Room C (Grand Ballroom 3), 2F | Chair: Seung-Hyun Cho (ETRI)

We1C | July 1 (Wed), 2026
Converged Fiber-Wireless & RoF Systems | 08:30-10:00

We1C-1 **08:30-08:45**

Comparison of Sigma-Delta and Analog Radio over Fiber for Next Generation FTTR

Sophie Thiele[1], Christian Bluemm[2], Stefano Calabrò[2], Stephan Pachnicke[1]
[1]Kiel University, [2]Huawei Technologies Duesseldorf GmbH

Wi-Fi distribution via sigma-delta radio over fiber is a promising technology for FTTR. We demonstrate 256-QAM transmission using a nonlinear SFP+ module and 1024-QAM VCSEL-based transmission with a sensitivity gain of 1.5 dB over ARoF.

We1C-2 **08:45-09:00**

Low-Cost Intensity Modulator Integrating 1.05 Tb/s CPRI-Equivalent Rate 1024-QAM RoF and 200-Gb/s PON for Fixed-Mobile Access Network

Yixiao Zhu[1], Yutong Pan[2], Tianhong Zhang[2], Xiang Cai[2], Jingchi Li[1], Fan Zhang[2], Weisheng Hu[1]
[1]Shanghai Jiao Tong University, [2]Peking University

We demonstrate fixed-mobile converged access network carrying RoF and PON signals with a single intensity modulator, achieving flexible radio-access from 1.05-Tb/s 1024-QAM to 527.3-Gb/s 65536-QAM at 51.9-dB SNR, and 100/200-Gb/s PON with 40.0/30.7-dB power budget.

We1C-3 **Invited** **09:00-09:30**

Optical-Wireless Cooperative Control for Future Radio Access Network

Kenji Miyamoto
NTT Access Network Service Systems Laboratories

This invited paper introduces the optical-wireless cooperative control we have proposed for 6G RAN. We review recent studies and experimental results for cooperative control between RAN and X-haul optical transport to achieve 6G requirements.

We1C-4 **Invited** **09:30-10:00**

Scaling LLM Fine-Tuning in Radio Access Network Deployment

Emilio Paolini
Sant'Anna School of Advanced Studies

We propose a transport-aware LLM adaptation framework for RAN edge nodes, combining continuous lightweight adapter updates over packet backhaul with opportunistic full fine-tuning triggered by high-capacity optical paths, enabling scalable deployment without overwhelming transport resources.