polarization Vectorial Meta-Holography

Dengji He^{1,2}, Guanghao Xu^{1,2}, Jinwei Zeng^{1,2}, Jian Wang^{1,2}
¹Huazhong University of Science and Technology, ²Optics Valley Laboratory

P3-13 **10:00-11:45**

Flexible Integrated Photonics with Lowtemperature a-Si:H Sputtering

Wei-Hsuan Hsieh¹, Song-Ying Wu¹, Sheng-Hui Chen¹, Pei-Hsun Wang²
¹National Central University, ²National Yang Ming Chiao Tung University

P3-14 **10:00-11:45**

Air-Spaced Transparent Metasurface for Ultra-Broadband Polarization Conversion

Huu Lam Phan, Syed Ahson Ali Shah, Juhoon Baek, Doyoon Lee, Minkyung Kim
Gwangju Institute of Science and Technology

P3-15 **10:00-11:45**

Burst-Mode Femtosecond Laser Direct Writing of Ridge Waveguides in MgO:LiNbO₃

Tsung-Ching Li, Jhih-Wei Liao, Tzu-Cheng Liu, You-Qi Lin, Ya-Chih Tsai, Shou-Tai Lin
Feng Chia University

P3-16 **10:00-11:45**

High-Q Dual-Resonant Dielectric Metasurface for Mid-Infrared Sensing

Syed Ahson Ali Shah, Huu Lam Phan, Minkyung Kim
Gwangju Institute of Science and Technology

P3-17 **10:00-11:45**

High-Efficiency SiN Triple-Tip Edge Coupler with a Bottom Metal Reflector on Glass for Co-packaged Optical Systems

Kyungjin Jo, Taewon Jin, Heeyun Jung, Younghyun Kim
Hanyang University

P3-18 **10:00-11:45**

Surface Plasmon Resonance Refractive Index Sensing based on Photonic Integrated Chips

Meng Jiang, Xuwen Shu
Huazhong University of Science and Technology

P3-19 **10:00-11:45**

Terahertz Vortex Mode Converter based on Multimode Waveguide

Yu Lu^{1,2}, Jia Luo^{1,2}, Zhiyuan Zhou^{1,2}, Shuang Zheng^{1,2,3}

¹Huazhong University of Science and Technology, ²National Engineering Research Center for Next Generation Internet Access System, ³Optics Valley Laboratory

P3-20 **10:00-11:45**

Optical Characteristics of SC-Type End-Capped Hollow-Core Fiber Connector

Katsuyoshi Sakaime, Ryo Nagase, Hideaki Furukawa

National Institute of Information and Communications Technology

P3-21 **10:00-11:45**

Multimode Grating Coupler Using 2D-Grating Structure for Highly Coupled Four-Core Fiber

Yuzhuang Xie, Peijyun Lin, Haisong Jiang, Kiichi Hamamoto

Kyushu University

P3-22 **10:00-11:45**

Compact and Low-Loss Evanescent Coupler between SiN-on-Glass and SiN-on-SOI Platforms for Co-Packaged Optics

Seokyoung Shin, Younghyun Kim

Hanyang University

P3-23 **10:00-11:45**

Wide-Bandwidth Frequency Difference Measurement Using a Repetition-Rate-Locked Optical Frequency Comb

Boyu Chen, Hao Gao, Baodong Zhao, Yapeng Liu, Yinglu Qin, Song Yu, Bin Luo

Beijing University of Posts and Telecommunications

P3-24 **10:00-11:45**

Enhanced Single-Pixel Imaging through a Multimode Fiber via Mode Modulation

Ning Zhan, Zhenming Yu, Liming Cheng, Jingyue Ma, Jiayu Di, Liang Lin, Tongshuo Zhang, Yanfeng Liu,

Yu Zhang, Ping Fang, Kun Xu

Beijing University of Posts and Telecommunications

P3-25 **10:00-11:45**

Q-Switched Pulse Generation in a 1.7 μm Thulium-Doped Fiber Laser Using Frequency-Shifted Feedback

Jee Hwan Kim, Junha Jung, Taeho Woo, Jaehak Choi, Ju Han Lee

University of Seoul

P3-26 **10:00-11:45**

Generation and Characterization of Odd /Even Order Brillouin Combs for RF Applications

Sharashti Saxena, Harsh Vaid, Amol Choudhary

Indian Institute of Technology Delhi

P3-27 **10:00-11:45**

Phase-Dominated GHz-Bandwidth Filtering in Dispersion-Assisted SBS Systems

Md Kamran Afroz, Deeksha Jachpure, Chowdhury Kamruzzaman, Arijit Das, Amol Choudhary

Indian Institute of Technology Delhi

P3-28 **10:00-11:45**

Broadband Spectral Shifting in Continuously Femtosecond-Laser-Modified Optical Fiber for Wavelength-Locking-Free Dynamic Sensing

Shunsuke Nagata¹, Yuma Matsushita², Shimbu Shirai¹, Keita Kikuchi^{1,3}, Heeyoung Lee³, Kenji Goya², Yosuke Mizuno¹

¹Yokohama National University, ²Akita Prefectural University, ³Shibaura Institute of Technology

P3-29 **10:00-11:45**

Mirror-less Single-Ended Observation of Depolarized Guided Acoustic-Wave Brillouin Scattering Using Fresnel Reflection

Ariasu Tamura¹, Neisei Hayashi², Yosuke Mizuno¹

¹Yokohama National University, ²The Graduate School for the Creation of New Photonics Industries

P3-30 **10:00-11:45**

Glass-Cladding Integration of a 9 μm Small-Core Chromium-Doped Crystalline Fiber Achieving 11.9dB Net Gain

Zhi-Hong Xu¹, Kai-Chieh Chang², Chien-Wei Huang¹, Chun-Nien Liu¹, Zingway Pei¹, Cheng-Mu Tsai¹, Zhi Ting Ye¹, Chun Wei Tsai³, Wood-Hi Cheng¹

¹National Chung Hsing University, ²National Taiwan University, ³National United University

P3-31 **10:00-11:45**

Experimental Characterization of Two Different Types of Optical Fiber Microcavities

Liudmila Silanteva^{1,2}, Robert Rylander², Viktor Brandels², Per Karlsson², Chigo Okonkwo², Thomas Bradley^{1,2}, Thomas Bradley^{1,2}

¹Eindhoven University of Technology, ²NorthLab Photonics

P3-32 **10:00-11:45**

Statistical Analysis of Spatial Mode Dispersion in Coupled 2- and 4-Core Fibers by Using Linear Optical Sampling in Coupled 2- and 4-Core Fibers by Using Linear Optical Sampling

Keita Konishi¹, Akira Izumoto¹, Takahiro Suyama¹, Chao Zhang^{2,3}, Fumihiko Ito¹, Shingo Ohno⁴, Atsushi Nakamura⁴, Kunihiro Toge⁴

¹Shimane University, ²Kogakuin University, ³The University of Tokyo, ⁴NTT, inc.

P3-33 **10:00-11:45**

Mid-Infrared Continuous-Wave Parametric Amplification in Silicon Core Fibers

Qixin Xu, Zhiwei Yan, Xuchen Peng, Zengfan Shen, Xinzhe Xiong, Qiyuan Yi, Guanglian Cheng, Qiyuan Li, Hanming Yuan, Jiahao Xing, Li Shen

Huazhong University of Science and Technology

P3-34 **10:00-11:45**

Analysis of Transient Effects in 1 kW-Class Ytterbium-Doped Fiber Amplifiers

Seungwon Jun, Dong Joon Kim, Jong-Won Lee, Daehee Lee, Joonhoi Koo, Junsu Lee
Agency for Defense Development

P3-35 **10:00-11:45**

Optical Bistability in a COF Saturable-Absorber Erbium-Doped Fiber Laser

Hsuan-Sen Wang¹, Wen-Hsuan Kuan², Gong-Ru Lin³, Kuei-Huei Lin², Shiao-Wei Kuo¹, Chao-Kuei Lee¹

¹National Sun Yat-sen University, ²University of Taipei, ³National Taiwan University

P3-36 **10:00-11:45**

Non-Orthogonal PAM4-OFDM Optical Transmission for Long-Reach Access Networks

Joungmoon Lee, Jinwoo Park, Sang-Kook Han
Yonsei University

P3-37 **10:00-11:45**

Terminal-Node Wavelength Conversion for Equipment-Efficient Network-Side 1+1 Protection: Numerical and Field Validation

Junnosuke Iyama¹, Mayuri Nakagawa¹, Hiroki Mori¹, Takeshi Seki¹, Rie Hayashi¹, Toshihiko Tamura¹, Sei Kim², Kota Ito²

¹NTT, inc., ²NTT EAST, Inc.

P3-38 **10:00-11:45**

AI-Driven Tidal Traffic Forecasting Enabling Energy Efficiency and Latency-Awareness in Integrated FWA-PON

Aveesha Gunasekara, Sourav Mondal, Elaine Wong
University of Melbourne

P3-39 **10:00-11:45**

A Novel Spectrum Defragmentation Method based on Heterogeneous GNN Trained with DRL

Takafumi Tanaka
NTT, inc.

P3-40 **10:00-11:45**

Time-Frequency Patching Perception for Latent Anomaly Detection in Optical Networks

Changjian Sun¹, Chunyu Zhang², Cheng Xing¹, Min Zhang¹, Danshi Wang¹
¹Beijing University of Posts and Telecommunications, ²University of Science, Technology Beijing

P3-41 **10:00-11:45**

Remote Receiver Characterization for QoT Estimation using BER Measurement Functions in Transceivers

Kai Ikuta, Ryo Igarashi, Ryo Koma, Kazutaka Hara, Jun-ichi Kan, Tatsuya Shimada
NTT, inc.

P3-42 **10:00-11:45**

QoT-Feasible Online RMSA with Service-Aware Adaptation

Haojie Wang, Yixin Wang
Beijing University of Posts and Telecommunications

P3-43 **10:00-11:45**

Coherent PON In-Service Laser Health Monitoring using OLT-based Carrier-Phase Estimation

Lukas Fonk, Stephan Pachnicke
Kiel University

P3-44 **10:00-11:45**

All-Photonic Switching based on Wavelength Grating Routers for 100-Gb/s Optical Links

Kuan Lin Huan, San Liang Lee
National Taiwan University of Science and Technology

P3-45 **10:00-11:45**

LLM-Enabled Token Communication in 200G Coherent TDM-PON

Junhao Zhao^{1,2}, Penghao Luo¹, Yuan Wei¹, Huayuan Qin^{1,2}, Chengxi Wang¹, Ouhan Huang¹, Sizhe Xing¹, Boyu Dong¹, Aolong Sun¹, Xuyu Deng¹, An Yan¹, Nan Chi¹, Junwen Zhang¹
¹Fudan University, ²Shanghai Innovation Institute

P3-46 **10:00-11:45**

Tracking Spectral Evolution: Agile Few-Shot Light Source Recognition for Optical Network Anomaly Detection

Jiayi Li¹, Nan Hua², Junfeng Cao², Weichen Hou², Yatong Xiao², Zhenrong Zhang¹, Xiaoping Zheng²
¹Guangxi University, ²Tsinghua University

P3-47 **10:00-11:45**

Dual-Polarization Multi-level IM/DD with Adaptive Polarization Tracking for Underwater Optical Wireless Communication

Masanori Hanawa
University of Yamanashi

P3-48	10:00-11:45
Signal Quality Evaluation of SOA-Amplified TDSC-IM Signals	
Kiyoto Takahashi, Wataru Imajuku Meijo University	
P3-49	10:00-11:45
Experimental Receiver Sensitivity Evaluation of PAM-4 based TDSC-IM Optical Signals	
Yuto Yamauchi, Kenyu Goto, Wataru Imajuku Meijo University	
P3-50	10:00-11:45
Machine Learning-Based Modeling of Add/Drop Transients in Cascaded EDFAs	
Huanyong Wang ^{1,2} , Christina Wen-Hsin Cheng ^{2,3} , Hua Liu ² , Zhongqi Pan ¹ ¹ University of Louisiana at Lafayette, ² Molex LLC, ³ University of California	
P3-51	10:00-11:45
Frequency Comb based Multi-Channel Free Space Optical Communication with Amplitude Noise Suppression	
Hyeokin Kang, Taewon Kim, Jaeyoon Kim, Gibeon Gu, Young-Jin Kim Korea Advanced Institute of Science and Technology	
P3-52	10:00-11:45
Physics-Informed Deep Learning with a Spectrally Filtered Loss Function for Dispersion Profile Estimation in Optical Fibers	
Keigo Kaizu ¹ , Keisho Yamamoto ¹ , Takumi Takahashi ² , Tadashi Wadayama ² , Koji Igarashi ¹ ¹ The University of Osaka, ² Nagoya Institute of Technology,	
P3-53	10:00-11:45
EDFA Failure Timing Prediction in ROADMs	
Tomoki Honda, Ken Ito, Rie Hayashi NTT, inc.	
P3-54	10:00-11:45
Free-Space Frequency Transfer Using a Limiting Photodetector Under Atmospheric Turbulence	
Yapeng Liu, Hao Gao, Jie Zhang, Baodong Zhao, Zhanyu Yang, Bin Luo, SongYu Beijing University of Posts and Telecommunications	
P3-55	10:00-11:45
Experimental Demonstration of Remote Pumped Aerial Relay Gain Unit for Air-Ground-Space Integrated Networks	
Kunfeng Liu, Liqian Wang, Yiwei Zhao Beijing University of Posts and Telecommunications	
P3-56	10:00-11:45
Complexity and Latency Evaluation of a Block-Length-Scalable Successive Cancellation Decoder for Ultra-Long Polar Codes	
Gakuto Kanematsu ¹ , Mizuki Yamamoto ¹ , Yohei Koganei ² , Koji Igarashi ¹ ¹ The University of Osaka, ² Finity	
P3-57	10:00-11:45
A Flat-Top Beam-Based Integrated Visible Light Positioning and Communication System Using DMD Projector	
Zhiyue Yin ¹ , Yuru Tang ^{1,3} , Connie Chang-Hasnain ^{1,2} , H. Y. Fu ¹ ¹ Tsinghua University, ² Berxel Photonics Co., Ltd., ³ Pengcheng Laboratory	

P3-58 10:00-11:45

Proactive Rate Adaptation in Turbulent UOWC via DNN-based SNR Prediction

Huayu Wang¹, Masanori Hanawa², Zhu Li¹, Meilin He¹
¹Hangzhou Dianzi University, ²University of Yamanashi

P3-59 10:00-11:45

Joint LDPC-Coded PRS and DNN-Based Soft Decision Receiver for Bandwidth-Limited UOWC

Dishen Lin¹, Masanori Hanawa²
¹Hangzhou Dianzi University, ²University of Yamanashi

P3-60 10:00-11:45

Impact of Intra-Band Crosstalk on Optical Filter Estimation Using Digital Longitudinal Monitoring

Yota Sagara, Ryuta Shiraki, Eiji Oki
Kyoto University

P3-61 10:00-11:45

Quaternion-Valued Neural Network-Based Fiber Nonlinearity Mitigation for Polarization-Multiplexed Optical Signals

Kizuku Ochiri, Yuto Ishigami, Moriya Nakamura
Meiji University

P3-62 10:00-11:45

Headerless Recovery of PAM2/PAM4 Ratios Using CNN for Optical Wireless Links

Ayumu Kariya, Kiichiro Kuwahara, Fumiya Kobori, Takahiro Kodama
Kagawa University

P3-63 10:00-11:45

An Apodized FBG Filter Configuration for Separation of O-Band QKD Channel over C-Band DWDM Communication Systems

Kyungtaek Lee¹, Namwook Joe², Taeho Woo², Suckwoo Shin², Ju Han Lee²
¹Korea Aerospace Research Institute, ²University of Seoul

P3-64 10:00-11:45

Simulation-Based Security Analysis of COW and DPS QKD: Decoy State Limitations and Positional Vulnerability under IAR Attacks

Hsiang-Chun Hsu, Yuh-Renn Wu
National Taiwan University

P3-65 10:00-11:45

Quantization Noise Shaping in CVQKD Using Delta-Sigma Modulation

Wenjun Fan¹, Zhenlin Zhao¹, Xingwen Yi², Dawei Wang¹
¹Sun Yat-sen University, ²Bangor University

P3-66 10:00-11:45

A Study of Co/Counter-propagation Design for O-/C-band QKD and APN DWDM Signals

Jian-Kai Huang, Ying-Ru Chen, Ju-Kai Chen
Chunghwa Telecom Co., Ltd.

P3-67 10:00-11:45

Distance Scaling of Teleportation in Hybrid Quantum-Classical Fiber Links

Federico Fissore, Andrea Ferraro, Alberto Polato, Jake Smith, Roberto Proietti
Polytechnic University of Turino

P3-68 **10:00-11:45**

Solid-State Optical Beam Scanner of FMCW LiDAR Sensor for Autonomous Driving

Nan Ei Yu, Toijam Sunder Meetie
Gwangju Institute of Science and Technology

P3-69 **10:00-11:45**

Plug And Play Prior for Deconvolution of Optical Coherence Tomography

Fu Liu^{1,2}, Shuyuan Zhu^{1,2}, Dongmei Huang^{1,2}
¹The Hong Kong Polytechnic University, ²The Hong Kong Polytechnic University Shenzhen Research Institute

P3-70 **10:00-11:45**

Vibration Compensation based on a Dual-Probe FMCW LiDAR

Riku Kondo¹, Takahiro Nagata¹, Yuto Kusaka¹, Hiroki Yamazaki¹, Chao Zhang^{2,3}, Fumihiko Ito¹, Shingo Ohno⁴, Atsushi Nakamura⁴, Kunihiro Toge⁴
¹Shimane University, ²Kogakuin University, ³The University of Tokyo, ⁴NTT, inc.

P3-71 **10:00-11:45**

Phase Retrieval in Reflection Microscopy via TIE-Consistent Reference Selection and Neural Defocus Field

Yongjun Lim
Electronics and Telecommunications Research Institute

P3-72 **10:00-11:45**

In vivo ultrastructural and dynamics imaging of whole zebrafish by multi-contrast OCT

Shadil Basheer¹, Yiheng Lim¹, Cunyou Bao¹, Ibrahim Abd El-Sadek^{1,2}, Toshiki Obokata¹, Aiyi Suic, Shuichi Makita¹, Makoto Kobayashi¹, Yoshiaki Yasuno¹
¹University of Tsukuba, ²Damietta University

P3-73 **10:00-11:45**

Deep-Learning Enhancement of OCT for Automatic Spheroid Evaluation: Future Prediction and Fine Segmentation

Zheng Yuping¹, Ibrahim Abd El-Sadek^{1,2}, Yusong Liu¹, Rameesa Rafi MH¹, Shadil Basheer¹, Atsuko Furukawa¹, Satoshi Matsusaka¹, Yoshiaki Yasuno¹
¹University of Tsukuba, ²Damietta University

P3-74 **10:00-11:45**

A 1.3 μm Swept Source Optical Coherence Tomography based on Time Stretching a Supercontinuum Source

Laiyang Dang^{1,2}, Shuyuan Zhu¹, Wenhao Zhu^{1,2}, Fu Liu^{1,2}, Dongmei Huang^{1,2}
¹The Hong Kong Polytechnic University, ²The Hong Kong Polytechnic University Shenzhen Research Institute

P3-75 **10:00-11:45**

Extended-Range FMCW LiDAR Using AWG-Based Wavelength-Division Reference Paths

Sangwon Park, Sang Min Park, Hwidon Lee, Chang-Seok Kim
Pusan National University

P3-76 **10:00-11:45**

FMCW LiDAR with Combined Mechanical and Spectral Steering for Improved Angular Resolution and Point Density

Seongmun Jeong, Sang Min Park, Hwidon Lee, Chang-seok Kim
Pusan National University

P3-77 **10:00-11:45**

Wavelength-Multiplexed Interferometer for Extended-Range FMCW LiDAR

Wontae Choe¹, Sang Min Park¹, Min Uk Jung², Hwidon Lee¹, Chang-Seok Kim¹
¹Pusan National University, ²Korea Photonics Technology Institute