

N4: Optical Access and Last-Mile Networks	
Conference Room 103C, 1F	
November 3, 2026	
Optical sensing and communication in access networks Presider: Shikui Shen, China Unicom, China	
13:30-14:30	Integrated Sensing and Communication over Deployed Fibre: SOP and DAS Principles, ML-based Analysis, and Applications from Submarine to Access Networks (Tutorial) Marco Ruffini Trinity College Dublin, Ireland
14:30-15:00	Digital Signal Processing and Optical Sensing for Future Optical Access Networks (Invited) Hwan Seok Chung ETRI, Korea
15:00-15:15	Mueller Matrix Analysis-based Forward Sensing in TDM-CPON (Oral) Zhang Yiwen Westlake University, China
15:15-15:30	Experimental Demonstration of Similarity-Based DSP Monitoring for Discriminating ODN Loss Variation and OLT Transmitter Performance Degradation in 50G-PON ONU Receiver (Oral) Han Hyub Lee Electronics and Telecommunication Research Institute, Korea
15:30-17:30	Coffee Break & Poster Session

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Key technologies for VHSP (1) Presider: Hanhyub LEE, ETRI, Korea	
08:30-09:00	Coherent PON Transceivers: Design Trade-Offs and Implementation Considerations (Invited) Gabriele Di Rosa Adtran Networks SE, Germany
09:00-09:30	Candidate Technologies and Challenges of Next-Generation Very High-Speed PON (Invited) Guoqiang Li ZTE, China
09:30-09:45	47-dB Power Budget Bidirectional 256-Gb/s Coherent PON with a Laser-Free ONU over 25-km Hollow-Core Fiber (Oral) Yutong Pan Peking University, China
09:45-10:30	Coffee Break

Key technologies for VHSP (2) Presider: Jim Zou, Adtran Networks, United States	
10:30-11:00	Overview of Digital Chromatic dispersion Pre-Compensation (DCPC) techniques for Very High Speed PON (Invited) Roberto Gaudino Politecnico di Torino, Italy
11:00-11:30	Carrier Leakage Suppression and Power Difference Equalization for TFDMA Coherent PON (Invited) Ji Zhou Beijing Institute of Technology, Zhuhai, China
11:30-11:45	Low-Complexity 1-Order IIR Notch Filter for Efficient DC Leakage Frequency Estimation and Removal with 8.4-dB Tolerance Gain in 200G Upstream Coherent TDM-PON (Oral) Yicheng Xu Shanghai Jiao Tong University, China
11:45-12:00	High Power Budget 160 Gbps PAM-4 Transmission for Next-Generation PONs Using Si-Ge PD (Oral) Xishan Yu State Key Laboratory of Ultrafast Optical Science and Technology, Xi'an Institute of Optics and Precision Mechanics Chinese Academy of Sciences, China
AI and access network Presider: Dezhi Zhang, China Telecom, China	
13:30-14:00	AI Empowerment: Exploration on Intelligent Evolution of Optical Access Network (Invited) Yue Sun China Unicom, China
14:00-14:30	Learning-Aware Optical Transport for Distributed AI over Mobile Networks (Invited) Emilio Paolini
14:30-15:00	From Connectivity to Intelligence: Create New Value via AI Integration in Broadband Infrastructure (Invited) Zhicheng Ye Huawei, China
15:00-15:30	Multi-Agent Collaborative Optimization for Distributed Fiber-Optic Sensing-Computing Integration (Invited) Zhiqun Gu Beijing University of Posts and Telecommunications, China
15:30-16:00	Coffee Break
New applications of access networks Presider: Junwen Zhang, Fudan University, China	
16:00-16:30	Research and Verification of PON-Based Computing-Networking-Control Integrated Industrial Control System (Invited) Ziyao Yang China Telecom Research Institute, China

16:30-16:45	Quality-of-Transmission-Aware Bandwidth Allocation for RAN Fronthaul over Flexible PON (Oral) Shangya Han Beijing University of Posts and Telecommunications, China
16:45-17:00	DARS: Reliability-Aware Joint Wi-Fi-PON Scheduling for FTTR Networks (Oral) Shun Zhao Soochow University, China