Best Student Paper Award

First Place

ACP2026-0701-205

Robust and Low-Complexity Duobinary-Encoded Out-of-Band Channel with Adaptive Equalization for Shared 200G Coherent Transceiver

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We demonstrate a Duobinary-encoded out-of-band channel sharing a 200-Gbps coherent PON transceiver over 20-km SSMF, recovered by low-complexity absolute-value operation tolerant to frequency offset, phase noise, and polarization rotation, reaching 1E-6 threshold at −40.5 dBm.

Runner-Up

ACP2026-0713-4

Low Memory Target-Response MLSE Receiver for Absorption-Notch-Resilient Hollow-Core Fiber Coherent Links

Tianhong Zhang[1], Yutong Pan[1], Yixiao Zhu[2]*, Shikui Shen[3]*, Yu Qin4,[5], Tianchi Zhong[1], Limin Xiao[4], Yichun Shen[5], Zelin Wang[3], Shuailuo Huang[3], Xian Zhou[6], Fan Zhang[1, 7*]

1.Peking University, China; 2.Shanghai Jiao Tong University, China; 3.China Unicom Research Institute, China; 4.Fudan University, China; 5.Zhongtian Technology Advanced Materials Co., Ltd., China; 6.University of Science and Technology Beijing, China; 7.Peng Cheng Laboratory, China

An absorption-aware TR-MLSE receiver is demonstrated for 64-GBaud 16QAM transmission over 25-km hollow-core fiber, using notch-matched target-response equalization to mitigate gas-line absorption, improve BER performance, and substantially reduce adaptive-equalization complexity without transmitter-side spectral shaping.

Third Place

ACP2026-0723-4

Bidirectional High-Capacity Integrated Sensing and Communication Emulation Using Interconnected Counter-Propagating Recirculating Loops

Junyu Wu[1], Zexu Liu[1], Lei Liu[1, 2], Honglin Jin[3], William Shieh[1, 2]*

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We demonstrate a bidirectional WDM integrated sensing and communication system using interconnected counter-propagating recirculating loops emulating long-haul fiber links, achieving 6.016-Tbps transmission over 2187.72 km, and DAS sensing with 1.85-km spatial resolution and over 15-dB sensing SNR.