

PDP-1**16:45-17:00****6133-km $8\lambda \times 800$ Gb/s WDM Transmission Over Interstitial-Tube-assisted DNANF With EDFA-Only Amplification**

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We demonstrate an 8×800 G WDM transmission over 6133-km IT-DNANF using a 153.34-km recirculating loop with EDFA-only amplification, setting a new distance record of 800G WDM transmission for high-capacity long distance optical network.

PDP-2**17:00-17:15****Field Demonstration of 440-Gb/s Coherent PON over Deployed AR-HCF with Polarization Sensing**

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We demonstrate multi-functional coherent TDM-PON over 20-km field-deployed anti-resonant hollow-core fiber, achieving flexible 240-440Gb/s data rates with 51/44-dB power budgets, respectively. We leverage the estimated signal SOP for polarization sensing and detect cable-shaking events.

PDP-3**17:15-17:30****Towards 34.132 Tbit/s/Fiber Silicon-Photonics (SiPh) Transmitter Using Ultra-Wideband Quantum-Dot Comb Laser-Diode**

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We experimentally demonstrate a transmitter comprising $4 \times$ monolithically-integrated silicon-photonics (SiPh) Mach-Zehnder-modulators noise isolated. Each comb line has a measured mean relative intensity(MZM), an off-chip quantum-dot-comb-laser-diode (QDL), and a seven-core multi-core-fiber (MCF), achieving an aggregate data-rate of 34.132-Tbit/s ($212\text{-Gbit/s} \times 23 \text{ comb-lines} \times 7\text{-cores}$).

PDP-4**17:30-17:45****Exabit/s Scale Communications with a Single Microcomb for Ultra-Scalable Data Centers**

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We propose an optical microcomb as the only light source in an AI-data-center. The microcomb is divided into $64 \times 32 \times 32$ copies supporting 65.536 fiber channels, with 62,6 Tbit/s throughput each, corresponding to 4,1 Ebit/s in total.

PDP-5**17:45-18:00****180 GBd PAM-4 O-Band IM/DD Using Packaged Low- V_{π} Silicon-Organic Hybrid MZM**

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We demonstrate 180 GBd PAM-4 O-band IM/DD at 2.4 Vpp single-ended drive voltage, using a fully packaged silicon-organic hybrid Mach-Zehnder modulator. Addition ally, we show that it also supports 120 GBd PAM-4 with less than 1 Vpp drive voltage.