

Day 0 - Sunday July 6

16:00 - 20:00 registration at UPC
18:00 – 20:00 Welcome Reception at UPC Auditorium

DAY 1 - Monday July 7

***** Mo A - Monday morning *****

Plenary Hall - Auditori Vertex, Monday July 7

9.00 - 9.30 Opening Ceremony

9.30 - 11.00 Mo.A - PLENARY, Chairs: Crina Cojocaru, Salvatore Spadaro, Josep Solé-Pareta

9.30 **Mo.A.1** [CapmanyJosePlenary] [Programmable Photonics: An introduction to its fundamentals and applications](#)(30 min)

José Capmany

10.00 **Mo.A.2** [MaierMartinPlenary] [From Passive Optical Networks to Active Inference: The Key to True AI](#) (30 min)
Martin Maier

10.30 **Mo.A.3** [VincentiAntonellaPlenary] [From Gradient Index to Nonlinear Effects: Tailored Optics in Organic Polymer Systems](#)(30 min)

Paolo Franceschini, William Jaffray, Virginia Maria Demartis, Domenico de Ceglia, Luca Carletti, Evgenii Menshikov, Ivano Alessandri, Alfonso Carmelo Cino, Michael Scalora, Costantino De Angelis, Fabrizio Torricelli, Marcello Ferrera, Maria Antonietta Vincenti

room 101 - networks, Monday July 7

11.20 - 12.40 TPLS 1, Chairlady: Pantea Nadimi Goki

11.20 **Mo.B1.1** [DominguezLi1] [Security Requirements for the Optical Transport Network from the Perspective of a Service Provider](#) (Invited 20 min)

Laura Domínguez, Patricia Diez Muñoz, Jesús Folgueira Chavarria, Antonio Pastor, José Manuel Rivas-Moscoco, and Alvaro Aparicio Ruiz

11.40 **Mo.B1.2** [GiddingsRi1] [DSP-based Physical Layer Security in Fiber Optic Networks](#) (Invited 20 min)

Roger Giddings

12.00 **Mo.B1.3** [LinPHi1] [Sustainability and Scalability of Physical Layer Security in Next-Generation Networks](#) (Invited 20 min)

Pin-Hsun Lin, Karl-Ludwig Besser, and Eduard A. Jorswieck

12.20 **Mo.B1.4** [AlemanyPi1] [End-to-End Security Enforcement on Packet and Optical Transport Providers in Untrustworthy Multi-stakeholder Scenario](#) (Invited 20 min)

Pol Alemany, Shayan Hajipour, Sergiy Remezov, Miriam Castro, Diogo Nogueira, José Cunha, Mattin Antartiko Elorza Forcada, Lluís Gifre, Javier José Díaz, Guillermo Gómez, Sonia Castro, Javier García, Antonio Pastor, Ricard Vilalta, and Raul Muñoz

room 102 - systems, Monday July 7

11.20 - 12.40 5GT, Chair: Mirosław Klinkowski

11.20 **Mo.B2.1** [VazquezCarmeni1] [Power over Fiber Monitoring Techniques and high throughput co-transmission in Analog Radio Over Fiber Fronthauls](#) (Invited 20 min)

Carmen Vázquez, Rubén Altuna, David Sánchez Montero, and Javier Barco-Alvarez

11.40 **Mo.B2.2** [SubramaniamSi1] [Latency-Aware Fronthaul Network Design Using Power-over-Fiber](#) (Invited 20 min)

Egemen Erbayat, Luiz G. S. Dos Santos, Gustavo B. Figueiredo, Shih-Chun Lin, Motoharu Matsuura, Hiroshi Hasegawa, and Suresh Subramaniam

12.00 **Mo.B2.3** [LazaroJAi1] [Open-Source 5G Digital Twin: Virtualizing Core and RAN for Network Replication](#) (Invited 20 min)

Cristhian J. Rodrigues D.S., Izan Mateos, Jose A. Lazaro, Joan Anguera, and Anna Umbert

12.40 **Mo.B2.4** [JaumardBi1] [Spatio-temporal Split Learning Framework for 5G and B5G Traffic Prediction](#) (Invited 20 min)

Junior Momo Ziazet and Brigitte Jaumard

room 103 - access, Monday July 7

11.20 - 13.25 CTS, Chairlady: Kira Kastell

11.20 **Mo.B3.1** [KastellKi1] [Clustering-based Spoofing Detection and Mitigation in Autonomous Vehicles](#) (Invited 20 min)

Daniel Valle de Lima, Kevin Herman Muraro Gularte, João Paulo Javidi da Costa, Daniel Alves da Silva, Giovanni Almeida Santos, and Kira Kastell

11.40 **Mo.B3.2** [CasademontJi1] [Age of Information-based Evaluation Methodology for Cooperative Connected and Automated Mobility](#) (Invited 20 min)

Jordi Marias-i-Parella, Daniel Ullied-Guevara, Francisco Vázquez-Gallego, and Jordi Casademont

12.00 **Mo.B3.3** [LaoudiasCi1] [Situational Awareness in Emergency Response Operations Using Airborne Direction Finder](#) (Invited 20 min)

Maria Karatzia, Nicolas Souli, Christos Laoudias, Panayiotis Kolios, Konstantinos Michail, and Anastasis Kounoudes

12.20 **Mo.B3.4** [CiminelliCi1] [A Heterogeneously Integrated Photonic-Electronic Architecture for FMCW LiDAR](#) (Invited 20 min)

Caterina Ciminelli, Mattia Tagliente, and Giuseppe Brunetti

12.40 **Mo.B3.5** [MedeirosCr1] [High Resolution Optical Ranging using a Linearized Directly Modulated DFB Laser](#) (regular 15 min)

L.C.P. Pinto and M.C.R Medeiros

12.55 **Mo.B3.6** [LazaroJAr1] [Radar-to-Radar Communication for Connected Vehicles with Commercial Devices](#) (regular 15 min)

Andrés Sánchez-Alcántara, Federico Dios, José Antonio Lázaro, Jorge Pinazo, and Adolfo Lerín

13.10 **Mo.B3.7** [PaolucciFr1] [Driving Audit Applications with AI, Edge Continuum and Stand Alone 5G Networks](#) (regular 15 min)

F. Paolucci, A. Sgambelluri, M. Abbondandolo, and M. Guaitolini

room 201 - fibres, Monday July 7

11.20 - 12.40 MOF 1, Chair: Reinhard Caspary

11.20 **Mo.B4.1** [YamanakaNi1] [Power over fiber using Hollow-core fiber and its application on IoT-ONU](#) (Invited 20 min)

Naoaki Yamanaka, Satoru Okamoto, Hiroyuki Tsuda, Motoharu Matsuura, and Kazunori Mukasa

11.40 **Mo.B4.2** [HorakPi1] [Gas Filling and Evacuation of Hollow-Core Optical Fibres through Laser-Machined Side Channels](#) (Invited 20 min)

Peter Horak, Kavitha Srinivasan, Timothy Lee, Martynas Beresna, Radan Slavík, and Natalie V. Wheeler

12.00 **Mo.B4.3** [TengCi1] [Comparative Study of Glue Filled Hollow Core Fiber Based Interferometer for Temperature and Pressure Measurement](#) (Invited 20 min)

Liyong Shi, Hongyun Xia, Yihai Chen, Shijie Deng, Yuting Zhang, and Chuanxin Teng

12.20 **Mo.B4.4** [UrrutiaEi1] [Comparative Study of Signal-to-Noise Ratio in Raman Spectroscopy: Traditional Cuvette-Based Measurements vs. Hollow-Core Microstructured Polymer Optical Fibers with Selective and Non-Selective Fillings](#) (Invited 20 min)

Eduardo Urrutia, Joseba Zubia, Igor Ayesta, Mikel Azkune, Eneko Arrospide, and María Asunción Illarramendi

room 202 - SWP, Monday July 7

11.20 - 13.00 Mo.B5 - SWP 1 sensors, Chairlady: Crina Cojocaru

11.20 **Mo.B5.1** [LedouxRakli1] [Optofluidic sensor based on polymer optical microresonators for the specific, sensitive and fast detection of chemical and biochemical species platforms](#) (Invited 20 min)

Isabelle Ledoux-Rak, Nolwenn-Amandine Keriell, Camille Delezoide, David Chauvin, Hafsa Korri-Youssoufi, and Chi Thanh Nguyen

11.40 **Mo.B5.2** [PoffoLi1] [Leaf-scale chlorophyll fluorescence LiDAR development and preliminary results for field measurements platforms](#) (Invited 20 min)

Benjamin Gac, Jean-Marc Goujon, Pascal Besnard, Ronan Le Page, Luiz Poffo, and Antoine Fournier

12.00 **Mo.B5.3** [MenduniGi1] [Fast and Accurate Detection of Methane and Ethane with Beat-Frequency Quartz Enhanced Photoacoustic Spectroscopy](#) (Invited 20 min)

Giansergio Menduni, Luigi Melchiorre, Angelo Sampaolo, and Vincenzo Spagnolo

12.20 **Mo.B5.4** [VigreuxCi1] [Hybrid optical infrared micro-sensor for the early detection of plant diseases](#) (Invited 20 min)

Ali Houssein Aldrouby, Martin Khouri, Raphaël Escalier, Daphné Héran, Ryad Bendoula, Claire Pascouau, Dominique Barry-Etienne, Raphaël Kada Kribich, Mikhaël Myara, Ahmad Mehdi and Caroline Vigreux

12.40 **Mo.B5.5** [TaccheoS1] [Lasers for advanced portable and real time clinical diagnostic tools](#) (Invited 20 min)

Stefano Taccheo, Antonio D'Avolio, and Chiara Riganti

room 203 - quantum, Monday July 7

11.20-12.35 PC3 - Quantum Communications 1, Chairlady: Laura Ortíz

11.20 **Mo.B6.1** [AlonsoBlancoPr1] [Integration of quantum random number generators with post-quantum cryptography algorithms](#) (regular 15 min)

Paula Alonso Blanco, Luis Trigo Vidarte, Marc Romeu Casas, José Ramón Martínez Saavedra, Fernando de la Iglesia, Jordi Mur-Petit, Valerio Pruneri

11.35 **Mo.B6.2** [FernandezVilasAr1] [A unified Cryptographic Framework for the Distribution of Quantum-Generated Keys](#) (regular 15 min)

David Soler, Iván Cillero, Francisco J. Nóvoa, Carlos Dafonte, Pedro Otero-García, David Pérez-Castro, Ana Fernández-Vilas, Manuel Fernández-Veiga, Rebeca P. Díaz-Redondo

11.50 **Mo.B6.3** [SebastianLombranaAr1] [A commercial-off-the-shelf quantum communication infrastructure for MadQCI](#) (regular 15 min)

Alberto Sebastián-Lombrana, David Rincón, Ferrán Hernández, Elham Bidaki, César Sánchez, Vicente Martín

12.05 **Mo.B6.4** [SanzAr1] [Securing the Access to the 5G core with Quantum Key Distribution](#) (regular 15 min)

Ane Sanz, Asier Atutxa, David Franco, Jasone Astorga, Eduardo Jacob

12.20 **Mo.B6.5** [SebastianLombranaAr2] [Opening MadQCl: A quantum-enabled time-aware distributed data centre for open R&D](#) (regular 15 min)

Jaime S.Buruaga, Daniel Fernández, Alberto Sebastián-Lombrana, Rafael J. Vicente, Juan P. Brito, Laura Ortiz, José Luis Rosales, Vicente Martín

room 205 - materials&devices, Monday July 7

11.20 - 13.00 NAON; Chair: Sylwester Latkowski

11.20 **Mo.B7.1** [SekGi1] [Engineering III-V epitaxial nanostructures for efficient light sources on silicon](#) (Invited 20 min)

Grzegorz Sęk

11.40 **Mo.B7.2** [RyabchikovYVi1] [Properties of Silicon-8-Metals Nanocomposite Colloidal Solutions Synthesized by Ultrafast Laser Processing](#) (Invited 20 min)

Yury V. Ryabchikov and Antonin Kana

12.00 **Mo.B7.3** [SitekAi1] [Spin-orbit interaction in square core-shell nanowires](#) (Invited 20 min)

Anna Sitek, Tudor Gabriel Dumitru, Sigurdur I. Erlingsson, and Andrei Manolescu

12.20 **Mo.B7.4** [SchintkeSi1] [Data acquisition and analysis for angular-resolved light scattering on microstructured material surfaces](#) (Invited 20 min)

Dean Adam Crowe, Stefan del Rossi, and Silvia Schintke

12.50 **Mo.B7.5** [PostigoPAi1] [Design and Optimization of High-performance Multilayer Coatings in the Far-ultraviolet Region Based on Machine Learning Techniques](#) (Invited 20 min)

Yifei Huang, Praveen Kumar Anwla, Lakshmi Nikhil Goduguluri, and Pablo A. Postigo

room 101 - networks, Monday July 7

14.00 - 15.30 TPLS 2, Chairlady: Pantea Nadimi Goki

14.00 **Mo.C1.1** [RuizMi2] [Optical Layer and Quantum Digital Twins for Enhancing Secure Autonomous Network Operation](#) (Invited 20 min)

Marc Ruiz and Luis Velasco

14.20 **Mo.C1.2** [BanaszekKi1] [Quantum-Safe Physical Layer Security in Optical Networks](#) (Invited 20 min)

Konrad Banaszek, Mateusz Kucharczyk, Karol Łukanowski, and Marcin Jarzyna

14.40 **Mo.C1.3** [SyvridisDi1] [Physical Unclonable Functions : Recent Developments, Challenges and their Role in Different Root of Trust Schemes](#) (Invited 20 min)

Marialena Akriotou, Konstantinos Krilakis, and Dimitris Syvridis

15.00 **TPLS Panel Discussion** (30 min)

room 102 - systems, Monday July 7

14.00 - 15.40 6G NeO 1, Chair Marc Ruiz

14.00 **Mo.C2.1** [RuizMi0] [10th Anniversary 6GNeO - Introduction from the Chairs](#) (10 min)

Marc Ruiz and Luis Velasco

14.20 **Mo.C2.2** [VegasOlmosJi1] [Programmable Networks for Future 6G Systems](#) (Invited 20 min)

Juan Jose Vegas Olmos

14.40 **Mo.C2.3** [GhasrizadehSi1] [OCATA Optical Multiband Time Domain Digital Twin: Supporting Lightpath Provisioning with NLI Mitigation in Multiband Optical Networks](#) (Invited 20 min)

Sadegh Ghasrizadeh, Marc Ruiz, and Luis Velasco

15.00 **Mo.C2.4** [MunozRi1] [Dynamic SDN Control of Pluggable Transceivers in disaggregated packet-optical networks for 6G Xhaul](#) (Invited 20 min)

Raul Muñoz, Lluís Gifre, Waleed Akbar, Ricard Vilalta, Ricardo Martínez, and Ramon Casellas

15.20 **Mo.C2.5** [ShakespearMilesHi1] [Enhancing DRL-Based Multi-Path Routing with Subflow Identification in 6G Packet-over-Optical Networks](#) (Invited 20 min)

H. Shakespear-Miles, N. Koneva, S. Barzegar, M. Ruiz, A. Sánchez-Macian, and L. Velasco

room 103 - access, Monday July 7

14.00 - 16.00 Access 1; Chairlady: Carmen Vázquez

14.00 **Mo.C3.1** [GaudinoRi1] [Overview on Current Trends in Coherent PON and in Metro-Access Convergence](#) (Invited 20 min)

Giuseppe Rizzelli and Roberto Gaudino

14.20 **Mo.C3.2** [MaesJi1] [The Road Towards 100G & 200G Passive Optical Network](#) (Invited 20 min)

Jochen Maes

14.40 **Mo.C3.3** [IzquierdoDi1] [Roadmap to Simplified Coherent Heterodyne Receivers for 100 Gb/s PONs](#) (Invited 20 min)

David Izquierdo, Pascual Sevillano, Miguel Barrio, Natalia Herguedas, Jorge Ciudad-Real, Alicia López, and Ignacio Garcés

15.00 **Mo.C3.4** [VirgillitoEi1] [Spatially Disaggregated Modelling of Coherent Cross-Channel Interference in Dispersion-Managed Optical Links](#) (Invited 20 min)

Emanuele Virgillito, Rosario Ietro, Santosh C. Ramesh, Siddharth Varughese, Antonio Napoli, Sai Kishore Bhyri, Gabriele Galimberti, Walid Wakim, and Vittorio Curri

15.20 **Mo.C3.5** [KlinkowskiMi1] [Evaluation of 1+1 and 1:1 Optical Protection Architectures in Passive WDM Optical Xhaul Access Networks](#) (Invited 20 min)

Mirosław Klinkowski

15.40 **Mo.C3.6** [SegarraJi1] [All-optical 5G/6G converged flexible access-metro network using wavelength selective switches](#) (Invited 20 min)

Josep Segarra, Vicent Sales, Victor Polo, Miquel Masanas, Rodrigo Méndez, María C. Santos, Josep Prat, and Juan Camilo Velásquez

room 201 - fibres, Monday July 7

14.00 - 14.50 MOF 2, Chair: Peter Horak

14.00 **Mo.C4.1** [BartonIi1] [Fabrication of negative curvature hollow core optical fibers capable of acoustic sensing](#) (Invited 20 min)

Ivo Barton, Andrei Borodkin, Yauhen Baravets, Ondrej Podrazky, Martin Grabner, Pavel Honzatko, and Ali. A. Jasim

14.20 **Mo.C4.2** [AguechKr1] [Novel Design of a 7-Core Photonic Crystal Fiber-Based Mode Multiplexer/Demultiplexer for High-Capacity Optical Communication](#) (regular 15 min)

Khaoula Aguech, Mourad Menif, and Amine Ben Salem

14.35 **Mo.C4.3** [KasztelanRr1] [Application of Machine Learning Techniques and Neural Networks in the Development of Nanostructured Optical Fibers](#) (regular 15 min)

Rafał Kasztelan, Maciej Napiorkowski, Stanisław Kazmierczak, Jacek Mandziuk, and Ryszard Buczyński

room 202 - SWP, Monday July 7

14.00 - 16.00 SWP 2 sensors; Chair: Vincenzo Luigi Spagnolo

14.00 **Mo.C5.1** [AnelliFi1] [A Long Period Grating based on ZBLAN Optical Fiber for the Mid-Infrared platforms](#) (Invited 20 min)

Francesco Anelli, Antonella Maria Loconsole, Sébastien Venck, Solenn Cozic, Francesco Prudeniano

14.20 **Mo.C5.2** [HattoriHTi1] [From carbide-based components to quantum Rydberg sensors](#) (Invited 20 min)

Haroldo T. Hattori, Dinelka Somaweera, Sanjida Akter, Khalil As'ham, Wen Lei

14.40 **Mo.C5.3** [HuXi1] [Tilted fiber Bragg grating in polyimide-coated optical fiber for temperature measurement](#) (Invited 20 min)

Ruibin Chen, Shaoxin Ma, Xintong Zhong, Hang Qu, Carlos Marques, Christophe Caucheteur, Xuehao Hu

15.00 **Mo.C5.4** [KrzempekKi1] [Sensitive Photothermal Gas Detection Using Miniature Fiber Fabry-Perot Cavities](#) (Invited 20 min)

Karol Krzempek, Florian Giefer, Lukas Tenbrake, Dieter Meschede, Sebastian Hofferberth, Hannes Pfeifer

15.20 **Mo.C5.5** [PoffoLi2] [Contribution to metrological corrections of a high spectral resolution mid infrared spectral imager](#) (Invited 20 min)

Jean-Marc Goujon, Pascal Besnard, Maroun Hjeij, Bastien Billot, Ronan Le Page, Mathilde Lefeuvre, John Sunil, Luiz Poffo

15.40 **Mo.C5.6** [QuHi1] [Micro-/nano- displacement and force sensor based on elastic rhombus-shaped structures fabricated on fiber tip using two-photon-polymerization](#) (Invited 20 min)

Rongcheng Zheng, Yufei Zhang, Xintong Zhong, Elissaios Stavrou, Chuanxin Teng, Xiaoyong Chen, Hang Qu

room 203 - quantum, Monday July 7

14.00 - 15.00 PC3 - Quantum Communications 2, Chair: Andrea Gorni

14.00 **Mo.C6.1** [AppasFr1] [Quantum Repeater Links with Rare-Earth Solid-State Quantum Memories](#) (regular 15 min)

Félien Appas, Jonathan Hänni, Alberto E. Rodríguez-Moldes, Soeren Wengerowsky, Dario Lago-Rivera, Jelena Rakonjac, Markus Teller, Samuele Grandi, and Hugues de Riedmatten

14.15 **Mo.C6.2** [BaladoSoutoDr1] [Synchronization method for MDI-QKD: implementation and insights](#) (regular 15 min)

Inés Meili Díaz García, Daniel Balado Souto, Verónica Fernández-Mármol, and Daniel Cano Reol

14.30 **Mo.C6.3** [Caballerolr1] [Optical quantum frequency standard bases for MADQuantum-CM communication network](#) (regular 15 min)

Ismael Caballero, Adriana Palos, Daniel de Mecado, Yolanda Álvarez, David Peral, and Javier Díaz de Aguilar

14.45 **Mo.C6.4** [RuizLr1] [On the impact of launch power control on the performance of QKD networks](#) (regular 15 min)

Lidia Ruiz and Juan Carlos García-Escartín

room 205 - materials&devices, Monday July 7

14.00 - 15.50 RONEXT; Chair: Luca Valcarenghi

14.00 **Mo.C7.1** [delaOlivaAi1] [Bridging the gap between TSN and Open-Source](#) (Invited 20 min)

David Rico Menendez, Antonio de la Oliva, Carlos Barroso-Fernández, and Francisco Luque Schempp

14.20 **Mo.C7.2** [CallegatiFi1] [Exploiting Automated Traffic Analysis to Detect Threats and Anomalies in Industry 4.0](#) (Invited 20 min)

Chiara Grasselli, Chiara Contoli, Riccardo Bacca, Andrea Melis, and Franco Callegati

14.40 **Mo.C7.3** [MasMachucaCi1] [Resilient Cascaded Optical Access Networks: An Urban Case-Study](#) (Invited 20 min)

Ritanshi Agarwal, Cristian Bermudez Serna, Anjali Sharma, and Carmen Mas-Machuca

15.00 **Mo.C7.4** [KowalczykMi1] [Detection of jamming attacks in optical networks using Convolutional Neural Networks](#) (CNNs) (Invited 20 min)

Marcin Kowalczyk

15.20 **Mo.C7.5** [KosAi1] [Cyber Security - A Methodology for the Classification of Operational and Technical Data in the Power Sector](#) (Invited 20 min)

Maj Vilfan, Andrej Kos, Matej Rabzelj, and Urban Sedlar

15.40 **Mo.C7.6** [MarottaApd1] [A Resilient Passive Optical Network Architecture Based on Dynamic Spatial Aggregation](#) (post-deadline10 min)

A. Marotta, C. Centofanti, G. Di Sciullo, C. Antonelli, F. Graziosi, and L. Valcarenghi

room 101 - networks, Monday July 7

16.20 - 18.30 Mo.D1 - WeInTel; Chairladies: Sima Barzegar & Pantea Nadimi Goki

16.20 **Mo.D1.1** [SerranoRodrigoAi1] [Advanced Photonics Packaging for Space and sub-THz Communication Systems](#) (Invited 20 min)

A. Serrano Rodrigo, M. Chiesa, and D. Rotta

16.40 **Mo.D1.2** [VillegasZannellaVi1] [UWB-SDM Data-Plane Network Architecture for Scalable and Adaptive 6G Transport](#) (Invited 20 min)

Vanessa Villegas Zannella, José Manuel Rivas-Moscoco, Juan Pedro Fernández-Palacios, Jesús Folgueira Chavarria, Dan Marom, Michael Enrico, Ioannis Tomkos, and David Moor

17.00 **Mo.D1.3** [GemmatoVi1] [Development of a Coherent-Detection LiDAR System based on Hybrid SOI-InP Integration](#) (Invited 20 min)

Valentina Gemmato, Federico Camponeschi, Filippo Scotti, Luca Rinaldi, Claudio Porzi, Manuel Reza, Paolo Ghelfi, Antonella Bogoni, and Mirco Scaffardi

17.20 **Mo.D1.4** [SamaFi1] [Integrated opto-microfluidic interferometric chemical sensors on silicon chip with enhanced sensitivity](#) (Invited 20 min)

Francesca Samà, Flaminia Piretta, Francesca Bontempi, Javier Elaskar, Riccardo Funari, and Claudio J. Oton

17.40 **Mo.D1.5** [MasMachucaCi2] [Towards Resilient and Secure QKD networks](#) (Invited 20 min)

Carmen Mas Machuca and Mario Wenning

18.00 [WeInTel Panel Discussion](#) (30 min)

room 102 - systems, Monday July 7

16.20 - 17.40 6G NeO 2; Chair Marc Ruiz

16.20 **Mo.D2.1** [ShariatiBi1] [NOBS: A Data-Sovereign Telemetry and Monitoring Framework for 6G Networks](#) (Invited 20 min)

Aydin Jafari, Behnam Shariati, Angela Mitrovska, Pooyan Safari, Mihail Balanici, and Johannes Karl Fischer

16.40 **Mo.D2.2** [SpadaroSi1] [On the selection of KPI-aware E2E paths for deterministic services in 6G Networks](#) (Invited 20 min)

Salvatore Spadaro, Albert Pagès, Fernando Agraz, Marta Blanco Caamaño, and Luis Miguel Contreras

17.00 **Mo.D2.3** [LuXi1] [Optimizing multicast services in Flexible-Rate Passive Optical Networks](#) (Invited 20 min)

Xiang Lu, Luis Velasco, and Marc Ruiz

17.20 **Mo.D2.4** [RuizMi1] [On the benefits of Multi-Agent Systems for Operational Expenditure Savings](#) (Invited 20 min)

Marc Ruiz, Hailey Shakespear-Miles, Sima Barzegar, Andrea Sgambelluri, and Luis Velasco

room change: A3-001, Monday July 7

16.20 - 18.00 Access 2; Chair: Josep Segarra

16.20 **Mo.D3.1** [CurriVi1] [Is the Gaussian Channel Model Suitable for Converged Metro-Access Optical Networks?](#) (Invited 20 min)

Andrea Rosso, Enrico Miotto, Emanuele Virgillito, Stefano Straullu, and Vittorio Curri

16.40 **Mo.D3.2** [BermudezSernaCi1] [Dependency Analysis of Optical Access Networks on Electrical Distribution Networks](#) (Invited 20 min)

Cristian Bermudez Serna, Shakthivelu Janardhanan, Elif Doğan, Anjali Sharma, and Carmen Mas-Machuca

17.00 **Mo.D3.3** [LatalJi1] [Coexistence of DWDM-PON and EPON Systems as a Hybrid Communication Network](#) (Invited 20 min)

Jan Latal, Petr Siska, Jozef Chovan, Dana Seyringer, Stanislav Hejduk, Frantisek Uherek, Jiri Stipal, Krystof Safr, Ondrej Vachek, Kamil Trubak, Martin Ziman, and Fadi Dohnal

17.20 **Mo.D3.4** [SoumplisZi1] [Model Predictive Control Scheduling for Extended Access Metro P2MP Optical Networks](#) (Invited 20 min)

Polyzois Soumplis, Konstantinos Christodouloupoulos, Konstantinos Yiannopoulos, and Emmanouel Varvarigos

17.40 **Mo.D3.5** [HuangYi1] [Full Lifecycle Management of Optical Access Networks with a Hierarchical Model-Based Design](#) (Invited 20 min)

Yangbao Huang and Weiqiang Sun

18.00 In Memoriam of Josep Prat

room 201 - fibres, Monday July 7

16.00 - 18.25 NOFSeT; Chair: Giuseppe Rizzelli

16.00 **Mo.D4.1** [BoffiPi1] [PON as a challenging scenario for sustainable fiber sensing](#) (Invited 20 min)

Pierpaolo Boffi, Marco Fasano, and Paola Parolari

16.20 **Mo.D4.2** [BoffiPi2] [Exploitation of FMF capabilities for joint communications and sensing](#) (Invited 20 min)

Stefano Gaiani, Marco Fasano, Alberto Gatto, Paola Parolari, Paolo Martelli, and Pierpaolo Boffi

16.40 **Mo.D4.3** [RizzelliGi1] [Experimental Characterization of a Deployed Early-Warning System for SOP-Based Monitoring of Debris Flows in Mountain Scenarios](#) (Invited 20 min)

Saverio Pellegrini, Dhia El Hak Daamouche, Roberto Gaudino, and Giuseppe Rizzelli

17.00 **Mo.D4.4** [MartinsHi1] [On the Coexistence of DAS and IMDD Systems on the Same Fiber](#) (Invited 20 min)

Saverio Pellegrini, Laura Hernandez-Martín, Ann M. Rosa Brusin, Giuseppe Rizzelli, Juan Diego Ania-Castañón, Gabriella Bosco, Roberto Gaudino, and Hugo F. Martins

17.20 **Mo.D4.5** [KarlssonSi1] [ML-Based Detection and Categorization of Complex Mechanical Vibrations via State of Polarization Analysis in Optical Networks](#) (Invited 20 min)

Leyla Sadighi, Stefan Karlsson, Marco Ruffini, and Marija Furdek

17.40 **Mo.D4.6** [UsmaniFr1] [Deep Learning Based Early Earthquake Detection through Terrestrial Optical Networks](#) (regular 15 min)

Fehmida Usmani, Hasan Awad, Stefano Straullu, Rudi Bratovich, Emanuele Virgillito, Francesco Aquilino, Roberto Proietti, and Vittorio Curri

17.55 **Mo.D4.7** [HorvathTr1] [Experimental Measurement of Mechanical Deformation of Optical Fiber with Simultaneous Transmission of DAS and 200 Gbps Data](#) (regular 15 min)

Tomas Horvath, Petr Dejdar, Adrian Tomasov, Ondrej Klicnik, Jan Bukovsky, Matej Cernohous, Francesco Da Ros, and Petr Munster

18.10 **Mo.D4.8** [HorvathTr2] [Trends in Optical Network Security: from Common to Advanced Monitoring Technologies](#) (regular 15 min)

Petr Munster, Adrian Tomasov, Petr Dejdar, Tomas Horvath, and Ondrej Klicnik

room 202 - SWP, Monday July 7

16.20 - 18.10 Metasurfaces, Chair: Francesco Dell'Olio

16.20 **Mo.D5.1** [DOrazioAi1] [Toward UAV-Aided RIS Communications](#) (Invited 20 min)

Carla Cantore, Ilaria Marasco, Giovanni Magno, and Antonella D'Orazio

16.40 **Mo.D5.2** [Marascoli1] [Metasurfaces for Transmission and Reflection in Next-Generation Communication Systems](#) (Invited 20 min)

Carla Cantore, Giovanni Magno, and Ilaria Marasco

17.00 **Mo.D5.3** [NousiosGi1] [A strongly resonant silicon square-slot metasurface hosting bound states in the continuum for lasing and nonlinear applications: theoretical studies and experimental verification](#) (Invited 20 min)

G. Nousios, J. F. Algorri, W. Fuscaldo, F. Dell'Olio, Y. Ding, V. Dmitriev, L. C. Andreani, M. Galli, O. Tsilipakos, E. E. Kriezis, and D. C. Zografopoulos

17.20 **Mo.D5.4** [PitruzzellaRi1] [PFAS Sensor configurations exploiting Plastic Optical Fibers and Molecularly Imprinted Polymers](#) (Invited 20 min)

Rosalba Pitruzzella

17.40 **Mo.D5.5** [CennamoNr1] [Intensity-based Plasmonic Spoon-shaped Sensor Systems via LED and Photodetectors](#) (regular 15 min)

Francesco Arcadio, Ines Tavoletta, Luigi Zeni, Raffaele Fusco, Ernesto Nappi, Chiara Marzano, Rosalba Pitruzzella, Luca Pasquale Renzullo, Giancarla Alberti, Federica Passeggio, Mimimorena Seggio, and Nunzio Cennamo

17.55 **Mo.D5.6** [DellOlioFr1] [Plasmonic metasensors comprising gold nanodisks and prisms on SiO₂ substrate in the near infrared regime](#) (regular 15 min)

Annabella la Grasta, María Isabel Gómez- Gómez, Amadeu Griol, Raffaella Germinario, Alejandro Martínez, and Francesco Dell'Olio

room 203 - quantum, Monday July 7

16.00 - 18.00 Quantum Communications 3; Chair: Alberto Gatto

16.00 **Mo.D6.1** [CincottiGi1] [Advances and perspectives in superadditive optical quantum communications](#) (Invited 20 min)

Gabriella Cincotti, Marco Napoleone, and Matteo Rosati

16.20 **Mo.D6.2** [MartinVi1] [Advancing the Future of Quantum Communication Networks: the new MadQCI](#) (Invited 20 min)

Alberto Sebastián-Lombrana, Laura Ortiz, Juan P. Brito, Javier Faba, Rubén B. Méndez, Jaime S. de Buruaga, Rafael J. Vicente, Julio Setien, Juan José Romero, Carmen Escribano, Pedro Salas, José Luis Bejarano, and Vicente Martín

16.40 **Mo.D6.3** [RinconDi1] [Precision Time Protocol Synchronization Analysis for Single and Coincidence Qubit Detection in Quantum Networks](#) (Invited 20 min)

Marc Jofre, Ferran Saigi, and David Rincón-Rivera

17.00 **Mo.D6.4** [BruscinoCi1] [Multi-nodes quantum network in metropolitan area of Naples](#) (Invited 20 min)

C. Bruscino, M. Peluso, P. Ercolano, C. Zhang, D. Salvoni, A. Giuliana, M. Venturini, D. Bacco, F. Santagiustina, T. Occhipinti, L. Calderaro, S. Capeleto, A. Zavatta, C. Liorni, G. De Falco, M. Dispenza, G. Elia, R. Aiello, P. Maddaloni, G. Delli Santi, C. Perissinotto, D. Calónico, L. Parlato, and G. P. Pepe

17.20 **Mo.D6.5** [WareCi1] [Quantum-Aware Network Planning and Integration](#) (Invited 20 min)

Cédric Ware and Mounia Lourdiane

17.40 **Mo.D6.6** [MartelliPi1] [Quantum interference and which-path information](#) (Invited 20 min)

Paolo Martelli

room 205 - materials&devices, Monday July 7

16.20 - 18.20 PICA W 1; Chair: Stefano Taccheo

16.20 **Mo.D7.1** [MinasianRi1] [Integrated silicon photonic signal processing and sensing](#) (Invited 20 min)

R. A. Minasian and X. Yi

16.40 **Mo.D7.2** [GoykhmanIi1] [2D hybrid photonics for light detection and manipulation on-chip](#) (Invited 20 min)

Ilya Goykhman

17.00 **Mo.D7.3** [AaltoTi1] [Low-loss photonic components for optical networks optimized for machine learning applications](#) (Invited 20 min)

Timo Aalto

17.20 **Mo.D7.4** [SuarezIi1] [Optimization of MAPbBr₃-Ni\(AcO\)₂ nanocomposite waveguides for lasing](#) (Invited 20 min)

Sandra Soriano-Díaz, Jaume Noguera-Gómez, Juan P. Martínez-Pastor, Pablo P. Boix, Rafael Abarques, and Isaac Suárez

17.40 **Mo.D7.5** [AltabasJAi1] [Quasi Coherent PIC Transceiver Technologies for Metro, Access and Front-Haul Networks](#) (Invited 20 min)

Jose A. Altabas, Lorenza Amati, Onur Düzgöl, Claus H. Jørgensen, Omar Gallardo, Rakshick Shrinivas, Michele Squartecchia, Miguel C. Temboury, Arsen Turhaner, Jesper B. Jensen, Shane Duggan, Caolán Murphy, Frank Smyth, Jonas Viklund, and Magnus Olson

18.00 **Mo.D7.6** [TeixeiraAi1] [Integrated Photonics in Access Networks: The Last Development Mile](#) (Invited 20 min)

António Teixeira, João Santos, Carla Rodrigues, Jacklyn Reis, Mário Lima, Francisco Rodrigues

Monday July 7: Cultural visit 19:00 – 22:00 → Guided tour in BORN Cultural Centre (with a catering dinner)

DAY 2 - Tuesday July 8

***** Tu.A - Tuesday morning parallel sessions *****

room 101 - networks, Tuesday July 8

08.30 - 10.20 DCN; Chair: Weiqiang Sun

8.30 **Tu.A1.1** [HanikNi1] [Symbol-Wise Phase Predistortion to Enhance Reach of Optical Pulse Amplitude Modulation with Direct Detection](#) (Invited 20 min)

Ulrike Höfler, Silas Oettinghaus, Annika Dochhan, Stephan Pachnicke, and Norbert Hanik

8.50 **Tu.A1.2** [KnapinskaAi1] [Provisioning Anycast Connections in Traffic-Prediction-Assisted Multilayer Networks](#) (Invited 20 min)

Aleksandra Knapieńska, Piotr Lechowicz, and Krzysztof Walkowiak

8.10 **Tu.A1.3** [LawoDCi1] [Confidential Computing and AI in Networking Fabrics](#) (Invited 20 min)

D. C. Lawo, I. Tafur Monroy, and J. J. Vegas Olmos

9.30 **Tu.A1.4** [ZhuZi1] [Accelerating DML Training in Optical Rackless DC with P4-based In-Network Computing](#) (Invited 20 min)

Weichi Wu, Ag Pang, Youyou Ai, Qiqi Zhu, and Zuqing Zhu

9.50 **Tu.A1.5** [RahhalMr1] [OpenFlow Support for the Next Generation TelcoEdgeCloud with TeraFlowSDN](#) (regular 15 min)

M. Rahhal, Ll. Gifre, R. Vilalta, R. Muñoz, and S. Spadaro

10.05 **Tu.A1.6** [IsmailLr1] [Programmable Decentralized Feature Extraction Telemetry](#) (regular 15 min)

Layal Ismail, Andrea Sgambelluri, Filippo Cugini, and Francesco Paolucci

room 102 - systems, Tuesday July 8

08.30 - 10.15 Tu.A3 - EWOC 1; Chair: Zoran Vujčić

8.30 **Tu.A2.1** [Welcome note](#) (5 min)

Zoran Vujcic

8.35 **Tu.A2.2** keynote 1 [Photonically-Assisted Beam Steering and Switching in Converged Optical–Wireless Networks](#) (35 min)

Maria C. Santos

9.10 **Tu.A2.3** keynote 2 [Enabling Intelligence in 6G Networks from Theory to Practice](#) (35 min)

Arifur Rahman

9.45 **Tu.A2.4** [AhmadNr1] [Stochastic Geometry based Coverage Analysis of RIS-Assisted UAV-aided THz Network](#) (regular 15 min)

Naveed Ahmad, Abdulkareem Karasuwa, Jonathan Rodriguez, and Ali Roula

10.00 **Tu.A2.5** [ArnaoutSr1] [Throughput Maximization Through an Adaptive Dynamic Bandwidth Allocation in TWDM-PON](#) (regular 15 min)

Sandra Arnaout, Md Arifur Rahman, Md Munjure Mowla, Sławomir Hausman, and Piotr Korbel

room 103 - access, Tuesday July 8

08.30 - 10.25 THz, Chair: Andreas Stöhr

8.30 **Tu.A3.1** [KawanishiTi1] [Space Division Multiplexed Fixed THz communication System](#) (Invited 20 min)

Tetsuya Kawanishi

8.50 **Tu.A3.2** [CesarCuelloJi1] [Dual-wavelength-modulation SSB-C mm-wave transmission system based on a gain switched laser](#) (Invited 20 min)

Luis Gonzalez-Guerrero, Jessica César-Cuello, Amol Delmade, Devika Dass, Colm Browning, Liam Barry, Frank Smyth, Horacio Lamela, and Guillermo Carpintero

9.10 **Tu.A3.3** [KajiTi1] [Antenna-coupled optical modulators using electro-optic polymer waveguides towards radio-over-fiber applications](#) (Invited 20 min)

Takahiro Kaji, Toshiki Yamada, Naoya Wada, and Akira Otomo

9.30 **Tu.A3.4** [StoehrAi1] [All-Photonics Fiber-Wireless Bridging based on MUTC Photodiodes and Polymer Modulators Operating in the D-Band](#) (Invited 20 min)

Jonas Tebart, Takahiro Kaji, Shuya Iwamatsu, Marcel Grzeslo, Ezgi Abacioğlu, Toshiki Yamada, Akira Otomo, Naoya Wada, and Andreas Stöhr

9.50 **Tu.A3.5** [PereiraMi1] [THz and Mid Infrared Photonics with Applications to Environmental Detection and Metabolomics](#) (Invited 20 min)

M.F. Pereira, Humaira Zafar, A. Al-Ateqi, A. Apostolakis, and V. Vaks

10.10 **Tu.A3.6** [AsgariSr1] [Tunable Graphene-Based Terahertz Anisotropic Metamaterial as Multiband Absorber and NOT Logic Gate](#) (regular 15 min)

Somayyeh Asgari and Tapio Fabritius

room 201 - fibres, Tuesday July 8

08.30 - 10.10 NOA 1, Chair: Paweł Rosa

8.30 **Tu.A4.1** [CalabrettaNi1] [Fast control SOA-Based Optical Switched Metro-Access Network with Edge Computing Nodes for Time-Sensitive Applications](#) (Invited 20 min)

Henrique Freire Santana, Ali Mefleh, and Nicola Calabretta

8.50 **Tu.A4.2** [KahnJMi1] [Statistics of Mode Scrambling in Long-Haul Multi-Mode Fiber Systems](#) (Invited 20 min)

Anirudh Vijay, Oleksiy Krutko, Rebecca Refae, and Joseph M. Kahn

9.10 **Tu.A4.3** [DragicPi1] [Erbium-Alkaline Earth Nanoparticle Suspension-Doped Aluminosilicate Optical Fibers for Next Generation Amplifiers and High-Power Lasers](#) (Invited 20 min)

Peter Dragic, Jennifer Campbell, Mary Ann Cahoon, Michael Gachich, Ann Luo, Bailey Meehan, Stephanie Morris, Michael Norlander, Alexander Pietros, Michael Rizk, Allen Wang, Thomas Hawkins, and John Ballato

9.30 **Tu.A4.4** [PoliFi1] [Rate-Equation-Based Modelling of Bi-Doped Fiber Amplifiers in the O+E Band](#) (Invited 20 min)

Federica Poli and Michelangelo Federico

9.50 **Tu.A4.5** [SpiekmanLi1] [Facet Reflectivities and Fabry-Perot resonance in Semiconductor Optical Amplifiers](#) (Invited 20 min)

L. H. Spiekman, A. Ouali, and J. E. Lopez

room 202 - SWP, Tuesday July 8

08.30 - 10.10 SWP 3 metamaterials 1; Chairlady: Muriel Botey

8.30 **Tu.A5.1** [TasolamprouACi1] [Laser with Dynamically Controllable Polarization Enabled by Engineered Chiral Metamaterials with Twisted Crosses](#) (Invited 20 min)

A. C. Tasolamprou, I. Katsantonis, T. Koschny, and M. Kafesaki

8.50 **Tu.A5.2** [ChebenPi1] [Metamaterial nanoantennas and optical phased arrays for the structuring of free-space optical beams using a programmable mesh](#) (Invited 20 min)

P. Cheben, J.H. Schmid, J. Zhang, R. Yuan, W. Fraser, I. Kandid, W. N. Ye, A. F. Hinesrosa, J.M. Luque-González, J. G. Wangüemert-Pérez, A. Ortega-Moñux, R. Halir, A. Sánchez-Postigo, I. Molina-Fernández, D. Benedikovič, D. Melati, C. Alonso-Ramos, L. Vivien, D.-X. Xu, R. Korček, Y. Grinberg, S. Janz, S. Wang, M. Vachon, and R. Cheriton

9.10 **Tu.A5.3** [MalureanuRi1] [The influence of on-fiber metasurface misalignment on the performance of optical mode separation](#) (Invited 20 min)

Jimmy Duc Tran, Andrei Lavrinenko, Toshio Morioka, Leif Katsuo Oxenløwe, and Radu Malureanu

9.30 **Tu.A5.4** [MagnoGi1] [Metasurfaces for Sensing and Display Applications](#) (Invited 20 min)

Giovanni Piscopo, Francesca Filograno, Marius Crouzier, Artem S. Vorobev, Liam O'Faolain, Olivier Gauthier-Lafaye, Béatrice Dagens, Giovanna Calò, and Giovanni Magno

9.50 **Tu.A5.5** [AguiamDi1] [Hardware-in-the-loop free space optical computing and optimization of polychromatic multilevel diffractive optics for imaging](#) (Invited 20 min)

Filipe Camarneiro, Manuel J. L. F. Rodrigues, João Cunha, Aamod Shanker, Ana Dias, Filipe S. Alves, and Diogo E. Aguiam

room 203 - quantum, Tuesday July 8

08.30 - 10.30 Quantum Communications 4; Chairlady: Virginia D'Auria

8.30 **Tu.A6.1** [ZavattaAi1] [Quantum Communication Networks Deployed in fiber and free-space Links](#) (Invited 20 min)

Domenico Ribezzo, Carlo Marconi, Luca Bianchi, Giulia Guarda, Sebastiano Cocchi, Marco Pinel, Tommaso Occhipinti, Davide Bacco and Alessandro Zavatta

8.50 **Tu.A6.2** [DjordjevicBi2] [High Secret-Key Rate Atmospheric Turbulence-Based Cryptosystems](#) (Invited 20 min)

Ivan B. Djordjevic

9.10 **Tu.A6.3** [KolenderskiPi1] [Entanglement-based Quantum Key Distribution for Satellite Uplink in the Daylight Conditions](#) (Invited 20 min)

Piotr Kolenderski

9.30 **Tu.A6.4** [UdvaryEi1] [Wavelength Allocation for Quantum Channel in Integrated Classical and Quantum Communication System](#) (Invited 20 min)

Eszter Udvary

9.50 **Tu.A6.5** [ChristodouloupoulosKi1] [Comparing Relayed and Switched QKD in Ring Networks](#) (Invited 20 min)

Antonios Selentis, Konstantinos Christodouloupoulos, and George T. Kanellos

10.10 **Tu.A6.6** [IsmailTi1] [Challenges and Applications of Integrated mmWave/FSO QKD-based Communication Systems for Secure and High-Capacity Networks](#) (Invited 20 min)

Tawfik Ismail, Ala H. Sabeeh, and Nancy Alshaer

room 205 - materials&devices, Tuesday July 8

08.30 - 10.30 PICA2; Chair: Frantisek Uherek

8.30 **Tu.A7.1** [LiuCNi1] [Solid-State Optical Chip with Dual-Gate Structure for Optical Phase Control Arrays](#) (Invited 20 min)

Chun-Nien Liu, Kai-Chieh Chang, Sheng-Lung Huang, and Wood-Hi Cheng

8.50 **Tu.A7.2** [IezekielSi1] [Enhanced Optical Frequency Comb Generation through Multitone Reciprocating Optical Modulation](#) (Invited 20 min)

Ioannis Stratakis, Dimitrios Kastritsis, and Stavros Iezekiel

9.10 **Tu.A7.3** [OzolinsOi1] [SiP Modulators for 400 Gbps on Single Wavelength in IM/DD Systems: Is This a Reality?](#) (Invited 20 min)

Armands Ostrovskis, Darja Cirjulina, Toms Salgals, Minkyu Kim, Michael Koenigsmann, Benjamin Krüger, Fabio Pittalá, Lu Zhang, Xianbin Yu, Richard Schatz, Markus Gruen, Hadrien Louchet, Robert Jahn, Kazuo Yamaguchi, Vjaceslavs Bobrovs, Peter De Heyn, Xiaodan Pang, and Oskars Ozolins

9.30 **Tu.A7.4** [PengHi1] [Chip-Scale Optical Frequency Combs for Ultra-Broadband Signal Processing and High-Speed Optical Communications](#) (Invited 20 min)

H. Peng, D. Drayss, D. Fang, Y. Chen, C. Füllner, A. Sherifaj, G. Lihachev, L. Schmitz, T. Henauer, T. Harter, T. Zwick, W. Freude, T. J. Kippenberg, S. Randel, and C. Koos

9.50 **Tu.A7.5** [ThomsonDJI1] [Optimisation of all silicon photodetectors at 1550nm](#) (Invited 20 min)

D. J. Thomson, T. Lo, K. Mohammed, S. Pedcenko, M. Ebert, X. Yan, E. Tsanidou, J. Le Besque, B. Pant, R. S. Pokharia, C. J. Mitchell, C. G. Littlejohns, A. P. Knights, and G. T. Reed

10.10 **Tu.A7.6** [ChenLi1] [Wavelength Modulation Optical Phased Array Technology](#) (Invited 20 min)

Yating Zhuang and Long Chen

room 101 - networks, Tuesday July 8

11.00 - 12.20 GOC 1; Chairlady: Carmen Mas Machuca

11.00 **Tu.B1.1** [BergmanKi1] [Petascale photonic connectivity for energy efficient scaling of AI computing](#) (Invited 20 min)

Keren Bergman

11.20 **Tu.B1.2** [MartinezRi1] [Overview of Autonomous Control Operations to Enhance Energy Efficiency in Multi-Band Optical Transport Networks](#) (Invited 20 min)

Ricardo Martínez, Laia Nadal, Carlos Hernández Chulde, Ramon Casellas, Ricard Vilalta, and Raul Muñoz

11.40 **Tu.B1.3** [CastoldiPi1] [Energy-efficient Optical Aggregation Enabled by Digital Sub-Carriers](#) (Invited 20 min)

P. Castoldi, N. Sambo, M. M. Hosseini, A. Napoli, J. Pedro, N. Costa, M. Quagliotti, E. Riccardi, J. A. Hernández, D. de la Osa Mostazo, and Ó. González de Dios

12.00 **Tu.B1.4** [ValcarengiLi1] [Energy Consumption of Quantized Federated Learning in Optical-Wireless Networks](#) (Invited 20 min)

Emilio Paolini, Andrea Pinto, Flavio Esposito, and Luca Valcarenghi

room 102 - systems, Tuesday July 8

11.00 - 12.45 EWOC 2; Chair: Zoran Vujičić

11.00 **Tu.B2.1** [MaraziotisOr1] [Smart Residential Buildings in the 6G Edge Network: Security and Privacy Threats](#) (regular 15 min)

Orestis Maraziotis, George Mantas, Jonathan Rodriguez, María Boado Mallón, and Felipe Gil-Castiñeira

11.15 **Tu.B2.2** [PousaRr1] [OSDTRAN: Open Software Defined Transport and Radio Access Network](#) (regular 15 min)

Ricardo J. B. Pousa, Mauri Seidel, Giang T. Nguyen, and Frank H.P. Fitzek

11.30 **Tu.B2.3** [AliAr1] [Capacity Assessment in Converged Metro-Access Optical Networks for end-to-end RAN Fronthaul](#) (regular 15 min)

Ahtisham Ali, Andrea Rosso, Muhammad Umar Masood, Michela Pollone, Alessandro Galardini, and Vittorio Curri

11.45 **Tu.B2.4** [AlzoubiSr1] [Dynamic Resource Allocation in Coherent DSCM PON for Mobile Fronthaul with Different Functional Splits](#) (regular 15 min)

Safana Alzoubi, Sandra Arnaout, Md Arifur Rahman, and Roberto Gaudino

12.00 **Tu.B2.5** [BernadasBusquetsNr1] [Beam Misalignment in 3GPP mmWave NR](#) (regular 15 min)

Noè Bernadas i Busquets, Xavier Gelabert, Bleron Klaiqi, Ki Won Sung, and Slimane Ben Slimane

12.15 **Tu.B2.6** [MendezRr1] [Flexible Optical Transmitter for Analog Radio-over-Fiber Fronthaul](#) (regular 15 min)

Rodrigo Méndez, Miquel Masanas, Aina Val Martí, María C. Santos, and Josep Prat

12.30 **Tu.B2.7** [MyshianovSr1] [Study on Throughputs in 5G and Beyond Networks](#) (regular 15 min)

Sergei Myshianov, Joonas Sæe, and Roman Glazkov

room 103 - access, Tuesday July 8

11.00 - 12.20 Microwave Photonics; Chairlady: Eszter Udvary

11.00 **Tu.B3.1** [SmajicJi1] [Wireless 90 GHz Receiver with Direct Optical Conversion](#) (Invited 20 min)

Hande Ibili, Laurenz Kulmer, Michael Baumann, Antonio D'Errico, Roberto Sabella, Marcel Destraz, Alberto Montanaro, Vito Sorianello, Jasmin Smajic, and Juerg Leuthold

11.20 **Tu.B3.2** [TartariniGi1] [Mitigation of Gain Fluctuations in Radio-over-Fiber Links within Large Radioastronomic Arrays](#) (Invited 20 min)

Federico Perini, Andrea Mattana, Federica Caputo, Jader Monari, Jacopo Nanni, Ahmed Ezzu, Andrea Fraietta, and Giovanni Tartarini

11.40 **Tu.B3.3** [StoehrAi2] [Low Power Consumption Multi-Channel RFoF System for Ka-Band Intra-Satellite Links](#) (Invited 20 min)

Yılmaz Uçar, Vitaly Rymanov, Sumer Makhoulf, Marcel Grzeslo, Riccardo Füllbrunn, and Andreas Stöhr

12.00 **Tu.B3.4** [BogoniAi1] [Integrated photonics for enabling coherent radar constellations](#) (Invited 20 min)

Federico Camponeschi, Valentina Gemmato, Filippo Scotti, Claudio Porzi, Muhammad Imran, Paolo Ghelfi, Mirco Scaffardi, and Antonella Bogoni

room 201 - fibres, Tuesday July 8

11.00 - 12.20 NOA 2, Chair: Giuseppe Rizzelli

11.00 **Tu.B4.1** [RosaPi1] [Challenges in Distributed Raman Amplification Across S-Band](#) (Invited 20 min)

Paweł Rosa

11.20 **Tu.B4.2** [ArpanaeiFr1] [Comparative Analysis of EGGN vs. GGN Models for Hybrid Raman/DFA Amplified Ultra-Wideband Optical Networks](#) (regular 15 min)

M. Mehrabi, F. Arpanaei, M. Ranjbar Zefreh, H. Beyranvand, M. Javad Emadi, P. Mahdizadeh, C. Natalino, José M. Rivas-Moscato, Ó. González de Dios, Juan P. Fernández-Palacios, D. Larrabeiti, and J. Alberto Hernández

11.35 **Tu.B4.3** [RothenbergCEr1] [Pinpointing Faulty Optical Amplifiers: Unsupervised Learning on Real Telemetry Data](#) (regular 15 min)

Marcos P. A. Dal Maso, Andrés F. Escallón-Portilla, Kayol S. Mayer, Isabela M. da Silva, Darli A. A. Mello, Dalton S. Arantes, and Christian E. Rothenberg

11.50 **Tu.B4.4** [RodriguezCuevasAr1] [Mamyshev Regenerator based spectral flattening and noise suppression in optical wave breaking induced electro-optic combs](#) (regular 15 min)

Alberto Rodriguez Cuevas, Eiji Hase, and Auro M. Perego

12.05 **Tu.B4.5** [SchneiderDr1] [A Transformer-Based Approach for Diagnosing Fault Cases in Optical Fiber Amplifiers](#) (regular 15 min)

Dominic Schneider, Lutz Rapp, and Christoph Ament

room 202 - SWP, Tuesday July 8

11.00 - 12.55 SWP 4 sensors; Chairlady: Shroddha Mukhopadhyay

11.00 **Tu.B5.1** [DellOlioFi1] [Inertial Sensors Miniaturization through Silicon Photonics: Emerging Trends and Future Prospects](#) (Invited 20 min)

Francesco Dell'Olio

11.20 **Tu.B5.2** [SanipatinBi1] [Characterization of Femtosecond Laser-Inscribed Cladding Waveguides for Photonic Devices](#) (Invited 20 min)

Lucia Arques, Elham Nazemosadat, Bryan Sanipatin, Tina Eschrich, and Salvador Sales

11.40 **Tu.B5.3** [SpagnoloVLI1] [Recent developments in tuning fork-based gas sensing and spectroscopy](#) (20 min)

Vincenzo Spagnolo, Andrea Zifarelli, Giansergio Menduni, Arianna Elefante, Marilena Giglio, Angelo Sampaolo, Pietro Patimisco, Hongpeng Wu, and Dong Lei

12.00 **Tu.B5.4** [YuCi1] [Interferometric Fiber Sensors Based on the Microstructure Fibers with Optical Vernier Effect](#) (Invited 20 min)

Changyuan Yu, Yujian Li, Jiayu Chen, and Pin Xu

12.20 **Tu.B5.5** [YangFi1] [Metal-doped nanoprobe materials and their applications in tumor theranostics](#) (Invited 20 min)

Fang Yang

12.40 **Tu.B5.6** [PierscinskaDr1] [Optimization of Long-Wavelength Quantum Cascade Lasers for Spectroscopic and Environmental Sensing Applications](#) (regular 15 min)

D. Pierścińska, D. Niewczas, K. Pieniak, A. Krzqstek, I. Sankowska, A. Kuźmicz, and K. Pierściński

room 203 - quantum, Tuesday July 8

11.00 - 12.40 Quantum Communications 5; Chairlady: Gabriella Cincotti

11.00 **Tu.B6.1** [BaccoDi1] [Quantum networks with qudits](#) (Invited 20 min)

Davide Bacco

11.20 **Tu.B6.2** [GattoAi1] [Quantum Key Distribution Technologies for Secured Passive Optical Networks](#) (Invited 20 min)

Alessandro Gagliano, Paola Parolari, Eliana Mazza, Pierpaolo Boffi, João dos Reis Frazão, Aaron Albores-Mejia, Chigo Okonkwo, Michela Svaluto Moreolo, Paolo Martelli, and Alberto Gatto

11.40 **Tu.B6.3** [IqbalMi1] [Anomaly Classification in CV-QKD over DWDM: Differentiating System Faults from Quantum Attacks](#) (Invited 20 min)

Masab Iqbal, Michela Svaluto Moreolo, and Laia Nadal

12.00 **Tu.B6.4** [StroblTi1] [Intercity Quantum Key Distribution using BB84 Protocol](#) (Invited 20 min)

Theodor Strobl, Marie-Christine Slater, Florian Kutschera, and Hannes Hübel

12.20 **Tu.B6.5** [PachnickeSi1] [Deep Reinforcement Learning Based Topology Independent Routing and Load-Balancing in QKD Networks using Graph Neural Networks](#) (Invited 20 min)

Tim Johann, Sebastian Kühn, and Stephan Pachnicke

room 205 - materials&devices, Tuesday July 8

11.00 - 12.40 PICA3; Chair: Oskars Ozoliņš

11.00 **Tu.B7.1** [LatkowskiSi1] [Phase Sensitivity Characterization of a Photonic Integrated Circuit for Sub-nm Profilometry](#) (Invited 20 min)

Ruud Jansen, Kevin Williams, and Sylwester Latkowski

11.20 **Tu.B7.2** [AnandarajahPi1] [Gerchberg-Saxton algorithm for optical field reconstruction of gain switched optical frequency combs](#) (Invited 20 min)

Alejandro Rosado, Ignacio Esquivias, Minghao Wei, Aleksandra Kaszubowska-Anandarajah, and Prince M. Anandarajah

11.40 **Tu.B7.3** [KuzminAi1] [Cryogenic Silicon-Organic Hybrid Modulators for Readout of Superconducting Circuits](#) (Invited 20 min)

A. Kuzmin, A. Schwarzenberger, A. Kotz, H. Kholeif, A. Mertens, C. Eschenbaum, S. Sarwar, P. Erk, S. Bräse, W. Freude, and C. Koos

12.00 **Tu.B7.4** [DeCarloMi1] [A new integrated optical spectrometer based on a Vernier-like configuration](#) Invited (20 min)

Carla Maria Coppola, Martino De Carlo, Francesco De Leonardis, and Vittorio M. N. Passaro

12.20 **Tu.B7.5** [PetrucelliVi1] [Lithium Niobate Electro-Optic Phase Shifters for Reconfigurable Beam Steering](#) (Invited 20 min)

Muhammad Khalid, Massimo Simone, Simone Ferraresi, Gaetano Bellanca, Pezhman Yousefi, Vincenzo Petrucci, and Giovanna Calò

posters & DEMOs area (Sala Polivalent), Tuesday July 8

11.00 - 13.00 DEMO 1; Chair: Ramon Casellas

DEMO 1 [AgrazFd1] [Demonstration of a Control Plane in Support of E2E Deterministic Service Provisioning over a Multi-domain Multi-technology 6G Network](#)

Fernando Agraz, Albert Pagès, Alejandro Calvillo-Fernandez, David Rico-Menendez, Antonio de la Oliva, Pietro G. Giardina, Matteo Ravalli, Jose Luis Carcel, Marc Ruiz, Luis Velasco, and Salvatore Spadaro

DEMO 2 [ShakespearMilesHd1] [Demonstrating Lightpath Operation with the OCATA Digital Twin in Multiband Optical Networks](#)

P. Gonzalez, S. Ghasrizadeh, S. Barzegar, H. Shakespear-Miles, M. Ruiz, and L. Velasco

DEMO 3 [HernandezChulded1] [Demonstration of Autonomous DRL-Based QoT-Aware Provisioning in Multi-Band EONs](#)

Carlos Hernández-Chulde, Ricardo Martínez, Ramon Casellas, Ricard Vilalta, and Raul Muñoz

DEMO 4 [MalikGd1] [Demonstration of Real-Time AI-Enabled Smart Fault Detection using State-of-Polarization Monitoring](#)

Gulmina Malik, Muhammad Umar Masood, Renato Ambrosone, Imran Chowdery Dipto, Mashboob Cheruvakkadu Mohamed, Ahtisham Ali, Stefano Straullu, Sai Kishore Bhyri, Gabriele Maria Galimberti, João Pedro, Antonio Napoli, Walid Wakim, and Vittorio Curri

DEMO 5 [VettoriLd1] [Automated Service Adaptation across Optical Access and Metro Segments via Hierarchical SDN Control](#)

Luca Vettori, Ricardo Martínez, Ramon Casellas, F. Javier Vilchez, Josep Maria Fàbrega, Raul Muñoz, and Ricard Vilalta

room 101 - networks, Tuesday July 8

14.00 - 15.20 GOC 2; Chair: Piero Castoldi

14.00 **Tu.C1.1** [WhitelHi1] [Energy-Efficient Cellular Switched Optical Network Topology for Composable Data Centers](#) (Invited 20 min)

Randa A. Thabit, Wafaa B. M. Fadlelmula, Ahmed M. Hassan, Mohammed A. Alharthi, Ahrar N. S. Hamad, Harith S. I. Ibrahim, Walter Z. Ncube, Azza E. A. Eltraify, Ian H. White and Jaafar M.H. Elmirghani

14.20 **Tu.C1.2** [KnapinskaAr1] [Energy Efficiency Analysis of Multilayer Networks with Time-Varying Traffic](#) (regular 15 min)

Aleksandra Knapinska, Piotr Lechowicz, Salvatore Spadaro, and Krzysztof Walkowiak

14.35 **Tu.C1.3** [BoernerMr1] [Potential Energy Savings in Passive Optical Networks Based on Real User Data](#) (regular 15 min)

Mirco Börner, Kristof Obermann, and Carmen Mas Machuca

14.50 **Tu.C1.4** [GuaitoliniMr1] [Power-aware RoCE Edge Transfer Agent](#) (regular 15 min)

A. H. Khan, M. Guaitolini, and F. Paolucci

15.05 **Tu.C1.5** [DuszynskaKr1] [Towards Green and Efficient Network Traffic Prediction](#) (regular 15 min)

Katarzyna Duszyńska and Róża Goścień

room 102 - systems, Tuesday July 8

14.00 - 15.20 MALOC 1; Chair: Carlos Natalino

14.00 **Tu.C2.1** [XuTi1] [Machine Learning-Enhanced Semantic Communication in Optical Fiber Systems](#) (Invited 20 min)

Xiaomin Cai, Yunfan Zhang, and Tianhua Xu

14.20 **Tu.C2.2** [MusumeciFi1] [Feature Selection for Generalizable Fault Detection ML Models in Optical Networks](#) (Invited 20 min)

Oleg Karandin, Andrea Grassi, Qiaolun Zhang, Massimo Tornatore, and Francesco Musumeci

14.40 **Tu.C2.3** [AibinMi1] [Task Priority Oriented Load Balancing Strategy Based on Machine Learning Classification](#) (Invited 20 min)

He Yang, Anbang Zhang, Yingting Feng, Shuyue Gao, and Michal Aibin

15.00 **Tu.C2.4** [MontiPi1] [Natural Language Interpretability for ML-Based QoT Estimation via Large Language Models](#) (Invited 20 min)

Omran Ayoub, Carlos Natalino, Sebastian Troia, Cristina Rottondi, Davide Andreoletti, Francesco Lelli, Silvia Giordano, and Paolo Monti

room 103 - access, Tuesday July 8

14.00 - 16.05 GOWN; Chairlady: Carmo Medeiros

14.00 **Tu.C3.1** [NadimiGokiPi1] [Telecommunication Networks Security Against Threats and Attacks](#) (Invited 20 min)
Pantea Nadimi Goki, Ramin Solaimani, and Luca Poti

14.20 **Tu.C3.2** [GhelfiPi1] [Extension of Radio-over-Fiber to the latest applications requests](#) (Invited 20 min)
Paolo Ghelfi, Filippo Scotti, Luca Rinaldi, and Antonella Bogoni

14.40 **Tu.C3.3** [OrtegaBi1] [Multiband Signal Transmission over an Optical Fronthaul Link Using a DML-based Free-Running Scheme for Millimeter-Wave Signal Generation](#) (Invited 20 min)
Jaime Romero-Huedo, Jose Mora, Luis Vallejo, Juan A Apolo, Jianming Tang, and Beatriz Ortega

15.00 **Tu.C3.4** [MedeirosCi1] [Modulation Strategies for Robust Optical Wireless Communications and Sensing in 6G](#) (Invited 20 min)
Bruno M.S.R. Rosmaninho, Vinicius. N.H. Silva, Paulo P. Monteiro, and Maria C.R. Medeiros

15.20 **Tu.C3.5** [nasrEsfahaniMr1] [Optimizing VCSEL-to-SSMF Butt-Coupling in view of Enhanced Efficiency in Radio-over-Fiber Systems](#) (regular 15 min)
Maryam nasr Esfahani, Jacopo Nanni, and Giovanni Tartarini

15.35 **Tu.C3.6** [WaseemMr1] [Performance of large-core SI-POF for the transmission of Standalone NB-IoT](#) (regular 15 min)
Muhammad Waseem, Alicia López, Pedro Luis Carro, and María Ángeles Losada

15.50 **Tu.C3.7** [VardakasJr1] [A Quantitative Comparison of Traffic Management Schemes in a Converged Optical-Wireless 6G Network](#) (regular 15 min)
Irene Keramidi, John S. Vardakas, Ioannis Moscholios, and Christos Verikoukis

room 201 - fibres, Tuesday July 8

14.00 - 15.40 Novel Glasses 1; Chair: Peter Dragic

14.00 **Tu.C4.1** [PrudenzenoFi1] [Recent Advances on Mid-Infrared Fiber Devices Based on Fluoride Glasses](#) (Invited 20 min)

Francesco Prudenzeno

14.20 **Tu.C4.2** [FernandezJi1] [Crystal field inhomogeneity and laser performance of a Nd³⁺ doped Li₂O-BaO-Al₂O₃-P₂O₅ glass](#) (Invited 20 min)

Sara Garcia-Revilla, Francisco Munoz, Jon Azkargorta, Joaquin Fernandez, Ignacio Iparraguirre, and Rolindes Balda

14.40 **Tu.C4.3** [Konidakisli1] [Light waveguiding within phosphate glasses upon post-melting encapsulation of glass microwires](#) (Invited 20 min)

Ioannis Konidakis, Foteini Dragosli, Aby Cheruvathoor Poulouse, Josef Kašlík, Aristides Bakandritsos, Radek Zbořil, and Emmanuel Stratakis

15.00 **Tu.C4.4** [OjhaNi1] [Effect of thermal poling on the structure of Ag doped oxyfluorophosphate glasses](#) (Invited 20 min)

Nirajan Ojha, Laeticia Petit, and Gael Yves Poirier

15.20 **Tu.C4.5** [PetitLi1] [CO₂ laser irradiation OF Ag⁺-Er³⁺ codoped tellurite glasses](#) (Invited 20 min)

Khaldoon Nasser, Juho Korri, Maxime Cavillon, Iuliia Karkowski, Evellyn Santos Magalhaes, and Laeticia Petit

room 202 - SWP, Tuesday July 8

14.00 - 15.40 SWP 5 metamaterials (2); Chair: Alex Quandt

14.00 **Tu.C5.1** [AnandSi1] [Semiconductor-based Mie Resonant Metasurfaces and Their Applications](#) (Invited 20 min)

S. Anand, M. Kjellberg, S. Sayouna, and H. Kyllhammar

14.20 **Tu.C5.2** [AsgariSi1] [Multi-Functional Terahertz Polarization Converter By Use of Tunable Graphene-Based Bianisotropic Metamaterial](#) (Invited 20 min)

Somayyeh Asgari and Tapio Fabritius

14.40 **Tu.C5.3** [LeoGi1] [Nonlinear generation of orbital angular momentum in metasurfaces](#) (Invited 20 min)

C. Lecasble, R. Que, A. Gerini, A. Degiron, G. Leo, L. Coudrat, and J.-M. Gérard

15.00 **Tu.C5.4** [PiwonskiTi1] [Metasurface-Enhanced Mid-Infrared Sensing for High Sensitivity Detection of Gases and Liquids](#) (Invited 20 min)

Tomasz Piwonski, Giovanni Piscopo, Jesus Hernan Mendoza-Castro, Artem S. Vorobev, Antonella D'Orazio, Giovanni Magno, and Liam O'Faolain

15.20 **Tu.C5.5** [BaghdasaryanHi1] [Origins of specific absorptance in thin film epsilon-near-zero \(ENZ\) metamaterials: wavelength-scale electromagnetic analysis](#) (Invited 20 min)

Hovik V. Baghdasaryan, Tamara M. Knyazyan, Tamara T. Hovhannisyan, Marian Marciniak, and Tigran Baghdasaryan

room 203 - quantum, Tuesday July 8

14.00 - 15.40 Quantum Communications 6; Chair: Abraham Cano

14.00 **Tu.C6.1** [VirziSi1] [Quantum-Secured Time and Frequency Dissemination: Integrating QKD with White Rabbit Protocols](#) (Invited 20 min)

S. Virzì, A. Meda, A. Mura, A. Avella, F. Levi, I.P. Degiovanni, M. Genovese, and D. Calonico

14.20 **Tu.C6.2** [WangXi1] [100-Gb/s Secure optical transmission with Layer-0 encryption seeded by QKD](#) (Invited 20 min)

Xu Wang

14.40 **Tu.C6.3** [SvalutoMoreoloMi1] [Enabling Quantum Secure Data Center Connectivity through QKD Integration](#) (Invited 20 min)

Michela Svaluto Moreolo, Masab Iqbal, Laia Nadal, Jose Manuel Rivas-Moscoso, Antonio Melgar, Antonio Pastor, Rafael Canto, Jesus Folgueira, and Sebastian Etcheverry

15.00 **Tu.C6.4** [BorghiMi1] [Frequency-bin entanglement-based quantum key distribution](#) (Invited 20 min)

Massimo Borghi, Noemi Tagliavacche, Giulia Guarda, Domenico Ribezzo, Marco Liscidini, Davide Bacco, Matteo Galli, and Daniele Bajoni

15.20 **Tu.C6.5** [CanoAi1] [Post-quantum cryptography for Quantum Resilient data transfer](#) (Invited 20 min)

Abraham Cano, José Luis Imaña, Idelfonso Tafur Monroy, and Juan José Vegas

room 205 - materials&devices, Tuesday July 8

14.00 - 15.40 PNPA 1, Chair: Brana Jelenkovic

14.00 **Tu.C7.1** [LiscidiniMi1] [Spontaneous parametric downconversion in periodically poled linearly uncoupled resonators](#) (Invited 20 min)

Matteo Piccolini, Alessia Stefano, Luca Zatti, and Marco Liscidini

14.20 **Tu.C7.2** [HerreroRi1] [Bright and dark soliton blending stabilized by non-Hermitian potentials in Kerr ring cavities](#) (Invited 20 min)

Salim Benadouda Ivars, Muriel Botey Cumella, Ramon Herrero Simon, and Kestutis Staliunas

14.40 **Tu.C7.3** [ColumboLi1] [Undamped effective Rabi frequency leads to formation of harmonic frequency combs in ring QCLs](#) (Invited 20 min)

Carlo Silvestri, Massimo Brambilla, Franco Prati, Mariangela Gioannini, and Lorenzo Columbo

15.00 **Tu.C7.4** [deCegliaDi1] [Nonlinear total angular momentum addition in flat optics for light structuring](#) (Invited 20 min)

Evgenii Menshikov, Paolo Franceschini, Kristina Frizyuk, Ivan Fernandez-Corbaton, Andrea Tognazzi, Alfonso Carmelo Cino, Denis Garoli, Mihail Petrov, Domenico de Ceglia, and Costantino De Angelis

15.20 **Tu.C7.5** [CastelloLurbeDi1] [Modeling multifrequency nonlinearities for propagating pulses](#) (Invited 20 min)

David Castelló-Lurbe, Enrique Silvestre, and Miguel V. Andrés

posters & DEMOs area (Sala Polivalent), Tuesday July 8

14.00 - 16.00 Tu.P - Poster Session

Tu.P.01 [SorianoDiazSp1] [MAPbI3 photodetectors integrated in waveguides](#)

Sandra Soriano-Díaz, Omar E. Solís, Diego Ramírez, Pablo P. Boix, Juan P. Martínez-Pastor, and Isaac Suárez

Tu.P.02 [UdvaryEp1] [Qualification and Simulation of a Single Photon Source](#)

Máté Galambos, Petra Seres, and Eszter Gerhátné Udvary

Tu.P.03 [MarkiewiczJp1] [Shaping the luminescent properties of compound phosphors in the range of 700 - 1700 nm](#)

Karolina Sadowska, Katarzyna Rećko, Jakub Markiewicz, Tomasz Ragiń, Marcin Kochanowicz, and Jacek Mariusz Żmojda

Tu.P.04 [KraemerLp1] [Towards micro transfer printing ready SNSPDs for fully integrated quantum photonic platforms](#)

Linus Krämer, R. Jaha, I. Luntadila Lufungula, L. Jin, S. Ferrari, and W. Pernice

Tu.P.05 [JankowskiDp1] [Temperature-dependent kinetics of up-conversion luminescence in single Er³⁺/Yb³⁺-doped nanocrystals](#)

D. Jankowski, M. Żebrowski, M. Ćwierzona, M. Misiak, A. Bednarkiewicz, J. Niedziółka-Jönsson, S. Maćkowski, and D. Piątkowski

Tu.P.06 [TorresSerraSp1] [Towards spike-based signal processing with optically coupled semiconductor lasers](#)

Sergi Torres Serra, Cristina Masoller, and Jordi Tiana-Alsina

Tu.P.07 [ZebrowskiDp1] [Excitation power-dependent kinetics of up-conversion luminescence in single Er³⁺/Yb³⁺-doped nanocrystals](#)

M. Żebrowski, D. Jankowski, M. Ćwierzona, M. Misiak, A. Bednarkiewicz, S. Maćkowski, and D. Piątkowski

Tu.P.08 [TasolamprouACp1] [Graphene-based optoelectronics for the THz regime: simulations and design](#)

Spyros Doukas, Ioannis Katsantonis, Thomas Koschny, Elefterios Lidorikis, and Anna C. Tasolamprou

Tu.P.09 [FrycowskiMp1] [Modelling of the impact of silver nanoparticles morphology on the electromagnetic field enhancement](#)

Maciej Frycowski, Marcin Szalkowski, and Sebastian Maćkowski

Tu.P.10 [WuGp1] [A New Mechanism for the Sudden Appearance and Disappearance of SARS-CoV-2 in Huanan Seafood Market](#)

Guang Wu and Shaomin Yan

Tu.P.11 [PagnaccoMp1] [Revealing Briggs-Rauscher Nonlinear Dynamics by Monitoring Fluorescent Response](#)

Maja Pagnacco, Dejan Dojic, Jelena Maksimović, Marina Simović Pavlović, Darko Vasiljević, Srdjan Bukvic, and Branko Kolarić

Tu.P.12 [YanSp1] [Random Walk to Fit Trigonometric Functions, and Its Implications](#)

Guang Wu and Shaomin Yan

Tu.P.13 [SoriaSr1] [Toward a low-cost SERS probe by ion-exchanged processed optical fibres](#)

Damandeep Kaur, Daniele Farnesi, Marella De Angelis, Cristiano D'Andrea, Nadia G. Boetti, Davide Janner, Gualtiero Nunzi Conti, Silvia Soria, Simone Berneschi, and Stefano Pelli

Tu.P.14 [YanSp2] [Random Walk to Fit Power and Polynomial Functions](#)

Guang Wu and Shaomin Yan

Tu.P.15 [MedeirosCp1] [Design of a integrated in SOI 4x4 MMI and its Impact on PON based on DSCM](#)

Gonçalo Figueira, Francisco Rodrigues, João Santos, and Maria Medeiros

Tu.P.16 [ZimanMp1] [Analysis of a Fabry-Pérot interferometer-based fiber-tip sensor prepared by 3D-DLW](#)

Martin Ziman, Jan Latal, Martin Feiler, Petr Siska, Matej Goraus, and Dusan Pudis

Tu.P.17 [HejdukSp1] [Using Public Lighting for Communications and Illuminance in Laboratory Environment with Regard to Simulated Atmospheric Conditions](#)

Stanislav Hejduk, Jan Latal, Petr Siska, Jiri Stipal, Kamil Trubak, Miroslav Slouka, and Tomas Novak

Tu.P.18 [PandeySSp1] [Automated Optimization of Photonic Integrated Circuit Layouts Using Cooperative Quantum Differential Evolution](#)

Subhash Shankar Pandey, Joao Santos, Diogo Vaz, Carla Rodrigues, Xing Liang, Hongwei Wu, and Antonio Teixeira

Tu.P.19 [GafurAp1] [A 50-Gbit/s 3-Tap FFE-Based Downstream Transmission Over 20 km in 1596-nm HS-PON](#)

Abdul Gafur, João Santos, Carla Rodrigues, Mário Lima, Francisco Rodrigues, and António Teixeira

Tu.P.20 [AssisKi1] [A New Path Model for DU/CU Placement in 5G Open Radio Access Network](#) (Invited)

K. D. R. Assis, R. C. Almeida Jr, A. F. Santos, Ange Njanda, C. Natalino, and D. L. Cardoso

room 101 - networks, Tuesday July 8

16.00 - 17.40 Flex-ON; Chair: Nicola Sambo

16.00 **Tu.D1.1** [VasquezChi1] [Relevance of Fragmentation in Different Elastic Optical Networks](#) (Invited 20 min)

Christofer Vásquez, Anjali Sharma, Danilo Borquez-Paredes, and Carmen Mas-Machuca

16.20 **Tu.D1.2** [YeYi1] [Liquid Crystal on Silicon Application Challenges in WSS](#) (Invited 20 min)

Yabin Ye, Gernot Goeger, Markus Wahle, and Grigory Lazarev

16.40 **Tu.D1.3** [RezaeeAr1] [Rethinking Flexibility: When Fixed-Grid with Grooming Outperforms Flex-Grid in EONs](#) (regular 15 min)

Arash Rezaee, Farhad Arpanaei, Ryan McCann, José Alberto Hernández, and Vinod M. Vokkarane

16.55 **Tu.D1.4** [CarvalhoAraujoSGFr1] [Evaluating the Impact of Circuit Reallocation on Inter-Core Crosstalk Mitigation in SDM-EONs](#) (regular 15 min)

Selles G. F. Carvalho Araújo, Jurandir C. Lacerda Júnior, and André C. B. Soares

17.10 **Tu.D1.5** [LacerdaJr1] [Circuit Reallocation to Avoid Crosstalk in Elastic Optical Networks with Space Division Multiplexing](#) (regular 15 min)

Selles G. F. Carvalho Araújo, Jurandir C. Lacerda Jr., and André C. B. Soares

17.25 **Tu.D1.6** [HeeraBSr1] [A Penalty-Based Dynamic Link-weight Updation Policy for Optimizing Request Blocking in EONs](#) (regular 15 min)

Baljinder Singh Heera and Ioannis Tomkos

room 102 - systems, Tuesday July 8

16.00 - 17.40 MALOC 2; Chair: Paolo Monti

16.00 **Tu.D2.1** [NatalinoCi1] [Optical Networking Gym: scenarios for machine learning research in optical networks](#) (Invited 20 min)

Talles Magalhães, Carlos Natalino, Fabrício Lobato, João Costa, and Paolo Monti

16.20 **Tu.D2.2** [VilaPi1] [AI/ML for cybersecurity and robustness in optical networks: Key opportunities and challenges](#) (Invited 20 min)

David Martínez, Miquel Farreras, Sergi Bergillos, Pere Vilà, Lluís Fàbrega, Antonio Bueno, and Eusebi Calle

16.40 **Tu.D2.3** [BiancoAi1] [Enhancing Reliability of Lightpath QoT Estimation Models using Bias Mitigation Techniques](#) (Invited 20 min)

Hussein Jammal, Omran Ayoub, Andrea Bianco, Michel Owayjan, and Cristina Rottondi

17.00 **Tu.D2.4** [EllinasGi1] [Federated Traffic-Driven Resource Allocation in Disaggregated Networks](#) (Invited 20 min)

Saroj Kumar Panda, Tania Panayiotou, Sadananda Behera, and Georgios Ellinas

17.20 **Tu.D2.5** [GharbaouiMi1] [Artificial Intelligence in Intent-Based Networking: Enhancing Automation, Scalability, and Reliability](#) (Invited 20 min)

M. Gharbaoui and P. Castoldi

room 103 - access, Tuesday July 8

16.20 - 17.00 ICTON digital twins; Chair: Reinhard Caspary

16.20 **Tu.D3.1** [VilaltaRi1] [Network Digital Twins Data Connectors Using International Data Spaces](#) (Invited 20 min)
Allen Abishek, Lluís Gifre Renom, Ricard Vilalta, Raul Muñoz, Xavier Masip-Bruin, and Adrian Asensio

16.40 **Tu.D3.2** [HesselbachXi1] [Digital Twin Networks requirements: Towards an ultra-reliable infrastructure](#) (Invited 20 min)
Xavier Hesselbach and Xavier Calle-Heredia

room 201 - fibres, Tuesday July 8

16.00 - 17.20 Novel Glasses 2; Chair: Ioannis Konidakis

16.00 **Tu.D4.1** [NekvindovaPi1] [Scintillating Glass and Glass-Ceramics in the silicate glass system](#) (Invited 20 min)
Pavla Nekvindová, Petr Vařák, Vítězslav Jarý, Vladimír Babin, Jan Abrham, and Jan Mrázek

16.20 **Tu.D4.2** [CalvezLr1] [Synthesis and shaping of high IR refractive index Te-based chalcogenide glasses](#) (regular 15 min)
Laurent Calvez, Valentin Reux, Antoine Gautier, Louisiane Verger, Zhiyong Yang, and Xiang-Hua Zhang

16.35 **Tu.D4.3** [KochanowiczMr1] [Broadband 1-1.7 \$\mu\text{m}\$ emission in Ni²⁺/Yb³⁺/Er³⁺-doped silica-gallo-germanate glass-ceramics and their optical fiber](#) (regular 15 min)
Jakub Markiewicz, Karolina Sadowska, William Romero Romo's, Tomasz Ragiń, Agata Baranowska, Gloria Lesly Jimenez, Dominik Dorosz, Piotr Miluski, and Marcin Kochanowicz

16.50 **Tu.D4.4** [MochalovLr1] [Behavior of metal impurities and nanoparticles in the process of plasma-chemical purification of arsenic](#) (regular 15 min)
L.A. Mochalov, E.A. Slapovskaya, and S.V. Telegin

17.05 **Tu.D4.5** [MochalovLr2] [Production of high-purity gallium for novel glasses and photonic materials generation](#) (regular 15 min)
L.A. Mochalov, E.A. Slapovskaya, S.V. Telegin, and E.U. Rafailov

room 202 - SWP, Tuesday July 8

16.00 - 18.05 SWP 6 photovoltaics; Chair: Mikhail Vasilevskiy

16.00 **Tu.D5.1** [QuandtAi1] [About the Analytical Modelling of Photovoltaic Devices](#) (Invited 20 min)

Alexander Quandt and Bouchta Sahraoui

16.20 **Tu.D5.2** [ZawadzkaAi1] [Electron Transport Layers for Perovskite Solar Cells](#) (Invited 20 min)

Anna Zawadzka, Agnieszka Marjanowska, Przemysław Płóciennik, Amina Laouid, Mateusz Mientki, and Michał Zawadzki

16.40 **Tu.D5.3** [KasprowiczDi1] [Luminescence of Bi₃TeBO₉ crystalline materials doped with RE³⁺ ions for photovoltaic applications](#) (Invited 20 min)

D. Kasprowicz, T. Zhezhera, P. Głuchowski, M. Chrunik, and A. Majchrowski

17.00 **Tu.D5.4** [PłóciennikPi1] [Physical vacuum co-deposition \(PVco-D\) method for various thin film materials](#) (Invited 20 min)

Przemysław Płóciennik, Anna Zawadzka, Amina Laouid, Mateusz Mientki, Agnieszka Marjanowska, and Zbigniew Łukasiak

17.20 **Tu.D5.5** [HattoriHr1] [Machine Learning Assisted Selective Emitter Design for Solar Thermophotovoltaic System](#) (regular 15 min)

Ambali Alade Odebowale, Andargachew Mekonnen BERHE, Rasheed T Ogundare, Haroldo T. Hattori, and Andrey E. Miroshnichenko

17.35 **Tu.D5.6** [LaouidAr1] [Evaluating the Performance of all-inorganic Perovskite Solar Cells: Integrating Experimental Data with Theoretical Frameworks](#) (regular 15 min)

Amina Laouid, Amine Alaoui Belghiti, Krzysztof Wisniewski, Przemysław Płóciennik, Abdelwahed Hajjaji, and Anna Zawadzka

17.50 **Tu.D5.7** [MientkiMr1] [Thin film metal-doped transparent conductive Zinc-Oxide layers](#) (regular 15 min)

Mateusz Mientki, Anna Zawadzka, and Przemysław Płóciennik

room 203 - quantum, Tuesday July 8

16.00 - 18.00 Quantum Communications 7; Chair: Marc Jofre

16.00 **Tu.D6.1** [AbadaSi1] [Modeling Quantum Links for the Exploration of Distributed Quantum Computing Systems](#) (Invited 20 min)

Sahar Ben Rached, Zezhou Sun, Junaid Khan, Guilu Long, Santiago Rodrigo, Carmen G. Almudéver, Eduard Alarcón, and Sergi Abadal

16.20 **Tu.D6.2** [StathisAi1] [5G X-haul/QKD Multiplexing over Deployed Infrastructure](#) (Invited 20 min)

Aristeidis Stathis, Argiris Ntanos, Panagiotis Kourelas, Panagiotis Toumasis, Nikolaos K. Lyras, Hercules Avramopoulos, and Giannis Giannoulis

16.40 **Tu.D6.3** [SarmientoSi1] [Advancing On-Chip Continuous-Variable Quantum Key Distribution Solutions](#) (Invited 20 min)

E. Llanos, S. Sarmiento, J. Tabares, E. Bazzani, J. A. Lazaro, T. Vehmas, Y. Marin Vasquez, G. Thomas, H. Forsten, B. Wälchli, S. Pourjamal, M. Kresse, Y. Durvasa Gupta, M. Kleinert, N. Keil, and S. Etcheverry

17.00 **Tu.D6.4** [KoltchanovIi1] [Hybrid Time-Path High-Dimensional Quantum Key Distribution in Multicore Fibers: Addressing Crosstalk and Enhancing Performance Metrics](#) (Invited 20 min)

Ian Korobov, Piotr Novik, and Igor Koltchanov

17.20 **Tu.D6.5** [StadlerAi1] [Characterisation of an InP-based PIC Transmitter in a QKD setup](#) (Invited 20 min)

Aaron Stadler, Martin Achleitner, Julian Konig, Ozan Çirkinoglu, Marie-Christine Slater, Xaveer Leijtens, and Hannes Huebel

17.40 **Tu.D6.6** [TafurMonroyIi1] [Integrated Photonics for Systems-on-Chip for Entangled Photon Pair Generation: Bridging Classical and Quantum Internet](#) (Invited 20 min)

Astrid Barreiro, Sergio Muñoz Tapasco, Alexander Grebenchukov, Hui Liu, Gleb Nazarikov, Bruno Cimoli, Simon Rommel, Andrés F. Calvo-Salcedo, Jose A. Jaramillo-Villegas, and Idelfonso Tafur Monroy

room 205 - materials&devices, Tuesday July 8

16.00 - 18.00 PNPA 2, Chair: Luigi Sirleto

16.00 **Tu.D7.1** [BoscoGi1] [DSP-Based Nonlinear SNR Estimation via Longitudinal Power Monitoring in Commercial Coherent Receivers](#) (Invited 20 min)

Gabriella Bosco, Lorenzo Andrenacci, Antonino Nespola, Stefano Straullu, Yanchao Jiang, Stefano Piciaccia, and Dario Piori

16.20 **Tu.D7.2** [LebrunSi1] [Hybrid silica optical nanofibers for efficient Raman converters](#) (Invited 20 min)

Maha Bouhadida, Aloïs Baudry, Abderrahim Azzoune, Laurent Divay, Etienne Eustache, Christian Larat, Jean-Charles Beugnot, and Sylvie Lebrun

16.40 **Tu.D7.3** [ArgyrisAi1] [Short External Cavity Laser-based Reservoir Computing for Fiber Transmission Data Recovery](#) (Invited 20 min)

Apostolos Argyris and Ingo Fischer

17.00 **Tu.D7.4** [RimoldiCi1] [Near-field measurement of Four-Wave Mixing sidebands and noise performance degradation in elliptical multimode VCSELs for datacom](#) (Invited 20 min)

Cristina Rimoldi, Marco Novarese, Lorenzo Luigi Columbo, Sebastian Romero García, Christian Raabe, and Mariangela Gioannini

17.20 **Tu.D7.5** [CastroNi1] [Efficient Volterra Equalization for WDM Systems](#) (Invited 20 min)

Nelson Castro and Stylianos Sygletos

17.40 **Tu.D7.6** [SimovicPavlovicMi1] [Power of Holography: Current and Future Perspectives](#) (Invited 20 min)

Marina Simović Pavlović, Yin Chang, Maja Pagnacco, Luka Krstić, Kristina Aćimović, Darko Vasiljević, and Branko Kolarić

social event Tuesday, 8 July 2025 19:30 – 21:00 → jazz concert, followed by catering dinner (ending 22:30)

DAY 3 - Wednesday July 9

***** We.A - Wednesday morning parallel sessions *****

room 101 - networks, Wednesday July 9

8.30 - 9.50 MOON; Chair: Farhad Arpanaei

8.30 **We.A1.1** [CasellasRi1] [Dynamic Service Provisioning in Multi-Band over Spatial Division Multiplexing Optical Networks](#) (Invited 20 min)

Ramon Casellas, Laia Nadal, Francisco J. Vilchez, Carlos Hernández-Chulde, Josep Maria Fàbrega, Ricard Vilalta, Ricardo Martínez, and Raul Muñoz

8.50 **We.A1.2** [ArpanaeiFi1] [A Digital Twin-Driven Framework for Cost-Effective Upgrading from C-Band to Multi-Band Optical Networks](#) (Invited 20 min)

F. Arpanaei, M.H. Shammakhi, H. Beyranvand, H. Sheikhzadeh, M. Ranjbar Zefreh, S. Yan, José M. Rivas-Moscoso, Ó. González de Dios, Juan P. Fernández-Palacios, A. Sánchez-Macián, D. Larrabeiti, and José A. Hernández

9.10 **We.A1.3** [EiraAi1] [Leveraging Digital Subcarrier-based Optical Interfaces to Maximize Core Network Capacity](#) (Invited 20 min)

André Souza, João Pedro, and António Eira

9.30 **We.A1.4** [PedroJi1] [Performance Comparison of S- and E-band Upgrades of a C+L-band System](#) (Invited 20 min)

André Souza, Nelson Costa, and João Pedro

room 102 - systems, Wednesday July 9

8.30 - 10.25 WAOR, Chair: Salvatore Spadaro

8.30 **We.A2.1** [Tomkosli1] [Programmable Reconfigurable Packet-Optical 6G Front-/Mid-Haul Infrastructure](#) (Invited 20 min)

C. Christofidis, K. Moschopoulos, V. Tsourtis, D. Uzunidis, D. Marom, M. Nazarathy, R. Munoz, and I. Tomkos

8.50 **We.A2.2** [CareglioDi1] [ML-enabled flow admission control policy for proactive QoS assurance in programmable RINA networks](#) (Invited 20 min)

Jordi Perelló, Josep Solé-Pareta, and Davide Careglio

9.10 **We.A2.3** [BekriMi1] [Deep Reinforcement Learning based Reconfiguration of Optical Transport Networks to Minimize Service Disruption Times](#) (Invited 20 min)

Malek Bekri and Ronald Romero Reyes

9.30 **We.A2.4** [BonaniLHi1] [Strategies for the Path Selection in a DWDM Optical Network Operating with Optical Wideband Wavelength Converters](#) (Invited 20 min)

Eric A. M. Fagotto, Marcelo L. F. Abbade, Majid Forghani-elahabad, Gianluca Davoli, G. Francesco Pittalá, Carla Raffaelli, Franco Callegati, and Luiz H. Bonani

9.50 **We.A2.5** [ShenGi1] [Cost-Efficient High-Degree Optical Cross-Connect \(OXC\) Based on AWGRs and WSSs](#) (Invited 20 min)

Dewei Zhai, Ningning Guo, Yongcheng Li, and Gangxiang Shen

10.10 **We.A2.6** [ChatterjeeBCr1] [PPO-RMSA: Proximal Policy Optimization-Based Routing, Modulation, and Spectrum Allocation in Elastic Optical Networks](#) (regular 15 min)

Vishnu Prakash, Shrasti Katiyar, Roshan Kumar Rai, and Bijoy Chand Chatterjee

room 103 - access, Wednesday July 9

8.30 - 10.10 SDM 1, Chair: Fabio Aparecido Barbosa

8.30 **We.A3.1** [Gasullali1] [Dispersion Diversity Unleashed: Signal processing enabled by multicore and few-mode fibers](#) (Invited 20 min)

Mario A. González, Sergi Garcia, and Ivana Gasulla

8.50 **We.A3.2** [LasagniCi1] [On the Impact of Mode Dispersion on the Nonlinear Interference in Few-Mode Fiber Transmission](#) (Invited 20 min)

Chiara Lasagni, Paolo Serena, Alberto Bononi, Antonio Mecozzi, and Cristian Antonelli

9.10 **We.A3.3** [MelloDi1] [Analytical Evaluation of the Average and Outage Capacities in Coupled SDM systems](#) (Invited 20 min)

Lucas Alves Zischler, and Darli A. A. Mello

9.30 **We.A3.4** [GuasoniMi1] [Sub-nanosecond all-optical reconfiguration of light in multimode and multicore fibres](#) (Invited 20 min)

Kunhao Ji, David J. Richardson, Stefan Wabnitz, and Massimiliano Guasoni

9.50 **We.A3.5** [Roudasli1] [Low-Complexity DSP Algorithms for Mode Vector Modulation Direct-Detection Receivers](#) (Invited 20 min)

I. Roudas, A. Brisson, and M. Dadras

room 201 - fibres, Wednesday July 9

8.30 - 9.50 Fibre Lasers 1; Chair: Khaldoun Nasser

8.30 **We.A4.1** [JaegerMi1] [The road to accessing new laser transitions in the VIS and NIR using rare-earth-doped fibers](#) (Invited 20 min)

Martin Leich, Sonja Unger, Anka Schwuchow, Tina Eschrich, Arni Pratiwi, Jan Dellith, Robert Müller, Katrin Wondraczek, Adrian Lorenz, and Matthias Jäger

8.50 **We.A4.2** [Kasikli1] [Rare-earth-doped specialty optical fibers for efficient light sources and photonics applications](#) (Invited 20 min)

Ivan Kasik, Michal Kamradek, Jan Aubrecht, Petr Varak, Ondrej Podrazky, Ivo Barton, Filip Todorov, Jan Pokorny, Bara Svejkarova, Martin Grábner, Pavel Peterka, and Pavel Honzatko

9.10 **We.A4.3** [LoconsoleAi1] [Active Devices Based on Rare-Earth-doped Fluoroindate Fibers in Mid-Infrared Range](#) (Invited 20 min)

Antonella Maria Loconsole, Francesco Anelli, Vito Vincenzo Francione, and Francesco Prudenizano

9.30 **We.A4.4** [MrázekIi1] [Inorganic nanoparticles in fiber laser technology](#) (Invited 20 min)

Jan Mrázek, Jana Proboštová, Jana Novotná, Michal Kamrádek, Ivan Kašík, Ivo Bartoň, Jan Aubrecht, Ondřej Podrazký, and Viktor Puchý

room 202 - SWP, Wednesday July 9

8.30 - 10.05 ESPC; Chairlady: Crina Cojocaru

8.30 **We.A5.1** [NotomiMi1] [Origin of high bend transmission in a certain class of photonic crystal waveguides with and without inversion symmetry](#) (Invited 20 min)

Masaya Notomi, Wei Dai, and Yuto Moritake

8.50 **We.A5.2** [ChiappiniAi1] [Hybrid Plasmonic-Photonic Platform for Bacillus Cereus Detection](#) (Invited 20 min)

Andrea Chiappini, Diego Florio, Laura Pasquardini, Mario Barozzi, Monica Bollani, Salvatore Stagira, and Tersilla Virgili

9.10 **We.A5.3** [HoudréRi1] [Optical characterization, discrimination and status of bacteria and bacteriophages viruses optically trapped in a photonic crystal cavity in the context of phage therapies antibiotics therapies](#) (Invited 20 min)

Nicolas Villa, Enrico Tartari, Khouloud Arfaoui, Hugues de Villiers de la Noue, Emmanuel Picard, Pierre Marcoux, Marc Zelsmann, Grégory Resch, Emmanuel Hadji, and Romuald Houdré

9.30 **We.A5.4** [GerkenMi1] [Photonic Crystal Slabs for the Continuous and Label-free Measurement of Human Alpha-Thrombin](#) (Invited 20 min)

Fabio Aldo Kraft, Moritz Paulsen, and Martina Gerken

9.50 **We.A5.5** [OteroEr1] [Surface Light Localization In Topological Multilayers](#) (regular 15 min)

Eva Otero, Ivan Toftul, Yuri Kivshar, Crina Cojocaru, and Jose Trull

room 203 - quantum, Wednesday July 9

8.30 - 10.05 Quantum Communications 8; Chair: Kostas Christodoulopoulos

8.30 **We.A6.1** [VallLloseraGi1] [Information transmission using on-demand single photons and error correction](#) (Invited 20 min)

J. Almlöf, M. Gapparova, H. Brännström, J. Vallin, S. Gyger, T. Lettner, G. Vall Llosera, and V. Zwiller

8.50 **We.A6.2** [AdillonPr1] [Low-complexity Phase-diversity Homodyne Receiver for Continuous-Variable QKD](#) (regular 15 min)

Pol Adillon, Samael Sarmiento, Jeison Taberes, Hugues de Riedmatten, and Sebastian Etcheverry

9.05 **We.A6.3** [AlmeidaMr1] [Polarization Multiplexing CV-QKD with Polarization Drift Pre-Compensation](#) (regular 15 min)

Margarida Almeida, Íris Guilherme, Armando N. Pinto, and Nuno A. Silva

9.20 **We.A6.4** [AzzouneAr1] [Efficient entangled quantum states generation in silica nanofibers for QKD-based quantum cryptography protocols](#) (regular 15 min)

Abderrahim Azzoune, Oussama Laouedj, Hamza Gouasmia, Hocine Medjadba, Ayoub Boudjelida, and Abderrahmane Bourbia

9.35 **We.A6.5** [CostaHFr1] [Design of high-voltage electronic driver for polarization encoding quantum transmitters](#) (regular 15 min)

Hugo Filipe Costa, João G. Prata, Armando N. Pinto, and Nelson J. Muga

9.50 **We.A6.6** [EramoVr1] [Proposal and Investigation of a Swapping Operation Reduction Technique in Quantum Switches](#) (regular 15 min)

V. Eramo, F.G. Lavacca, M. Polverini, T. Fiori, and M. Listanti

room 205 - materials&devices, Wednesday July 9

8.30 - 10.10 PNPA 3, Chair: Raman Kashyap

8.30 **We.A7.1** [CivelliSi1] [Fiber Nonlinearity Mitigation in Coherent Optical Systems](#) (Invited 20 min)

Stella Civelli, Dario Cellini, Enrico Forestieri, and Marco Secondini

8.50 **We.A7.2** [LaegsgaardJi1] [Nonlinear processes in high-order optical fiber modes](#) (Invited 20 min)

Jesper Lægsgaard, Lars Søjgaard Rishøj, and Andrea Arduin

9.10 **We.A7.3** [RottwittKi1] [Quantum state preserving frequency conversion using four-wave mixing in optical fibers: The impact of Raman scattering](#) (Invited 20 min)

Karsten Rottwitt, Mathias Linde Holst Korsgaard, and Jacob Gade Koefoed

9.30 **We.A7.4** [DudleyJi1] [Data-driven Machine Learning Methods in Nonlinear Fiber Optics: Recent Advances](#) (Invited 20 min)

Andrei V. Ermolaev, Mathilde Hary, Mehdi Mabed, Lev Leybov, Piotr Ryczkowski, Anas Skalli, Daniel Brunner, Christophe Finot, Goëry Genty, and John M. Dudley

9.50 **We.A7.5** [AbbadeMi1] [Multi-dimensional assessment of machine-learning based nonlinear equalizers for optical interconnects](#) (Invited 20 min)

Ivan Aldaya, Marcelo L. F. Abbade, Ana Júlia Nora, João Pedro Gosmin, Rafael Penchel, and Leandra Abreu

room 101 - networks, Wednesday July 9

11.00 - 12.35 ICTON network sensing; Chairlady: Gabriella Bosco

11.00 **We.B1.1** [LuCi1] [Integrated Optical Communication and Sensing Systems](#) (Invited 20 min)

Chao Lu, Jingchuan Wang, Yaxi Yan, Maoqi Liu, Alan Pak Tao Lau, and Changyuan Yu

11.20 **We.B1.2** [KaszubowskaAnandarajahAi1] [Intent and Context-Aware Optical Networks](#) (Invited 20 min)

Aleksandra Kaszubowska-Anandarajah, Dan Kilper, Marco Ruffini, Kaida Kaeval, Esther Renner, Bernhard Schmauss, Alessandro Giusti, Petr Munster, Tomas Horvath, André Richter, Igor Koltchanov, Steinar Bjørnstad, Darko Zibar, Andreas Papadopoulos, Achim Autenrieth, Andre Sandmann, Florian Azendorf, and Mohammed Hassine

11.40 **We.B1.3** [YoshidaYi1] [Phase-retrieval Coherent Detection and its Application for Optical Performance Monitoring](#) (Invited 20 min)

Yuki Yoshida and Kouichi Akahane

12.00 **We.B1.4** [FabregaJMi1] [Cost-efficient Non-intrusive Performance Monitoring in Optical Networks Using Polarization-Diverse Spectrum Analysis](#) (Invited 20 min)

J. M. Fabrega, W. Akbar, L. Nadal, L. Gifre, F. J. Vilchez, R. Vilalta, M. Svaluto Moreolo, M. Ali, and R. Muñoz

12.20 **We.B1.5** [SchipsRr1] [Control and Telemetry in Optical Multiplex Section Enhanced by OpenConfig Model](#) (regular 15 min)

Riccardo Schips, Renato Ambrosone, Stefano Straullu, Francesco Aquilino, Antonino Nespola, and Vittorio Curri

room 102 - systems, Wednesday July 9

11.00 - 12.40 OWW 1; Chair: Ernesto Ciaramella

11.00 **We.B2.1** [ChanVWSi1] [Transport Layer Protocol for Optical Wireless Networks](#) (Invited 20 min)

Vincent W. S. Chan

11.20 **We.B2.2** [IvanovHi1] [European Space Agency Modular Ground Segment Infrastructure for Deep Space Optical Communications](#) (Invited 20 min)

Hristo Ivanov, Sinda Mejri, Andrea Di Mira, Klaus-Juergen Schulz, and Clemens Heese

11.40 **We.B2.3** [CossuGi1] [A bidirectional 500 kb/s optical wireless CAN-bus system for innovative scenarios](#) (Invited 20 min)

L. Gilli, S. Macrì, N. Vincenti, G. Cossu, and E. Ciaramella

12.00 **We.B2.4** [DjordjevicBi1] [Entanglement Assisted Communications with Phase-Conjugation on Idler Photons Outperforming Entanglement Assisted Systems with Phase-Conjugated Receivers](#) (Invited 20 min)

Ivan B. Djordjevic

12.20 **We.B2.5** [HuiRi1] [An Optical Feedforward Neural Network with Nonlinear Activation Function Provided by a RSAM](#) (Invited 20 min)

Peter Tso, Andrea Fumagalli, and Rongqing Hui

room 103 - access, Wednesday July 9

11.00 - 12.20 SDM 2, Chair: Fabio Aparecido Barbosa

11.00 **We.B3.1** [MounaixMi1] [Spatiotemporal Toroidal Light Beams With Arbitrary Polarization And Orientation Through A Multimode Fiber](#) (Invited 20 min)

Andrew V. Komonen, Nicolas K Fontaine, Martin Ploschner, Marcos Maestre Morote, David T Neilson, Joel Carpenter, and Mickael Mounaix

11.20 **We.B3.2** [GordonGi1] [Adapting the ChatGPT architecture for efficient AI representation and modelling of optical fibre transmission matrices](#) (Invited 20 min)

Yijie Zheng, Robert J. Kilpatrick, Qing Yang, David B. Phillips, and George S.D. Gordon

11.40 **We.B3.3** [CarnielloPi1] [Nonlinearity Coefficients for Space-Division Multiplexing Fibers](#) (Invited 20 min)

Paolo Carniello, Filipe M. Ferreira, and Norbert Hanik

12.00 **We.B3.4** [PhillipsDi1] [Self-configuring multi-plane light conversion for automatically unscrambling light propagation through multimode fibres](#) (Invited 20 min)

Hlib Kupianskyi, José CA Rocha, Uné G Būtaitė, Jérôme A Don Jayamanne, Simon AR Horsley, Joel Carpenter, and David B Phillips

room 201 - fibres, Wednesday July 9

11.00 - 12.20 Fibre Lasers 2; Chair: Matthias Jäger

11.00 **We.B4.1** [PajewskiLi1] [Numerical and experimental analysis of Q-switched, dysprosium \(III\)-doped, fluoride glass, mid-infrared fibre lasers](#) (Invited 20 min)

Sławomir Sujecki, Łukasz Sójka, Łukasz Pajewski, Sindy Phang, Mark C. Farries, David Furniss, Emma Barney, Trevor M. Benson, Angela B. Seddon, and Samir Lamrini

11.20 **We.B4.2** [VarakPi1] [Classical and Combinatorial Judd-Ofelt Analysis of Rare Earth-doped Silicate Glass](#) (Invited 20 min)

Petr Vařák, Jan Hrabovský, Robin Kryštof, Michal Kamrádek, Artem Simoniakin, Pavla Nekvindová, and Pavel Peterka

11.40 **We.B4.3** [SanchezFi1] [Phase transition in a fiber laser](#) (Invited 20 min)

O. Ougrige, F. Bessin, and F. Sanchez

12.00 **We.B4.4** [CucinottaAi1] [Yellow Fiber Laser system for the treatment of ocular disorders](#) (Invited 20 min)

Aizhan Issatayeva, Walter Belardi, Gian Maria Cavallini, Guido Perrone, and Annamaria Cucinotta

room 202 - SWP, Wednesday July 9

11.00 - 13.00 SWP 7 new materials & phenomena; Chair: Jasmin Smajic

11.00 **We.B5.1** [MukhopadhyaySi1] [Harmonic generation from resonant metal-dielectric interfaces: contribution of bound and hot electrons](#) (Invited 20 min)

Shroddha Mukhopadhyay, Crina Cojocaru, Maria Antonietta Vincenti, Kent Hallman, Michael Scalora, and Jose Trull

11.20 **We.B5.2** [XuHi1] [2D MoS₂: Large-Scale Growth, Integrated Optoelectronics and Beyond](#) (Invited 20 min)

Gaohui Ge, Changlei Wu, Juntong Zhu, Jiazhen Zhang, Xiao Li, Jiang Wu, Guifu Zou, and Hao Xu

11.40 **We.B5.3** [TomasiusRi1] [Investigation of surface trap states in GaN: Impact on the optoelectronic properties of the oxide heterointerface](#) (Invited 20 min)

Roland Tomašiūnas, Ignas Dailidėnas, Ignas Reklaitis, Martin Mandl, Sebastian Taeger, Martin Strassburg, and Riina Ritasalo

12.00 **We.B5.4** [MarjanowskaAr1] [Phase Transitions in Halide Perovskite Thin Films Fabricated by PVco-D Method](#) (regular 15 min)

Agnieszka Marjanowska, Krzysztof Wisniewski, Bouchta Sahraoui, and Anna Zawadzka

12.15 **We.B5.5** [ZinouneJBr1] [Modeling and Analysis of Local Thermal Gradient Around Suspended Metallic Nanoparticles Under Laser Irradiation](#) (regular 15 min)

Julien-Bilal Zinoune, Christophe Cassagne, Mihaela Chis, and Georges Boudebs

12.30 **We.B5.6** [AlmaevAr1] [Electroconductive and photoelectric properties of Pt/\(100\) \$\beta\$ -Ga₂O₃ Schottky barrier diode based on Czochralski grown crystal](#) (regular 15 min)

Nikita Yakovlev, Aleksei Almaev, Leonid A. Mochalov, and Ekaterina A. Slapovskaya

12.45 **We.B5.7** [AlmaevAr2] [p-type transparent conductive electrodes based on the Cr₂O₃–NiO mixed oxides thin films](#) (regular 15 min)

Aleksei Almaev, Bogdan Kushnarev, Petr Korusenko, Leonid Mochalov, and Ekaterina Slapovskaya

room 203 - quantum, Wednesday July 9

11.00 - 13.00 PMRD 1, Chair: Misha Sumetsky

11.00 **We.B6.1** [OFaolainLi1] [Hybrid Photonic Crystal laser Refractive Index sensing](#) (Invited 20 min)

Taynara Oliveira, Davide Monopoli, Nicola Maraviglia, Artem Vorobev, Simone Iadanza, and Liam O'Faolain

11.20 **We.B6.2** [JamshidiKi1] [Investigation of Nonlinear Dynamics and Self-Pulsing Oscillations of Silicon Microring Resonators](#) (Invited 20 min)

Abdou E. Shetewy, Weizhong Zhang, Menglong He, and Kambiz Jamshidi

11.40 **We.B6.3** [KuzmiakVi1] [Fabry-Perot bound states in the continuum supported by a coupled waveguide array](#) (Invited 20 min)

Vladimír Kuzmiak and Jiří Petráček

12.00 **We.B6.4** [StoliarovDi1] [High-Power O-Band Laser Source for Silicon Photonics Device Testing](#) (Invited 20 min)

Dmitrii Stoliarov

12.20 **We.B6.5** [KintakaKi1] [Recent Advances of Focusing Cavity-Resonator-Integrated Guided-Mode Resonance Filter](#) (Invited 20 min)

Kenji Kintaka, Keisuke Ozawa, Junichi Inoue, and Shogo Ura

12.40 **We.B6.6** [SoriaSi1] [Whispering Gallery Mode Resonators as versatile platforms for lasing, nonlinear optics and photoacoustics](#) (Invited 20 min)

Gabriele Frigenti, Daniele Farnesi, Stefano Pelli, Gualtiero Nunzi Conti, and Silvia Soria

room 205 - materials&devices, Wednesday July 9

11.00 - 12.40 PNPA 4, Chair: Luigi Sirleto

11.00 **We.B7.1** [VivienLi1] [Hybrid integration of doped oxides in silicon photonics platform](#) Invited (20 min)

Maria Statie, Pablo Bedoya-Ríos, Alicia Ruiz-Caridad, Ali El Boutaybi, Davide Cammilleri, Mahitosh Biswas, Christian Lafforgue, Guillaume Marcaud, Karamanis Panaghiotis, Carlos Alonso-Ramos, Daniele Melati, Samson Edmond, Guillaume Agnus, Nathaniel Findling, Stefano Pirodda, Ludovic Largeau, Eric Cassan, Delphine Marris-Morini, Nicolas Dubreuil, Michel Rérat, Philippe Lecoer, Sylvia Matzen, Thomas Maroutian, and Laurent Vivien

11.20 **We.B7.2** [BoteyMi1] [Non-Hermitian mode-cleaning and flexible mode management in waveguide amplifiers](#) (Invited 20 min)

M. Nayeem Akhter, Ramon Herrero, Kestutis Staliunas, and Muriel Botey

11.40 **We.B7.3** [RaghunathanVi1] [Infrared Nonlinear Photonics using All-dielectric Resonant Metasurfaces](#) (Invited 20 min)

Varun Raghunathan, Urmila Bag, and Lal Krishna A.S

12.00 **We.B7.4** [SchulzSi1] [Hybrid-Epsilon-near-zero metasurfaces for short wavelength operation](#) (Invited 20 min)

Iman Alhamdan and Sebastian A. Schulz

12.20 **We.B7.5** [TsilipakosOi1] [Metasurfaces for engineering the dispersion and mode profile of guided waves](#) (Invited 20 min)

Odyseas Tsilipakos and Thomas Koschnyy

posters & DEMOs area (Sala Polivalent), Wednesday July 9

11.00 - 13.00 DEMO 2; Chair: Albert Pagès

DEMO 6 [GiorgettiAd1] [Enabling PUF-based Authentication in QKD Networks](#)

S. Tahir, S. Civelli, M. Ferrari, L. Potì, E. Paolini, P. Nadimi Goki, M. Brunero, A. Gatto, N. Andriolli, and A. Giorgetti

DEMO 7 [RahimiHd1] [Premium and Best-Effort Connectivity Services for Cloud Immersive Applications with F5G-Advanced Networks](#)

Hesam Rahimi, Lluís Gifre, Shayan Hajipour, Ricard Vilalta, Raul Muñoz, Pablo Armingol, Oscar González, Juan Pedro Fernández-Palacios, Henry Yu, Yanpeng Wang, Ruilin Cai, Christopher Janz, Yi Lin, Liang Zhang, and Håkon Lønsethagen

DEMO 8 [DalgkitsisAd1] [Programmable & Trustworthy Data Paths for Sovereign Network Services](#)

Anestis Dalgkitsis, José E. Zerna Torres, Angelos Dimoglis, Marios Avgeris, Chrysa Papagianni, and Paola Grosso

DEMO 9 [JanardhananSd1] [Interactive Demonstration of an Open-Source Dependability Suite for Communication Networks](#)

Shakthivelu Janardhanan, Joey Patricia, Wolfgang Kellerer, and Carmen Mas-Machuca

DEMO 10 [SantosJd1] [PICFlow: A Codeless Layout Automation Framework for Photonic Integrated Circuit Layout](#)

José Silva, Pedro Teixeira, João Santos, Carla Rodrigues, André Amarante, Mário Lima, Francisco Rodrigues, and António Teixeira

room 101 - networks, Wednesday July 9

14.00 - 15.50 ICTON; Chair: Xavier Hesselbach

14.00 **We.C1.1** [TornatoreMi1] [An Overview on Multi-Layer Design of OTN-over-WDM Metro Networks with Low Equipment Cost](#) (Invited 20 min)

Aryanaz Attarpour, Bitra Rahmat Zadeh, Memedhe Ibrahim, Francesco Musumeci, Andrea Bovio, Andrea Castoldi, and Massimo Tornatore

14.20 **We.C1.2** [GifreLli1] [Multi-Layer Dynamic Adaptation of IP Virtual Network Topologies over Multi-Granular Optical Networks with ETSI TeraFlowSDN](#) (Invited 20 min)

Ll. Gifre, A. Sgambelluri, W. Akbar, J. Vilchez, N. Sambo, R. Vilalta, J.M. Fàbrega, and R. Muñoz

14.40 **We.C1.3** [RaffaelliCi1] [Characterizing Resource Usage of Application Services Towards Efficient Orchestration](#) (Invited 20 min)

Yasin Saedi, Gaetano Francesco Pittalà, Gianluca Davoli, Walter Cerroni, and Carla Raffaelli

15.00 **We.C1.4** [FumagalliAi1] [TeTON: A Physics-Aware Simulation Platform for Phase-Only Optical Artificial Neural Networks](#) (Invited 20 min)

Linqi Xiao, Muhammad Ridwanur Rahim, Peter Tso, Rongqing Hui, and Andrea Fumagalli

15.20 **We.C1.5** [SgambelluriAi1] [Provisioning of L2VPN services in IPoWDM networks](#) (Invited 20 min)

Andrea Sgambelluri, Pablo Armigol Robles, Ghulam Bahoo, Piero Castoldi, Oscar Gonzalez de Dios, and Filippo Cugini

15.40 **We.C1.6** [AguiarDpd1] [Full Disaggregation of IPoWDM Networks from the Operator's Perspective: Opportunities, Challenges and Implementation Strategies](#) (post-deadline 10 min)

Kamil Pierściński, Dorota Pierścińska, Agata Krzqstek, Dominika Niewczas, Michał Nagowski, Krzysztof Michalak, and Joanna Branas

room 102 - systems, Wednesday July 9

14.00 - 15.15 OWW 2, Chair: Hristo Ivanov

14.00 **We.C2.1** [PierscinskiKi1] [Quantum Cascade Lasers for Free-Space Optical Communication Systems](#) (Invited 20 min)

Kamil Pierściński, Dorota Pierścińska, Agata Krzqstek, Dominika Niewczas, Michał Nagowski, Krzysztof Michalak, and Joanna Branas

14.20 **We.C2.2** [CiaramellaEi1] [Feasibility of FSO feeder links for drones exploiting COTS components](#) (Invited 20 min)

S. Basu, G. Cossu, L. Oliviero, and E. Ciaramella

14.40 **We.C2.3** [SamboNi1] [Managing fading in free space optics according to the service class](#) (Invited 20 min)

Nicola Sambo, Giulio Cossu, Andrea Sgambelluri, Luca Oliviero, Francesco Paolucci, and Ernesto Ciaramella

15.00 **We.C2.4** [SchrenkBr1] [Spectral Aggregation of Turbulence-Resilient FSO Links as Feeders for Capillary Access Networks](#) (regular 15 min)

Bernhard Schrenk and Florian Honz

room 103 - access, Wednesday July 9

14.00 - 15.20 SDM-WDM 1; Chairlady: Laia Nadal

24.00 **We.C3.1** [WalkowiakKi1] [Hit-Less Dynamic Reallocation for Time-Varying Traffic in Translucent SDM Optical Networks](#) (Invited 20 min)

Adam Włodarczyk, Aleksandra Knapińska, Piotr Lechowicz, Salvatore Spadaro, and Krzysztof Walkowiak

14.20 **We.C3.2** [LeivaAi1] [Performance Evaluation of List-sorting-based Allocation Algorithms in Few-Mode Fiber SDM Optical Networks](#) (Invited 20 min)

Catalina Cuevas-Aliaga, Juan Pinto-Ríos, Ariel Leiva, Astrid Lozada, Nicolás Jara, Ricardo Olivares, Danilo Bórquez-Paredes, Gabriel Saavedra, Ramon Durán, and Ignacio de Miguel

14.40 **We.C3.3** [ParolariPi1] [Enabling Advanced Networking and Intelligent Fiber Sensing with Space Division Multiplexing](#) (Invited 20 min)

Paola Parolari, Marco Fasano, Alberto Gatto, Paolo Martelli, Cristian Antonelli, Antonio Mecozzi, and Pierpaolo Boffi

15.00 **We.C3.4** [RebolaJi1] [Optimizing crosstalk suppression in bidirectional weakly-coupled multicore fiber spans by resorting to mid-span isolators](#) (Invited 20 min)

João L. Rebola and Adolfo V. T. Cartaxo

room 201 - fibres, Wednesday July 9

14.00 - 15.00 OMT 1; Chair: George Stanciu

14.00 **We.C4.1** [NishidaKi1] [Photothermal nonlinear scatterings in silicon nanostructures and applications to super-resolution microscopy](#) (Invited 20 min)

Kentaro Nishida and Shi-Wei Chu

14.20 **We.C4.2** [CirtoajeCi1] [Nematic liquid crystal composites with carbon-based nanomaterials for electronic devices](#) (Invited 20 min)

Cristina Cirtoaje, Stefan Stanciu, Olivia Stefanoiu, Stefan Anton, and Stefan Postelnicu

14.40 **We.C4.3** [StanciuGAi1] [Thin films investigations by using superresolution microscopy techniques](#) (Invited 20 min)

George A. Stanciu, Denis E. Tranca, Stefan G. Stanciu, Stefan R. Anton, Radu Hristu, Antonela Toma, and Engang Fu

room 202 - SWP, Wednesday July 9

14.00 - 15.20 SWP 8 plasmonics; Chair: Andrea Chiappini

14.00 **We.C5.1** [CaloGi1] [Mode asymmetry in magneto-plasmonic slot waveguides enabling the design of non-reciprocal devices](#) (Invited 20 min)

Aniqa Mehboob, Giovanni Magno, Vincenzo Petruzzelli, Vy Yam, Béatrice Dagens, and Giovanna Calò

14.20 **We.C5.2** [HuangJi1] [Plasmonic amplification actuated by surface acoustic waves in a plasmonic racetrack resonator](#) (Invited 20 min)

Rohit Gupta, Cheng-Yi Cheng, and Jian-Jang Huang

14.40 **We.C5.3** [PiatkowskiDi1] [Optical spectroscopy through a single silver nanowire: A promising platform for nanoscale sensing](#) (Invited 20 min)

D. Piątkowski, M. Ćwierzona, D. Jankowski, M. Żebrowski, M. Misiak, A. Bednarkiewicz, and S. Maćkowski

15.00 **We.C5.4** [VasilevskiyMi1] [Exciton-polaritons supported by organic and hybrid semiconductor platforms](#) (Invited 20 min)

Diogo Cunha, Marcelo Barreiro, José Gama, Victor Duarte, Nuno Peres, and Mikhail Vasilevskiy

room 203 - quantum, Wednesday July 9

14.00 - 16.10 PMRD 2, Chairlady: Silvia Soria

14.00 **We.C6.1** [BianucciPi1] [Experiments on nonlinear optics in surface nanoscale axial photonics resonators](#) (Invited 20 min)

Emily Eadie, Samar Deep, and Pablo Bianucci

14.20 **We.C6.2** [DelgadoPinarMi1] [Forward Stimulated Brillouin Scattering for point-to-point sensing and metrology](#) (Invited 20 min)

Carlos Álvarez-Ocampo, Juan Julián-Barriel, Ana I. Garrigues-Navarro, Aleksander S. Paterno, Martina Delgado-Pinar, Antonio Díez, Jose Luis Cruz, and Miguel V. Andrés

14.40 **We.C6.3** [LinGi1] [Exploration of nonlinear optical phenomena in crystalline microresonators via a fiber-nested configuration](#) (Invited 20 min)

Guoping Lin

15.00 **We.C6.4** [SemenovaYi1] [Novel Fiber Micro- and Nanostructures for Ultrasensitive Sensors and Photonic Devices](#) (Invited 20 min)

Yuliya Semenova, Zhe Wang, and Yiming Shen

15.20 **We.C6.5** [SumetskyMi1] [Amplification of light in photonic waveguides and resonators modulated by a relatively slow travelling wave](#) (Invited 20 min)

M. Sumetsky

15.40 **We.C6.6** [ViolaAr1] [Tailoring Spontaneous Four-Wave Mixing in a Ring Resonator with a Resonant Interferometric Coupler](#) (regular 15 min)

Alice Viola, Paula L. Pagano, Francesco Malaspina, Massimo Borghi, Federica Moroni, Daniele Bajoni, Matteo Galli, and Marco Liscidini

15.55 **We.C6.7** [TsilipakosOr1] [Assessing passive Q-switching in nanophotonic laser cavities enhanced with 2D materials](#) (regular 15 min)

Thomas Christopoulos, Johanne Hizanidis, Georgios Nousios, Emmanouil E. Kriezis, and Odysseas Tsilipakos

room 205 - materials&devices, Wednesday July 9

14.00 - 15.45 PICA4, Chair: Ioannis Tomkos

14.00 **We.C7.1** [RamirezJMi1] [Heterogeneous Photonics Integrated Circuits: Roadmap and challenges](#) (Invited 20 min)

J. M. Ramirez

14.20 **We.C7.2** [Teofilovicli1] [Predicting and compensating thermal crosstalk in programmable photonic integrated circuits](#) (Invited 20 min)

Isidora Teofilovic and Francesco Da Ros

14.40 **We.C7.3** [DeCarloMi2] [The Electrically Erasable Programmable Read-Only Grating: principle and applications](#) (Invited 20 min)

Martino De Carlo, Francesco De Leonardis, and Vittorio M. N. Passaro

15.00 **We.C7.4** [VandenKerchoveFi1] [Routing and placing filters for programmable photonics](#) (Invited 20 min)

Ferre Vanden Kerchove, Didier Colle, Wouter Tavernier, Wim Bogaerts, and Mario Pickavet

15.20 **We.C7.5** [HongSr1] [Implementation of Programmable Multiport Interferometers with Spiral Waveguides](#) (regular 15 min)

Seokjin Hong, Berkay Neseli, Jae-Yong Kim, Seungsoo Lee, Seungyeon Choi, Junyeop Lee, Hyo-Hoon Park, and Hamza Kurt

15.35 **We.C7.6** [CurriVpd1] [Wideband operation of 3x3 Mach-Zehnder Interferometer mesh for programmable photonic computing](#) (post-deadline 10 min)

Teng Ma, Andrea Marchisio, Francesco Da Ros, Vittorio Curri, Andrea Carena, and Paolo Bardella

room 101 - networks, Wednesday July 9

16.20 - 18.00 ICTON; Chair: Moshe Zukerman

16.20 **We.D1.1** [GarrichMi1] [A Bioengineering Perspective on Optical Network Openness and Automation](#) (Invited 20 min)

Miquel Garrich and Pablo Pavón Mariño

16.40 **We.D1.2** [EramoVi1] [Investigation of the Optimal Scheduling Problem in Deterministic Passive Optical Networks for Industrial Applications](#) (Invited 20 min)

T. Fiori, F.G. Lavacca, and V. Eramo

17.00 **We.D1.3** [TaccaMi1] [Enhancing Optical Network Emulation \(ONE\) with Fast Gaussian Noise Modeling of Nonlinear Interference](#) (Invited 20 min)

Aparaajitha Gomathinayakam Latha, Muhammad Ridwanur Rahim, Marco Tacca, Ron Hui, and Andrea Fumagalli

17.20 **We.D1.4** [JanardhananSi1] [PyRobust: An Open-Source Robustness Surface Generation Tool](#) (Invited 20 min)

Shakthivelu Janardhanan, Juliane Erhardt, and Carmen Mas-Machuca

17.40 **We.D1.5** [MasaadSi1] [Photonic Reservoir Equalization in Coherent Transmission Systems](#) (Invited 20 min)

Sarah Masaad, Stijn Sackesyn, Stylianos Sygletos, and Peter Bienstman

room 102 - systems, Wednesday July 9

16.00 - 17.10 OSCto5G; Chair: Hamzeh Khalili

16.00 **We.D2.1** [KashyapRi1] [Laser induced cooling for space communications and sensor systems](#) (Invited 20 min)

Thomas Meyneng, Nicolas Grégoire, Malek Aissaoui, Younes Messaddeq, and Raman Kashyap

16.20 **We.D2.2** [TroiaSi1] [Mitigating Satellite Link Variability in SD-WAN using Constellation-Aware Edge Routing](#) (Invited 20 min)

Giacomo Sguotti, Sebastian Troia, and Guido Maier

16.40 **We.D2.3** [GalambosMr1] [How Laser Power Beaming Could be Utilized Directly and Safely for Satellite QKD](#) (regular 15 min)

Máté Galambos, Kitty Olah, Viktor Ödön Zahorán, and László Bacsárdi

16.55 **We.D2.4** [HernandezJAR1] [Building Intelligent UAVs for Non-Terrestrial Networks: Large Language Models, Vision and Reasoning on-board](#) (regular 15 min)

Andrés Navarro, Carlos de Quinto, José Alberto Hernández, Gabriel Otero, Tomás Martínez-Cortés, David Larrabeiti, Farhad Arpanaei, and Óscar González de Dios

room 103 - access, Wednesday July 9

16.00 - 16.55 SDM-WDM 2; Chair: Massimiliano Guasoni

16.00 **We.D3.1** [PerelloJi1] [QAM Order Selection Strategy for Energy-efficient Probabilistic Constellation Shaping in Flex-Grid over Multicore Fiber Optical Backbone Networks](#) (Invited 20 min)

Jordi Perelló, Joan M. Gené, Junho Cho, and Salvatore Spadaro

16.20 **We.D3.2** [ChatterjeeBCi1] [Fragmentation-Aware Resource Allocation Considering Crosstalk-Avoided Approach in Spectrally-Spatially Elastic Optical Networks](#) (Invited 20 min)

Imran Ahmed, Roshan Kumar Rai, Md Abdullah Al Mamun Mojumder, Eiji Oki, and Bijoy Chand Chatterjee

16.40 **We.D3.3** [VilchezFr1] [Introducing L-band Spectral Switching Granularity in Programmable MBoSDM Node Prototype](#) (regular 15 min)

F. Javier Vilchez, Laia Nadal, Ramon Casellas, Josep. M. Fàbrega, Michela Svaluto Moreolo, and Raúl Muñoz

room 201 - fibres, Wednesday July 9

16.00 - 17.25 OMT 2; Chairlady: Cristina Cirtoaje

16.00 **We.D4.1** [MahajanSi1] [Pushing the Frontiers of Molecular Biophotonics: Raman Spectroscopy and Label-free Microscopy for Medical Diagnostics and the Environment](#) (Invited 30 min)

Sumeet Mahajan

16.30 **We.D4.2** [HristuRi1] [Multiscale Optical Microscopy for the Characterization of Collagen Thermal Denaturation](#) (Invited 20 min)

Radu Hristu, Denis E. Tranca, Stefan G. Stanciu, Lucian G. Eftimie, and George A. Stanciu

16.50 **We.D4.3** [CasparyRi1] [In-line Holography for Automized Laser Direct Writing](#) (Invited 20 min)

Reinhard Caspary, Hannes Robben, Lei Zheng, Dominik WoIWode, Konrad Bethmann, and Bernhard Roth

17.10 **We.D4.4** [CasparyRr1] [Holographic Microscopy as Inline Metrology Tool](#) (regular 15 min)

Hannes Robben, Reinhard Caspary, Lei Zheng, Dominik WoIWode, Konrad Bethmann, and Bernhard Roth

room 202 - SWP, Wednesday July 9

16.00 - 17.25 SWP 9 new light sources; Chairlady: Crina Cojocaru

16.00 **We.D5.1** [DuqueGijonMi1] [Coherence control in semiconductor laser light with optical feedback and current modulation](#) (Invited 20 min)

María Duque-Gijón, Cristina Masoller, and Jordi Tiana-Alsina

16.20 **We.D5.2** [QuirceAi1] [Broadly Tunable Single- and Dual-Comb Generation in Gain-Switched Discrete-Mode Lasers via Low-Power Injection into Suppressed Modes](#) (Invited 20 min)

Daniel Plaza-Vas, María Duque-Gijón, Cristina Masoller, Jordi Tiana-Alsina, Ángel Valle, Nathalie Vermeulen, and Ana Quirce

14.40 **We.D5.3** [SabeehAHR1] [Optimizing Light Extraction in RGB OLEDs with Multi-Quantum Well Configurations](#) (regular 15 min)

Basma E. Abu-Elmaaty, Tawfik Ismail, Ala H. Sabeeh, and Nancy Alshaer

16.55 **We.D5.4** [GancioJr1] [Anticipating and identifying the threshold bifurcation of a complex laser with permutation entropy](#) (regular 15 min)

Juan Gancio, Cristina Masoller, and Mathias Marconi

17.10 **We.D5.5** [PassaroVr1] [Optimising brightness and power enhancement trade-off in Cerium doped YAG 3D luminescent concentrator](#) (regular 15 min)

Rahuldas Kutteeri, Martino De Carlo, Francesco De Leonardis, and Vittorio M. N. Passaro

room 203 - quantum, Wednesday July 9

16.30 - 17.50 Quantum Photonics 1; Chair: [Ciro Bruscino](#)

16.30 **We.D6.1** [AnKi1] [Photon statistics and emission spectrum of single-atom superradiance](#) (Invited 20 min)

Kyungwon An

16.50 **We.D6.2** [JelenkovicBi1] [Advances in Quantum imaging](#) (Invited 20 min)

Filip Krajinić, Marija Ćurčić, and Brana Jelenković

17.10 **We.D6.3** [BoudebsGi1] [Analysis of Photothermal and Fluorescence Properties in Suspensions and Solutions Using Thermal Lens Z-Scan Method](#) (Invited 20 min)

Georges Boudebs, Julien-Bilal Zinoune, Christophe Cassagne, and Mihaela Chis

17.30 **We.D6.4** [GrillotFi1] [Semiconductor Quantum Dots for Classical and Quantum Photonic Applications](#) (Invited 20 min)

Frédéric Grillot, Heming Huang, and Di Liang

room 205 - materials&devices, Wednesday July 9

16.20 - 18.10 Programmable Photonics, Chair: [Ioannis Tomkos](#)

16.20 *David Miller: Keynote talk (30 min)*

16.50 *Andrea Melloni (20 min)*

17.10 *Ioannis Tomkos (20 min)*

17.30 *Chris Roeloffzen (20 min)*

17.50 *Douglas Aguiar (20 min)*

social event Wednesday, 9 July 2025

Gala Dinner at Restaurant Can Travi Nou (departing of the buses in front of UPC Auditorium 19:00 sharp)

DAY 4 - Thursday July 10

***** Th.A - Thursday morning parallel sessions *****

room 101 - networks, Thursday July 10

8.30 - 10.25 ICTON; Chair: Miquel Garrich

8.30 **Th.A1.1** [TzanakakiAi1] [Optical Transport Networks in Support of Joint Communication and Sensing](#) (Invited 20 min)

Anna Tzanakaki

8.50 **Th.A1.2** [ZukermanMi1] [Path Planning of a New Undersea Telecommunications Cable with Consideration of Crossing Angle with Existing Cables](#) (Invited 20 min)

Xinyu Wang, Fahan Chen, Zengfu Wang, Tianjiao Wang, Bill Moran, and Moshe Zukerman

9.10 **Th.A1.3** [SeklosKr1] [Joint Route Planning for Submarine Optical and Power Cables](#) (regular 15 min)

Konstantinos Seklos, Panagiotis Kokkinos, and Emmanuel Varvarigos

9.25 **Th.A1.4** [VojtechJr1] [Long-haul White Rabbit Transmission](#) (regular 15 min)

Josef Vojtech, Michal Spacek, Jaromir Sima, Tomas Novak, Vladimir Smotlacha, Ondrej Havlis, Elisabeth Andriantsarazo, Rudolf Vohnout, Martin Slapak, Lada Altmannova, Radek Velc, Petr Pospisil, Jan Kundrat, and Jaroslav Roztocil

9.40 **Th.A1.5** [VasquezChr1] [Hyperconnected Networks: Approaches for a High Scale Network Expansion](#) (regular 15 min)

Christofer Vásquez, Dat Kieu Tien, Anjali Sharma, Mirko Zitkovich, and Carmen Mas-Machuca

9.55 **Th.A1.6** [WuGr1] [Random Walk to Fit Rayleigh–Jeans, Wien and Planck Formulas](#) (regular 15 min)

Guang Wu and Shaomin Yan

10.10 **Th.A1.7** [DrainakisGr1] [AI Traffic Escalation Study in Edge Networking: Priority Access Criteria for Optical Data Center Networks](#) (regular 15 min)

Georgios Drainakis, Peristera Baziana, and Adonis Bogris

room 102 - systems, Thursday July 10

8.30 - 10.10 TECHto6G 1, Chair: Hamzeh Khalili

8.30 **Th.A2.1** [SefianeAi1] [Programmable networks for future 6G systems](#) (Invited 20 min)

Adel Sefiane, Juan Jose Vegas Olmos, and Alireza Farshin

8.50 **Th.A2.2** [KhaliliHi1] [An Explainable Orchestration Approach to Multi-Domain Network Management](#) (Invited 20 min)

Hamzeh Khalili, Seyed Morteza Ahmadian, and Fatemeh Tabatabaei

9.10 **Th.A2.3** [NadalLi1] [Innovative Transmission Systems for Capacity Scaling in 6G Optical Networks](#) (Invited 20 min)

Laia Nadal, Mumtaz Ali, Francisco Javier Vélchez, Michela Svaluto Moreolo, and Josep Maria Fàbrega

9.30 **Th.A2.4** [RagoAi1] [6GxAID: Integrating 6G Networks and eXplainable Artificial Intelligence for Drone-Based Assistance in Emergency Situations](#) (Invited 20 min)

Arcangela Rago, Alessio Fascista, Giuseppe Piro, Gennaro Boggia, and Luigi Alfredo Grieco

9.50 **Th.A2.5** [TartagliaAi1] [Perspectives for Coherent Optical Transmission in Radio Access Networks](#) (Invited 20 min)

Antonio Tartaglia, Antonio Napoli, Kevin Affolter, Fabio Cavaliere, Stefan Dahlfort, Roberto Magri, Marco Distefano, David Hillerkuss, and Alfredo Palagi

room 203 - quantum, Thursday July 10

8.30 - 10.30 Quantum Photonics 2; Chairlady: Maria Duque Gijon

8.30 **Th.A6.1** [DAuriaVi1] [Multipartite quantum correlation in bright frequency combs out of microresonators](#) (Invited 20 min)

A. Bensemhoun, S. Cassina, C. Gonzalez-Arciniegas, M.F. Melalkia, G. Patera, J. Faugier-Tovar, Q. Wilmart, S. Olivier, A. Zavatta, A. Martin, J. Etesse, L. Labonté, O. Pfister, V. D'Auria, and S. Tanzilli

8.50 **Th.A6.2** [PorzioAi1] [Reconstruction of photon number distributions from single photon events](#) (Invited 20 min)

Alberto Porzio, Pasquale Ercolano, Diego Scarano, Ciro Bruscino, Martina Peluso, Daniela Salvoni, Mikkel Ejrnaes, Chengjun Zhang, Hao Li, Lixing You, Jian Huang, Loredana Parlato, and Giovanni Piero Pepe

9.10 **Th.A6.3** [SalvoniDi1] [Superconducting nanowires single photon detectors enabling quantum technologies](#) (Invited 20 min)

Daniela Salvoni, Chengjun Zhang, Fabio Auriemma, Ciro Bruscino, Pasquale Ercolano, Syed Muhammad Junaid Bukhari, Martina Peluso, Riccardo Maria Ienco, Hao Li, Jia Huang, Alberto Porzio, Loredana Parlato, Mikkel Ejrnaes, Giovanni Piero Pepe, and Lixing You

9.30 **Th.A6.4** [TarekiAi1] [Optimizing Silicon Nitride Waveguide Fabrication for Classical and Quantum Applications](#) (Invited 20 min)

Abubaker Tareki, Khaled Mnaymneh, Jiang Weihong, and Connor Kupchak

9.50 **Th.A6.5** [WatsonSi1] [Design and optimisation of GaN laser technology for quantum and optical communications applications](#) (Invited 20 min)

Shuqiao Cai, Finlay Walton, Daehyun Kim, Simon Munro, Anthony E. Kelly, Scott Watson, Sean Mulholland, Ian Hill, Patrick Gill, Stephen P. Najda, Piotr Perlin, Tadek Suski, Lucja Marona, Mike Leszczynski, and Szymon Stanczyk

10.10 **Th.A6.6** [TaheriniyaSi1] [Tunable Light-Matter Interactions in 3D printed fluorescent materials for Quantum Applications](#) (Invited 20 min)

Shabnam Taheriniya, Finn Kröger, Daniel Ryklin, Rongyang Xu, Eva Blasco, Rasmus Schröder, and Wolfram Pernice

room 205 - materials&devices, Thursday July 10

8.30 - 10.25 PICAW 5; Chair: Kambiz Jamshidi

8.30 **Th.A7.1** [SeyringerDi1] [Study of Optical Performance of 16-Channel 100-GHz Colourless AWG Over a Wide Wavelength Range](#) (Invited 20 min)

Dana Seyringer, Fadi Dohnal, Jozef Chovan, Frantisek Uherek, Jan Latal, and Petr Siska

8.50 **Th.A7.2** [ChovanJi1] [Desing of Athermal Cyclic AWG for Super PON](#) (Invited 20 min)

Jozef Chovan, Dana Seyringer, Heinz Seyringer, Jan Latal, Petr Siska, and Frantisek Uherek

9.10 **Th.A7.3** [WangKi1] [Thulium-Doped Al₂O₃ Waveguide Amplifiers Fabricated via Radio Frequency Reactive Co-Sputtering](#) (Invited 20 min)

Kai Wang, Carlos Osornio Martinez, Jan Lorenzen, Meindert Dijkstra, Bjorn Jongebloed, Neetesh Singh, Franz X. Kärtner, and Sonia M. Garcia-Blanco

9.30 **Th.A7.4** [XuRi1] [Focused Ion Beam Deposition-Assisted Higher-Order Mode Conversion in Asymmetric Directional Couplers](#) (Invited 20 min)

Rongyang Xu, Shabnam Taheriniya, Zhongyu Tang, and Wolfram Pernice

9.50 **Th.A7.5** [BrunettiGi1] [PCM aided PICs: a Crucial Migration Towards Cutting-Edge Signal Processing](#) (Invited 20 min)

Giuseppe Brunetti, Nabarun Saha, and Caterina Ciminelli

10.10 **Th.A7.6** [PassaroVr2] [Two-dimensional beam steering by cascaded domain engineering in lithium niobate](#) (regular 15 min)

Rahuldas Kutteeri, Martino De Carlo, Francesco De Leonardis, and Vittorio M. N. Passaro

room 102 - systems, Thursday July 10

10.50 - 12.20 TECHto6G 2, Chair: Hamzeh Khalili

10.50 **Th.B2.1** [MohammadiKouhiniSi1] [800 Gbps 6G Fronthaul over Space Division PON with Weakly-Coupled Multicore Fiber](#) (Invited 20 min)

Sepideh Mohammadi Kouhini, Kai Habel, Michael Schlosser, Ronald Freund, and Volker Jungnickel

11.10 **Th.B2.2** [NanniJi1] [850nm VCSEL-based Analog Radio-over-SSMF for low-latency, low-consumption Industrial Networks](#) (Invited 20 min)

Jacopo Nanni, Benedetta Palumbo, Giada Saderi, Maryam Nasr Esfahani, and Giovanni Tartarini

11.30 **Th.B2.3** [SharifiSoltaniZr1] [QoS-Based Recovery in 6G Optical Transport Networks: A Fast Service Prioritization Approach](#) (regular 15 min)

Zahra Sharifi Soltani, Arash Rezaee, Orlando Arias, and Vinod M. Vokkarane

11.45 **Th.B2.4** [VettoriLr1] [6G Monitoring Agents in Autonomous Disaggregated Optical Transport Network](#) (regular 15 min)

Luca Vettori, Aitor Zabala Orive, Daniel Augusto Therañ Uribe, Ricardo Martínez, and Ramon Casellas

12.00 **Th.B2.5** [VikranthPendemSpd1] [Hybrid FSO–THz Technologies for 6G Access Networks: A Cost-Availability Trade-off Analysis](#) (post-deadline 10 min)

Sai Vikranth Pendem, Carlos Natalino, Antonio Napoli, and Paolo Monti

12.10 **Th.B2.6** [AgustiApd1] [A Simulator for Testing and Developing Scheduling Mechanisms in integrated 5G/6G-TSN scenarios](#) (post-deadline 10 min)

Anna Agustí-Torra, Cilia Inés Sierra-Guerrero, Marc Jofre, and David Rincón-Rivera

room 202 - SWP, Thursday July 10

10.50 - 12.20 Re-scheduled presentations, Chairs: Josep Solé-Pareta and Marian Marciniak

10.50 **Th.B5.1** [TomljenovicHanicSi1] [Non-invasive detection and identification of biomaterials utilizing their autofluorescence](#) (Invited 20 min)

Asma Khalid, Farah Qazi, Rajni Verma, and Snjezana Tomljenovic-Hanic

11.10 **Th.B5.2** [KarsentyAi1] [Optical Hall Effect Embedded in Graphene Hall Amplifier Nanoscale Device \(HAND\)](#) (Invited 20 min)

Raz Mottes and Avi Karsenty

11.30 **Th.B5.3** [KrolikowskiWi1] [Nonlinear photonic crystals: from 2D to 3D](#) (Invited 20 min)

Wieslaw Krolikowski

11.50 **Th.B5.3** [RabbaniHr1] [Modeling Nonlinear Noise for Arbitrary Pulse Shapes in Optical Fiber Communication Systems](#) (regular 15 min)

Hami Rabbani, Arash Rezaee, Farhad Arpanaei, Vinod M. Vokkarane, and Maite Brandt-Pearce

12.05 **Th.B5.4** [MelalkiaMFr1] [Vacuum-based QRNG with \$\mu\$ -law and A-law-based non-uniform ADCs: a comparative study](#) (regular 15 min)

Mohamed Faouzi Melalkia, Samir Djenan, and Bachir Madani

room 203 - quantum, Thursday July 10

10.50 - 12.20 Quantum Photonics 3; Chair: Massimo Borghi

10.50 **Th.B6.1** [RaghunathanVr1] [Multimode Phase Matching and Overlap Engineering in Gallium Selenide on Silicon Nitride Hybrid Waveguides for Spontaneous Parametric Down Conversion](#) (regular 15 min)

Asish Prosad, Srinivas Talabattula, and Varun Raghunathan

11.05 **Th.B6.2** [LecaronNr1] [An all-fibred, telecom technology compatible, room temperature, single-photon source](#) (regular 15 min)

Nathan Lecaron, Max Meunier, Grégory Sauder, Romain Dalidet, Yoann Pelet, Sébastien Tanzilli, Jesús Zúñiga-Pérez, and Olivier Alibart

11.20 **Th.B6.3** [FarooqMr1] [Prospects of InP channel waveguides for Single Photon Generation](#) (regular 15 min)

Muneeb Farooq, Francisco Soares, and Francisco Diaz

11.35 **Th.B6.4** [BernardiAr1] [High switching rate post-selection free time-bin entanglement in thin-film lithium niobate](#) (regular 15 min)

Andrea Bernardi, Marcello Bacchi, Marco Clementi, Sara Congia, Francesco Garrisi, Andrea Martellosio, Marco Passoni, Alexander Wrobel, Federico A. Sabattoli, Matteo Galli, and Daniele Bajoni

11.50 **Th.B6.5** [CongiaSr1] [Generation of hyperentangled photon pairs encoded in the time-bin and frequency-bin degree of freedom from silicon microrings](#) (regular 15 min)

Sara Congia, Massimo Borghi, Emanuele Brusaschi, Marco Liscidini, Johan Rothman, Ségolène Olivier, Matteo Galli, and Daniele Bajoni

12.05 **Th.B6.6** [TianaAlsinaJr1] [Event detection methods distinguish different emission regimes in a semiconductor laser with optical feedback](#) (regular 15 min)

María Duque-Gijón, Cristina Masoller, and Jordi Tiana-Alsina

room 205 - materials&devices, Thursday July 10

10.50 - 12.40 PICA6; Chair: Kai Wang

10.50 **Th.B7.1** [KurtHi1] [Inverse Design and Deep Learning Methods in Photonics](#) (Invited 20 min)

Seokjin Hong, Berkay Neseli, Jae-Yong Kim, and Hamza Kurt

11.10 **Th.B7.2** [NeseliBr1] [Thermally Reconfigurable Inverse-Designed Photonic Logic Gate](#) (regular 15 min)

Berkay Neseli, Seokjin Hong, Jae-Yong Kim, Seungsoo Lee, Seungyeon Choi, Junyeop Lee, Hyo-Hoon Park, and Hamza Kurt

11.25 **Th.B7.3** [LazoulMr1] [Modeling and Experimental Validation of the Impact of Lattice Defects on the Performance of Periodically Poled Crystals](#) (regular 15 min)

Mohamed Lazoul, Omar Belmahi, Faryel Yasmine Latrech, and Mustapha Haimour

11.40 **Th.B7.4** [MartinezPamiasBr1] [Phase Synchronization Dynamics of Two Coupled Lasers for Quantum Random Number Generation](#) (regular 15 min)

Berta Martínez-Pàmias, Miquel Rudé, and Cristina Masoller

11.55 **Th.B7.5** [MegasGr1] [Demonstration of an Optical 16×16 Benes Switch based on 3D Photonic Integration](#) (regular 15 min)

Georgios Megas, Efsthios Andrianopoulos, Madeleine Weigel, Panos Groumas, Sabrine Mejri, Zerihun G. Tegegne, Milan Milosevic, Eva Loukisa, Christos Tsokos, David de Felipe, Maria Massaouti, Norbert Keil, Christos Kouloumentas, and Hercules Avramopoulos

12.10 **Th.B7.6** [TarekiAr1] [Optimizing Silicon Nitride Waveguide Fabrication for Classical and Quantum Applications](#) (regular 15 min)

Abubaker Tareki, Khaled Mnaymneh, Jiang Weihong, and Connor Kupchak

12.25 **Th.B7.7** [YousefiPr1] [Dual-Wavelength Add-Drop filters with aperiodic gratings on a Hybrid SiN-TFLN Platform](#) (regular 15 min)

Pezhman Yousefi, Muhammad Khalid, Vincenzo Petruzzelli, and Giovanna Calò

13:00 Closing Ceremony & Announcement of ICTON 2026