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Chair(s): Jean Teissier | Coherent Laser Enterprise | Switzerland

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Chair(s): Johan Bauwelinck | imec - Ghent University | Belgium

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Chair(s): Catherine White | BT PLC | United Kingdom

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Chair(s): Michael Galili | Technical University of Denmark | Denmark

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Th2B: Submarine and Long-Haul

Chair(s): Jeremie Renaudier | Nokia Bell Labs | France

Th2B.1: 16.1 Tb/s, 363 km, Unrepeatered C-band Transmission with Bidirectional Raman Amplification without ROPA 1801

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Chair(s): Darli Mello | University of Campinas | Brazil

Th1C.1: Net 835-Gb/s/λ Carrier- and LO-Free 100-km Transmission Using Channel-Aware Phase Retrieval Reception ***1825***
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Th1C.3: Colorless and Polarization-Invariant Unitary Self-Homodyne Coherent Detection in Silicon Photonics ***1833***
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Th1C.4: Linearization of Directly Modulated Lasers for Carrier-less Amplitude and Phase (CAP) Modulation ***1837***
Y.H. Low, N. Bamiedakis, D.G. Cunningham and R.V. Penty

Th1C.5: 5-Dimensional Coherent Receiver with Modulated Remote LO ***1841***
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Th1C.6: CNN Outperforms MMSE Filtering at Equal Complexity While Combating Chromatic Dispersion in PAM ***1845***
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Th2C: VCSEL arrays & optical multiport packaging

Chair(s): Daniel Kuchta | IBM Research | United States, Janet Chen | Nvidia | United States

Th2C.1: An Ultra-Compact CPO Transceiver based on 1060-nm Single-Mode VCSEL Array and Multi-Core Fibre ***1849***
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Th2C.2: 1.6 Tbps Coarse-Wavelength-Division-Multiplexing O/E Converter for Active Optical Package ***1853***
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Th2C.3: Solder-Reflow Resistant Thermoplastic Resin Single-Mode Micro-Lens Array for Integrated Photonic Packaging ***1857***
K. Gradkowski, G. Hoogland, F. Jung, YJ. Choi, J. van Gisbergen, PM. Johnson and R. Pitwon, A. Hartwig, R. Koh and P. O'Brien

Th2C.4: A 1.6-Tbps (16-ch x 100Gbps PAM-4) Single-mode VCSEL array for Multi-core Fiber-based Co-packaged Optics ***1861***
Liang Dong, Xiaodong Gu and Fumio Koyama

Th1D: Metro-Access, Fronthaul & 6G

Chair(s): Paola Parolari | Politecnico di Milano | Italy

Th1D.1: Coexistence of Analogue Radio and Digital Coherent Transmission Over Access/Metro Networks fibre for Bandwidth-Efficient Fronthaul Beyond 5G ***1865***
Devika Dass, Frank Slyne, Dan Kilper, Liam Barry and Marco Ruffini

Th1D.2: Future Converged Fixed/Mobile Access Networks in the 6G Era ***1869***
Fabienne Saliou, Philippe Chanclou, Gaël Simon and Jérémy Potet

Th1D.3: Experimental Demonstration of 291 Gb/s/λ DSCM-WDM Metro-access Networks Leveraging SOA-based OADM Nodes ***1873***
Zhouyi Hu, Vincent van Vliet, María Freire-Hermelo, Shiyi Xia, Menno van den Hout, Chigo Okonkwo and Nicola Calabretta

Th1D.4: Demonstration of 200 Gbps Coherent DSCM PON Fronthaul Transmission and Scheduling by an Open RAN Intelligent Controller ***1877***
Dongxu Zhang, Xiaofeng Hu, Xiaoan Huang and Kaibin Zhang

Th2D: Atmospheric Turbulence Mitigation for FSO

Chair(s): Eduward Tangdiongga | Technische Universiteit Eindhoven | Netherlands

Th2D.1: Can DSP mitigate the effect of turbulence on FSO signals? ***1881***
Fernando P. Guiomar, Marco A. Fernandes, Manuel M. Freitas, Bruno T. Brandão, Gil M. Fernandes and Paulo P. Monteiro

Th2D.2: Strong Atmospheric Turbulence Compensation Using Adaptive Optics and Mode Diversity Reception over a 15.6km Horizontal Free Space Optical Communication Link ***1885***
Wenjie Guo, Kejia Xu, Yan Li, Chao Liu, Bin Lan, Kaihe Zhang, Zhengjie Wang, Shuai Wei, Jingwei Song, Hongxiang Guo, Zhisheng Yang and Jian Wu

Th2D.3: Enhanced Atmospheric Turbulence Resiliency in Free Space Optical Communication with Silicon-Photonics Based Grating Coupler Array and Maximal-Ratio-Combining (MRC) Algorithm ***1889***
Tzu-Chieh Wei, Yuan-Zeng Lin, Pin-Cheng Kuo, Yin-He Jian, Chi-Wai Chow, David W. U. Chan, Yeyu Tong, Chien-Hung Yeh and Hon Ki Tsang

Th2D.4: Integrated Photonic Transceiver for Adaptive Mitigation of Atmospheric Turbulence in Free Space Optical Links ***1893***
A. Martinez, S. Seyedinnavadeh, F. Zanetto, F. Morandi, A. Milani, A. D'Acierno, L. Resteghini, F. Morichetti and A. Melloni

Th2D.5: Experimental Demonstration of a Narrow and Low-Divergence "Pin-Like" Beam in a 2-Gbit/s OOK FSO Link under Turbu-lence Effects when Using a Limited-Size Receiver Aperture 1896
Zile Jiang, Xinzhou Su, Huibin Zhou, Yue Zuo, Yuxiang Duan, Muralekrishnan Ramankrishnan, Abdulrahman Alhaddad, Hongkun Lian, Yingning Wang, Ruoyu Zeng, Zixun Zhao, Jan Tepper, Francesco Nardo, Moshe Tur, Volker Ziegler and Alan Willner

Th1E: Network architectures and resource allocation

Chair(s): Karl Tran | Genexis Group | Netherlands

Th1E.1: Digital Subcarrier-based Point-to-Multipoint Trees in ROADM-based Networks 1900
Nina Skorin-Kapov, Pablo Pavon-Marino, Marco Quagliotti, Emilio Riccardi, Antonio Napoli, João Pedro and Oscar Gonzalez de Dios

Th1E.2: Flexible and Intelligent Latency Management Scheme Using Joint Resource Optimization in PTMP Fronthaul Networks 1904
Xi Chen, Yixiao Zhu, Yicheng Xu, Mengfan Fu, Leyan Fei, Weisheng Hu and Qunbi Zhuge

Th1E.3: Field Trial of Transparent Multi-band Multi-domain Disaggregated IPoWDM Networks 1908
Roberto Morro, Emilio Riccardi, Anna Chiado' Piat, Annachiara Pagano, Alessio Giorgetti, Evangelos Kosmatos, Shiyi Xia, Henrique Freire Santana, Nicola Calabretta, Pol Gonzalez, Luis Velasco, Andrea Sgambelluri, Pablo Pavon-Marino, Enrique Fernandez, Jordi Ortiz, Alexandros Stavdas, Chris Matrakidis, Filippo Cugini, Laia Nadal, Ramon Casellas and Oscar Gonzales De Dios

Th1E.4: DRL-Assisted Dynamic QoT-Aware Service Provisioning in Multi-Band Elastic Optical Networks 1912
Yiran Teng, Carlos Natalino, Farhad Arpanaei, Alfonso Sánchez-Macián, Paolo Monti, Shuangyi Yan and Dimitra Simeonidou

Th1E.5: ADMIRE_SCALE: A Scalable Routing with Hierarchical Rein-forcement Learning in Large-Scale IPoDWDM Networks 1916
Ziyi Wu, Jiawei Zhang, Huangxu Ma, Zheng Zhang, Zhiqun Gu and Yuefeng Ji

Th2E: Optical node architectures

Chair(s): Alexandros Stavdas | OpenLightComm | United Kingdom

Th2E.1: Demonstration of Spatial- and Wavelength-Channel Routing with Polarity Management Using Spatial Cross-Connects Based on Hermetically Sealed 19-CF Core Selective Switch Modules and Cladding-Pumped 19-CF EDFA Modules 1920
Takuma Izumi, Ryohei Otowa, Yusuke Matsuno, Kyosuke Nakada, Yuji Hotta, Tsubasa Sasaki, Rika Tahara, Koichi Maeda, Yasuki Sakurai, Ryuichi Sugizaki and Masahiko Jinno

Th2E.2: Cross-optical-and-electrical Layer Hitless Rate Adjustment Based on Probabilistic Shaping and Real-time In-line Rate Indicator 1924
Sheng Liu, Tao Gui, Dawei Ge, Yunbo Li, Dong Wang, Liuyan Han, Dechao Zhang and Han Li

Th2E.3: Optical Switching Challenges for the Post-Moore's Law Era 1928
Shu Namiki

Th2E.4: Demonstration of a 126 nm, S+C+L band ROADM in a field-deployed fiber network ***1932***
Ruben S. Luis Jiaqian Yang, Benjamin J. Puttnam, Eric Sillekens, Mindaugas Jarmolovicius, Romulo Aparecido, Robert Killey, Satoshi Shinada, Polina Bayvel and Hideaki Furukawa

Th1F: Remote Sensing

Chair(s): Oskars Ozolins | RISE - Research Institutes of Sweden AB | Sweden

Th1F.1: First Field Demonstration of Hollow-Core Fibre Supporting Distributed Acoustic Sensing and DWDM Transmission ***1936***
Ezra Ip, Ming-Fang Huang, Yue-Kai Huang, Junqiang Hu, Giacomo Borraccini, Andrea d'Amico, Glenn Wellbrock, Tiejun Xia, Jamie Lynn, Danny Peterson, Brian Mangan, Kyle Dube, Benyuan Zhu, Ting Wang and Koji Asahi

Th1F.2: Remote Sensing for Power Grid Fuse Tripping Using AI-Based Fiber Sensing with Aerial Telecom Cables ***1940***
Zhuocheng Jiang, Yue Tian, Wataru Kohno, Sarper Ozharar, Yangmin Ding, Ting Wang, Yiyun Yao and Fei Ding

Th1F.3: Earthquake Detection using State-of-Polarisation Sensing on Aerial Cable ***1944***
Kristina Shizuka Yamase Skarvang, Daniel J. Elson, Shohei Beppu, Daiki Soma, Steinar Bjørnstad, Dag Roar Hjelme and Yuta Wakayama

TH1F.4: Coherent Optical Supervisory Channel Enabling Per-Span Real-Time Gigabit/s Transmission and Distributed Sensing ***1948***
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