**ICTON 2024 Detailed Session Programme**

**Day 0 - Sunday July 14**

***18:30 – 20:00 Welcome Reception at the Politecnico di Bari***

**DAY 1 - Monday July 15**

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

**Great Hall (1st floor)**

***9.00 - 9.30 Opening Ceremony***

**9.30 - 11.00 Mo.A - PLENARY, Chair: Francesco Prudenzano**

9.30 **Mo.A.1** [VitielloM\_plenary] Ultrafast photodetectors at Terahertz frequencies based on 2D materials: technological developments and applications in optical communications (30 min)
*Miriam Serena Vitiello*

10.00 **Mo.A.2** [TrolesJ\_plenary] Chalcogenide microstructured optical fibers: fabrication and applications (30 min)
*Johann Troles, Gilles Renversez*

10.30 **Mo.A.3** [CochraneP\_plenary] Future Networking -v- Energy Limits (30 min)
*Peter Cochrane and Felix Ngobigha*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Mo.B - Monday noon parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 1 - networks, Monday July 15**

**11.20-13.00 Mo.B1 - WeInTel, Chairladies: Sima Barzegar & Pantea Nadimi Goki**

11.20 **Mo.B.1.1** [BlancoCaamanoMi2] Header Proposal for the DetNet Application Layer (Invited20 min)
*Marta Blanco Caamaño, Luis M. Contreras, Rafael A. López da Silva*

11.40 **Mo.B.1.2** [GemmatoVi1] Microwave Photonics Optical Filter for ESM Systems (Invited20 min)
*Valentina Gemmato, Filippo Scotti, Federico Camponeschi, Luca Rinaldi, Marco Bartocci, Claudio Porzi and Paolo Ghelfi*

12.00 **Mo.B.1.3** [NadalLi1] Towards Extending Switching Capabilities in Future Optical Networks (Invited20 min)
*Laia Nadal, Josep M. Fàbrega, Mumtaz Ali, F. Javier Vílchez, and Michela Svaluto Moreolo*

12.20 **Mo.B.1.4** [RadovicMi1] Multicarrier Transmission Optimization in Elastic Optical Networks (Invited20 min)
*Margita Radovic, Andrea Sgambelluri, Filippo Cugini, and Nicola Sambo*

12.40 **Mo.B.1.5** [SadighiLi1] Machine Learning Analysis of Polarization Signatures for Distinguishing Harmful from Non-harmful Fiber Events (Invited20 min)
*Leyla Sadighi, Stefan Karlsson, Lena Wosinska, Marija Furdek*

**Aula 3 - access, Monday July 15**

**11.20-13.10 Mo.B2 - Access 1, Chair: Pierpaolo Boffi**

11.20 **Mo.B2.1** [ArevaloGi1] Convergence Test of LTE and OFDM-IM in Optical Access Networks (Invited20 min)
*Germán V. Arévalo, Arguero T. Berenice, and Milton N. Tipán*

11.40 **Mo.B2.2** [BoscoGi1] Next Generation Coherent PONs: Technical Challenges and Outlook (Invited20 min)
*Giuseppe Rizzelli, Gabriella Bosco, Dario Pilori, Mariacristina Casasco, and Roberto Gaudino*

12.00 **Mo.B2.3** [CalabrettaNi1] Photonic WDM Switches for Multi-Band Optical Networks (Invited20 min)
*Shiyi Xia, Henrique Freire Santana, Marijn Rombouts, Yu Wang, Aref Rasoulzadeh Zali, Mohammad Mukit, Zhouyi Hu, Oded Raz, Nicola Calabretta*

12.20 **Mo.B2.4 [**KlinkowskiMi1] Quality of Transmission-Aware Optimization of Passive WDM Optical Xhaul Access Networks (Invited20 min)
*Mirosław Klinkowski*

12.40 **Mo.B2.5** [ChatterjeeBCr1] Blocking Probability Analysis Modeling in Spectrally-Spatially Elastic Optical Networks: A Crosstalk-Avoided Perspective (15 min)
*Imran Ahmed, Eiji Oki, and Bijoy Chand Chatterjee*

12.55 **Mo.B2.6** [MasanasMr1] Experimental assessment of photonic down-conversion techniques for analog new-radio upstream (15 min)
*Miquel Masanas, María C. Santos, Josep Prat*

**Aula 5 - systems, Monday July 15**

**11.20-13.35 Mo.B3 - 5GT/TECHto6G, Chair: Hamzeh Khalili**

11.20 **Mo.B3.1** [VazquezCi1] Power-over-Fiber Integration in 5G Optical Fronthauling based on Multicore Fibers (Invited20 min)
*David Sánchez Montero, Rubén Altuna, Javier Barco, Juan Dayron López-Cardona, Carmen Vázquez*

11.40 **Mo.B3.2** [YamanakaNi1] Newly structured Hollow-Core Fiber and its open innovation field for Power over fiber, Radio over fiber and ultra-low latency application (Invited20 min)
*Naoaki Yamanaka, Satoru Okamoto, Hiroyuki Tsuda, Motoharu Matsuura and Kazunori Mukasa*

12.00 **Mo.B3.3** [CareglioDi1] In-network Computing for Secure Distributed AI (Invited20 min)
*Chiara Grasselli, Lorenzo Rinieri, Pol González, Luis Velasco, Davide Careglio, and Franco Callegati*

12.20 **Mo.B3.4** [RinconDi1] Building a 5G-TSN Testbed: Architecture and Challenges (Invited20 min)
*Anna Agustí-Torra, Marc Ferré-Mancebo, David Rincón-Rivera, Cristina Cervelló-Pastor, Sebastià Sallent-Ribes*

12.40 **Mo.B3.5** [TomkosIi1] Challenges and Innovations of Transport Networks to Support 6G Use-Cases (Invited20 min)
*Ioannis Tomkos*

13.00 **Mo.B3.6** [MunozRi1] Security and Trust in Open and Disaggregated 6G networks (Invited20 min)
*P. Alemany, R. Munoz, R. Vilalta, Ll. Gifre, R. Martinez, R. Casellas, M. Castro, P. Ferreira, D. Moreira, J. Garcia, J. Cunha , I. Nunez, G. Gomez, S. Castro, A. Pastor, D. Lopez*

13.20 **Mo.B3.7** [ZinouneJBr1] Kerr Effect Enhanced Nonlinear Optical Correlator: Simplified Implementation for Non-Binary Matrix Multiplication (15 min)
*Julien-Bilal Zinoune, Christophe Cassagne, Mihaela Chis, Georges Boudebs*

**Aula 7 - fibres, Monday July 15**

**11.20-13.00 Mo.B4 - MOF 1 - Low loss hollow core fibers, Chair: Walter Belardi**

11.20 **Mo.B4.1** MOF opening (10 min)
*Walter Bellardi*

11.30 **Mo.B4.2** [PolettiFi1] Hollow core fibres: the long and winding road from scientific tool to commercial product (Invited30 min)
*Francesco Poletti*

12.00 **Mo.B4.3** [FroszMi1] Non-invasive techniques for measuring the microstructure of hollow-core fibres during drawing (Invited20 min)
*Michael Frosz*

12. 20 **Mo.B4.4** [ VincettiLi1] Hollow Core Inhibited Coupling Fibers: theoretical and real limits (Invited20 min)
*F. Melli, L. Rosa, K. Vasko, F. Benabid, and L. Vincetti*

12.40 **Mo.B4.5** [AlDhaybiAi1] Hollow-core fibers with reduced surface roughness for record losses and beam delivery in the UV domain (Invited20 min)
*Ali Al Dhaybi, Jonas Osorio, Frédéric Delahaye, Kostia Vasko, Foued Amrani, Gilles Tessier, Luca Vincetti, Benoit Debord, Frédéric Gérôme and Fetah Benabid*

**Aula 9 - SWP, Monday July 15**

**11.20-13.30 Mo.B5 - SWP 1 sensors, Chairlady: Crina Cojocaru**

11.20 **Mo.B5.1** [JhaAi1] Applications of Near-IR CW and Ultrafast Pulsed Lasers and Photo-active Biominerals in Reconstructive and Restorative Surgery of Hard Tissues (Invited30 min)
*Sarathkumar Lognathan, Eric K Barimah, Geeta Sharma, Evangelos Daskalakis, Neelam Iqbal, Lemiha Yildizbakan, E Mostafa Raif, N Thuy Do, Peter V Giannoudis, Animesh Jha*

11.50 **Mo.B5.2** [BensonTi1] FBG-based sensors for measurement of small distances (Invited20 min)
*Trevor Benson, Jacek Palmowski, Sendy Phang, Alicja Anuszkiewicz, Tomasz Osuch, Yaping Zhang, Elżbieta Bereś-Pawlik*

12.10 **Mo.B5.3** [ZhangYi1] A Weak-FBG Sensor Demodulation System Based on a DBR-SOA Tunable Laser (Invited20 min)
*Chongqian Zhu, Kun Shang, Wenqian Yuan, Haikun Zhang, Yanan Zhai, Xingwei Sun, Yaping Zhang*

12.30 **Mo.B5.4** [KaszubowskaAnandarajahAi1] Dual Optical Frequency Comb for Photonic Sensing (Invited20 min)
*Minghao Wei, Prince M. Anandarajah and Aleksandra Kaszubowska- Anandarajah*

12.50 **Mo.B5.5** [SanipatinBi1] Optical Vernier Effect-Based DC Piezoelectric Sensor for Low Voltage Applications (Invited20 min)
*Bryan Sanipatin, Luis A. Sánchez and Salvador Sales*

13.10 **Mo.B5.6** [XuHi1] Novel 2D Glassy-Graphene for Photodetection and Sensing (Invited20 min)
*Wang Na, Jiazhen Zhang, Fan Cui, Xiao Li, Kai Shen, Jiang Wu, Guifu Zou, Hao Xu*

**Aula 11 - D-Photon, Monday July 15**

**11.20-13.20 Mo.B6 - Qphot 1, Chair: Jiří Petráček**

11.20 **Mo.B6.1** [RamponiRi1] Diamond platform for Quantum Technologies: laser and ion beam writing (Invited20 min)
*Roberta Ramponi, Giulio Coccia, Yanzhao Guo, Akhil Kuriakose, Sahnawaz Alam, Sajedeh Shahbazi, Anthony J. Bennett, Vibhav Bharadwaj, J. P. Hadden, Ottavia Jedrkiewicz, Paweł Machnikowski, Alexander Kubanek, Shane M. Eaton*

11.40 **Mo.B6.2** [JelenkovicBi1] Quantum imaging with undetected photons (Invited20 min)
F. *Krajinić , J.R. León-Torres, M. Kumar, C. Helgert, F. Setzpfandt, and B. Jelenković*

12.00 **Mo.B6.3** [BoudebsGi1] Evaluation of fluorescence quantum yields using thermal lens Z-scan measurements: theoretical and experimental errors for low and high quantum yields (Invited20 min)
*Georges Boudebs, Julien-Bilal Zinoune, Christophe Cassagne, Mihaela Chis*

12.20 **Mo.B6.4** [EramoVi1] Definition and Effectiveness Evaluation of an Analytical Model for the Dimensioning of Memory in Quantum Switches (Invited20 min)
*V. Eramo, F.G. Lavacca, A. Cianfrani, M. Polverini, M. Listanti*

12.40 **Mo.B6.5** [AnKi1] Coherent Photon Statistics in a Superradiant Laser (Invited20 min)
*Kyungwon An*

13.00 **Mo.B6.6** [BennettAi1] Quantum optics with aluminium nitride (Invited20 min)
*Y. Guo, H. Bilge Yağcı, J. K. Cannon, S. G. Bishop, R. N. Clark, J. P. Hadden and A. J. Bennett*

**Aula 13 - materials&devices, Monday July 15**

**11.20-13.10 Mo.B7 - ESPC, Chairlady: Antonella D'Orazio**

11.20 **Mo.B7.1** [BabaTi1] Nonmechanical slow-light grating scanner loaded Si photonics FMCW LiDAR (Invited20 min)
*Toshihiko Baba*

11.40 **Mo.B7.2** [NotomiMi1] Topological and non-Hermitian photonics controlled by hybrid photonic crystals (Invited20 min)
*Masaya Notomi, Takahiro Uemura, Satoshi Suzuki, Yuto Moritake*

12.00 **Mo.B7.3** [HoudreRi1] Integrated photonic crystal nanotweezers for bacteria and bacteriophages viruses trapping and susceptibility testing (Invited20 min)
*Nicolas Villa, Enrico Tartari, Simon Glicenstein, Emmanuel Picard, Pierre Marcoux, Marc Zelsmann, Grégory Resch, Emmanuel Hadji and Romuald Houdré*

12.20 **Mo.B7.4** [KumarBi1] Disorder-Enhanced Photonic Crystals based on-chip Spectrometer (Invited20 min)
*Bhupesh Kumar and Sebastian A. Schulz*

12.40 **Mo.B7.5** [OteroEr1] Rainbow light trapping in a chirped 3D woodpile photonic crystal (15 min)
*E. Otero, B. Soria, D. Gailevičius, V. Mizeikis, E. Puig Vilardell, K. Staliūnas, M. Malinauskas, J. Trull, C. Cojocaru*

12.55 **Mo.B7.6** [MorozovGr1] Periodic Solutions of Hill’s Equation in Allowed Bands (15 min)
*G. V. Morozov and A. Goussev*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Mo.C - Monday afternoon parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 1 - networks, Monday July 15**

**13.30-14.50 Mo.C1 - 6GNeO/TSN, Chair: Marc Ruiz**

13.30 **Mo.C1.1** [BlancoCaamanoMi1] Reliability in deterministic networks: Comparison of FRER (TSN) and PREOF (DetNet) (20 min)
*Marta Blanco Caamaño, Luis M. Contreras, Javier Velázquez Martínez, Rafael A. López da Silva*

13.50 **Mo.C1.2** [SanchezGarridoJi1] Integrating the synchronization stacks of a heterogeneous time-sensitive networking system with wired and wireless domains (Invited20 min)
*Jorge Sánchez-Garrido, Emilio Florentín, Marco Fuentes, Trinidad García, Gorka Ros, Raúl Torrego*

14.10 **Mo.C1.3** [VelascoLi2] Provisioning of Time-Sensitive and non-Time-Sensitive Flows on a Common Infrastructure (Invited20 min)
*L. Velasco and M. Ruiz*

14.30 **Mo.C1.4** [SpadaroSi2] The role of the TSN controller in E2E deterministic services provisioning (Invited20 min)
*Salvatore Spadaro, Fernando Agraz, Albert Pagès*

**Aula 3 - access, Monday July 15**

**13.40-15.40 Mo.C2 - NOA, Chair: Paweł Rosa**

13.40 **Mo.C2.1** [TuritsynSKi1] Nonlinear science of optical fibre systems with semiconductor optical amplifiers (Invited20 min)
*Sergei K. Turitsyn*

14.00 **Mo.C2.2** [CarrereHi1] Versatile global model for semiconductor optical amplifier design (Invited20 min)
*Célia Cruz, Cosimo Calò, Frédéric Pommereau, Arnaud Wilk, Olivier Delorme, Nicolas Vaissière, Jean Decobert, Hélène Carrere*

14.20 **Mo.C2.3** [SpiekmanLi1] Limits to determination of polarization independence in SOAs (Invited20 min)
*Leo H. Spiekman*

14.40 **Mo.C2.4** [AniaCastanonJDi1] Timing jitter in ultralong ultrafast ring fiber lasers (Invited20 min)
*Alejandro Rosado, Inés Cáceres-Pablo and Juan Diego Ania Castañón*

15.00 **Mo.C2.5** [CarrereHr1] Design, Growth, and Characterization of Semiconductor Optical Amplifier Structures with Wide Spectral Bandwidth in C+L Bands (15 min)
*Quentin Hochart, Olivier Delorme, Cosimo Calò, Arnaud Wilk, Hélène Carrere*

15.15 **Mo.C2.6** [LoconsoleAMr1] Design of a praseodymium-doped fluoroindate fiber amplifier for medium infrared wavelength range applications (15 min)
*Antonella Maria Loconsole, Vito Vincenzo Francione, Andrea Annunziato, Francesco Anelli, Md. Imran Khan, Stefano Taccheo, Francesco Prudenzano*

15.30 **Mo.C2.7** [RosaPr1] Bandwidth Extension Using Raman Amplifier for Enhanced Optical Communication Systems (10 min)
*Paweł Rosa, Giuseppe Rizzelli Martella*

**Aula 5 - systems, Monday July 15**

**13.40-15.40 Mo.C3 - Qcomms 1, Chair: Paolo Martelli**

13.40 **Mo.C3.1** [MorandottiRi1] Quantum information and Artificial Neural Networks-based Signal Processing using Integrated Photonics (Invited20 min)
*Imtiaz Alamgir, Luigi Di Lauro, Stefania Sciara, Abdul Rahim Aadhi, Celine Mazoukh, Hao Yu, Bennet Fischer, Nicolas Perron, Nicola Montaut, Mario Chemnitz, Brent E. Little, Sai T. Chu, David J. Moss, Zhiming Wang and Roberto Morandotti*

14.00 **Mo.C3.2** [CincottiGi1] Optical communications at the quantum limit (Invited20 min)
*Matteo Rosati, Gabriella Cincotti*

14.20 **Mo.C3.3** [BaccoDi1] Building the Practical Foundations of a European Quantum Communication Infrastructure (Invited20 min)
*Domenico Ribezzo, Mujtaba Zahidy, Clauda De Lazzari, Nicola Biagi, Ilaria Vagniluca, Cristian Antonelli, Antonio Mecozzi, Leif K. Oxenløwe, Alessandro Zavatta, Davide Bacco*

14.40 **Mo.C3.4** [MartinVi1] Towards Large Scale QKD networks (Invited20 min)
*V. Martin, M. Peev, J.P. Brito, L. Ortíz, R. Brito-Méndez, R. Vicente, J. Saez-Buruaga, A.J. Sebastian-Lombraña, M.I. García-Cid, J. Faba, J. Setien, P. Salas, C. Escribano, L. Mengual, F. Fung, J. Morales, A. Muñiz, A. Pastor-Perales, D. Lopez*

15.00 **Mo.C3.5** [ZavattaAi1] Generating bound-entangled states using multicore fibres (Invited20 min)
*Carlo Marconi, Elena Fanella, Davide Bacco, Alessandro Zavatta*

15.20 **Mo.C3.6** [ParolariPi1] Is the access network ready for Quantum Key Distribution? (Invited20 min)
*Alessandro Gagliano, Alberto Gatto, Paolo Martelli, Pierpaolo Boffi, and Paola Parolari*

**Aula 7 - fibres, Monday July 15**

**14.00-15.20 Mo.C4 - MOF 2: Hollow core fibers for unconventional wavelengths range, Chair: Walter Belardi**

14.00 **Mo.C4.1** [FuQi1] Advances in Mid-Infrared Low-Loss Hollow-Core Anti-Resonant Fibers (Invited20 min)
*Q. Fu, G. T. Jasion, L. Xu, D. J. Richardson, F. Poletti, I. A. Davidson, and N. V. Wheeler*

14.20 **Mo.C4.2** [BelardiWi1] Designing and exploiting the properties of gas filled hollow core optical fibers (Invited20 min)
*Walter Belardi, William Wadsworth, Jonathan Knight, Piotr Jaworski, Karol Krzempek, Aymeric Pastre, Geraud Bouwmans, Laurent Bigot, Luca Vincetti, Lorenzo Rosa, Annamaria Cucinotta*

14.40 **Mo.C4.3** [HarringtonKi1] Anti-resonant hollow core fibres for UV guidance (Invited20 min)
*Kerrianne Harrington, Robbie Mears, James M Stone, Jonathan C Knight, William J Wadsworth, Tim A Birks*

15.00 **Mo.C4.4** [StefaniAi1] Flexible hollow core waveguides for THz applications and conformal sensing (Invited20 min)
*Alessio Stefani, Alessandro Tuniz, Ivan D. Rukhlenko, Maryanne C.J. Large, Simon C. Fleming*

**Aula 9 - SWP, Monday July 15**

**14.20-15.40 Mo.C5 - SWP 2 biosensors, Chair: Francesco Dell'Olio**

14.20 **Mo.C5.1** [ZalevskyZi2] Fiber based photonic sensor for sensing of vital bio-signs and of glucose concentration in blood stream as well as for its usage in smart building related applications (Invited20 min)
*Jonathan Philosof, Deep Pal, Aviya Bennett, Yevgeny Beiderman, Sergey Agdarov, Yafim Beiderman and Zeev Zalevsky*

14.40 **Mo.C5.2** [TossiDi1] Enhanced-backscattering optical fibers for inline interferometers: applications to biosensing (Invited20 min)
*Daniele Tosi, Wilfried Blanc, Aliya Bekmurzayeva, Marzhan Nurlankyzy, Albina Abdossova, Sabira Seipetdenova, Kuanysh Seitkamal*

15.00 **Mo.C5.3** [GiannettiAi1] Molecular switches suitably designed for optical biosensing (Invited20 min)
*Ambra Giannetti*

15.20 **Mo.C5.4** [MarkosCi1] Gas-filled Hollow-core Fiber Lasers and Advanced Optoelectronic Neural Interfaces for the Brain (Invited20 min)
*Christos Markos, Yazhou Wang and Marcello Meneghetti*

**Aula 11 - D-Photon, Monday July 15**

**14.00-15.55 Mo.C6 - Qphot 2, Chairlady: Roberta Ramponi**

14.00 **Mo.C6.1** [deCegliaDi1] Analog signal processing with nonlinear nonlocal flat optics (Invited20 min)
*Domenico de Ceglia and Costantino De Angelis*

14.20 **Mo.C6.2** [ElsaesserWi1] Unpolarized light: Poincaré sphere engineering - From natural light via quantum optics to applications (Invited20 min)
*Wolfgang Elsäßer, Florian Kroh and Markus Rosskopf*

14.40 **Mo.C6.3** [PetracekJi1] Photonic waveguides with bound states in the continuum (Invited20 min)
*Jiří Petráček, Jiří Čtyroký, Vladimír Kuzmiak, and Ivan Richter*

15.00 **Mo.C6.4** [RottwittKi1] Detrimental effects in four wave mixing (Invited20 min)
*Karsten Rottwitt, Thjalfe Ulvenberg, Lars S. Rishøj, Jacob G. Koefoed, and Lars Grüner-Nielsen*

15.20 **Mo.C6.5** [TaheriniyaSi1] Exploring novel photonic platforms for quantum computing through Si ion implantation (Invited20 min)
*Shabnam Taheriniya, Akhil Varri, Seongmin Jo, Francesco Lenzini, Wolfram Pernice*

15.40 **Mo.C6.6** [CaloCr1] Buried Heterostructure InAs/InP Quantum Dash Lasers at 1.3 µm (15 min)
*Cosimo Calò, Daniel Micha, Nicolas Vaissière, Florence Martin, Gustavo Afonso de Castro, Célia Cruz, Igor Mijovic, Karim Mekhazni, Alexandre Shen, Frédéric Pommereau, Olivier Delorme and Arnaud Wilk*

**Aula 13 - materials&devices, Monday July 15**

**14.00-15.40 Mo.C7 - PICAW 1, Chair: António Teixeira**

14.00 **Mo.C7.1** [NazabalVi1] Rare earth doped chalcogenide waveguide for mid-IR luminescence (Invited20 min)
*V. Nazabal, T. Ghandawi, F. Starecki, A. Hammouti, S. Meziani, A. Benardais, R. Chahal, J. Gutwirth, J. Lemaitre, C. Boussard, Y. Dumeige, P. Němec, J. Charrier, L. Bodiou*

14.20 **Mo.C7.2** [MorthierGi1] Heterogeneously integrated laser diodes that are efficient and insensitive to external feedback (Invited20 min)
*G. Morthier, Y. Xue, G. Roelkens*

14.40 **Mo.C7.3** [SuarezIi1] Tin perovskites vertical cavity lasers (Invited20 min)
*Hamid Pashaei Adl, Jesús Sánchez-Díaz, Giovanni Vescio, Albert Cirera, Blas Garrido, Felipe Andres Vinocour Pacheco, Wiktor Żuraw, Łukasz Przypis, Senol Öz, Iván Mora-Seró, Juan P. Martínez-Pastor and Isaac Suárez*

15.00 **Mo.C7.4** [KintakaKi1] Optically Pumped VECSEL Using Cavity-Resonator-Integrated Guided-Mode Resonance Mirror (Invited20 min)
*Kenji Kintaka, Akari Watanabe, Keisuke Ozawa, Junichi Inoue, and Shogo Ura*

15.20 **Mo.C7.5** [PierscinskiKi1] Quantum Cascade Laser: key component enabling mid-IR photonics (Invited20 min)
*Kamil Pierściński, Dorota Pierścińska, Artur Broda, Katarzyna Pieniak, Dominika Niewczas, Agata Krząstek, Jan Muszalski, Krzysztof Chmielewski, Maciej Bugajski*

**posters & DEMOs area, Monday July 15**

**14.00 - 16.00 Mo.C8 - DEMO 1, Chairs: Pol González, Francesco Paolucci, Luis Velasco**

**Mo.C8.1** [HernandezCr1] Experimental Validation of an Efficient DRL-based Routing and Spectrum Assignment for Optical Network Automation
*Carlos Hernández-Chulde, Ramon Casellas, Ricardo Martínez, Ricard Vilalta and Raul Muñoz*

**Mo.C8.2** [JanardhananSr1] Improving Network Sovereignty - A minimal cut set approach
*Shakthivelu Janardhanan, Yousuf Moiz Ali, Ritanshi Agarwal, Carmen Mas-Machuca*

**Mo.C8.3** [RahimiHr1] Enabling Cloud AR/VR Gaming Services by an Open-Source and Standards-Based Network-as-a-Service Platform for Control and Management of Optical Networks
*Hesam Rahimi, Lluis Gifre, Ricard Vilalta, Raul Muñoz, Henry Yu, Yanpeng Wan, Ruilin Cai, Yixiao Chen, Hao Li, Haoyu Feng, Christopher Janz*

**Mo.C8.4** [GuaitoliniMr1] Virtual Try-On Application leveraging RoCE in Low-latency Edge Computing Networks
*Michelangelo Guaitolini, Abdul H. Khan, Emilie Le Rouzic, Francesco Paolucci, Filippo Cugini*

**Mo.C8.5** [PapagianniCd1] In-network Control for Flow Steering
*A. Dimoglis, F. Alhamed, A. Dalgkitsis, A. Sgambelluri, F. Paolucci, C. Papagianni, P. Grosso*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Mo.D - Monday evening parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 1 - networks, Monday July 15**

**15.30-17.50 Mo.D1 - 6GNeO, Chair: Luis Velasco**

15.30 **Mo.D1.1** [BarzegarSi1] Autonomous Flow Routing Based on Deep Reinforcement Learning (Invited20 min)
*S. Barzegar, H. Shakespear-Miles, M. Ruiz, and L. Velasco*

15.50 **Mo.D1.2** [GonzalezPi1] Deployment of Multi-Agent System Pipelines for Near-Real-Time Operation of 6G Network Services (Invited20 min)
*Pol González, Sima Barzegar, Marc Ruiz, and Luis Velasco*

16.10 **Mo.D1.3** [ShakespearMilesHi1] Distributed Network Control for QoS Assurance in Multi-Domain Networks (Invited20 min)
*H. Shakespear-Miles, S. Barzegar, M. Ruiz, and L. Velasco*

16.30 **Mo.D1.4** [VelascoLi1] Towards Zero-Touch Optical Multiband Networking with the OCATA Optical Time Domain Digital Twin (Invited20 min)
*Prasunika Khare, Sadegh Ghasrizadeh, Mariano Devigili, Marc Ruiz, and Luis Velasco*

16.50 **Mo.D1.5** [TroiaSi2] Service Function Chain Resource Allocation and Offloading in Constrained Edge-Cloud Optical Networks (Invited20 min)
*Jean Pierre Asdikian, Daniele Gjeka, Albert Pagès, Sebastian Troia, Guido Maier, Salvatore Spadaro*

17.10 **Mo.D1.6** [RuizMi1] Smart Operation of 6G RAN supported by Autonomous Transport Networks (Invited20 min)
*Shaoxuan Wang, Marc Ruiz, and Luis Velasco*

17.30 **Mo.D1.7** [BeyranvandHi1] Optimizing Resource Allocation in Filterless Elastic Optical Networks over C+L Band: QoT-Aware Approach (Invited20 min)
*Sadegh Ghasrizadeh, Farhad Arpanaei, Luis Velasco, and Hamzeh Beyranvand*

**Aula 3 - access, Monday July 15**

**16.00-17.20 Mo.D2 - CTS, Chairlady: Kira Kastell**

16.00 **Mo.D2.1** [KastellKi1] Framework for time-varying DoA estimation and beamforming against radio jamming in V2X applications (Invited20 min)
*Daniel V. de Lima, Antonio S. da Silva, João Paulo J. da Costa, Giovanni A. Santos, Kira Kastell, Auzuir R. de Alexandria, and Melissa B. da Conceição*

16.20 **Mo.D2.2** [VilaltaRi1] Network Extensions to Support Robust Secured and Efficient Connectivity Services for V2X Scenario (Invited20 min)
*A. Abishek, R. Vilalta, Ll. Gifre, P. Alemany, C. Manso, R. Casellas, R. Martínez, R. Muñoz*

16.40 **Mo.D2.3** [CasademontJi1] Real-time responsive Physical and Digital Infrastructure for CCAM-enabled Traffic Management of cross-border highways (Invited20 min)
*Jordi Casademont, Jordi Marias-i-Parella, Harilaos Vasiliadis, David Porcuna, Jacint Castells, Joseph Kokolo, William Diego, Ignacio López, Aristarco Tomas, Lazaros Gkatzikis*

17.00 **Mo.D2.4** [MelloDi1] Field Trial of an ML-Assisted Phase-Sensitive OTDR for Traffic Monitoring in Smart Cities (Invited20 min)
*Robson A. Colares, Evandro Conforti, Leticia Rittner and Darli A. A. Mello*

**Aula 5 - systems, Monday July 15**

**16.00-18.00 Mo.D3 - Qcomms 2, Chair: Roberto Morandotti**

16.00 **Mo.D3.1** [IqbalMi1] Continuous Variable Quantum Key Distribution Coexisting with Classical Channels (Invited20 min)
*Masab Iqbal, Michela Svaluto Moreolo, Arturo Villegas, Laia Nadal, Raul Muñoz*

16.20 **Mo.D3.2** [SarmientoSi1] Phase Noise Reduction in Continuous-Variable Quantum Key Distribution Using Digital Filtering (Invited20 min)
*S. Sarmiento, E. Llanos, P. Adillon, J. Tabares, J. A. Lázaro, and S. Etcheverry*

16.40 **Mo.D3.3** [SvalutoMoreoloMi1] On the Adoption of Continuous-Variable QKD in Optical Networks (Invited20 min)
*Michela Svaluto Moreolo, Masab Iqbal, Arturo Villegas, Laia Nadal, Raul Muñoz*

17.00 **Mo.D3.4** [UdvaryEi1] Investigation of Spontaneous Raman Scattering in Combined Classical and Quantum Communication Networks(Invited20 min)
*Eszter Udvary, Flóra Kárpát*

17.20 **Mo.D3.5** [AchleitnerMi1] Optimizing Quantum Communication: A comparative analysis of InGaAs SPADs and SNSPDs in entanglement-based Quantum communications (Invited20 min)
*Martin Achleitner, Mariana F. Ramos, Alessandro Trenti and Hannes Hübel*

17.40 **Mo.D3.6** [SadotDi1] Securing the Speed: Harvest-Immune Photonic Layer Security in DCI and Metro Networks (Invited20 min)
*Dan Sadot, Eyal Wohlgemuth, Ido Attia, Ohad Balasiano, Isaak Jonas, Elimelech Keller, and Hamutal Shalom*

**Aula 7 - fibres, Monday July 15**

**15.40-16.55 Mo.D4 - MOF 3: Properties of hollow core fibers, Chair: Walter Belardi**

15.40 **Mo.D4.1** [AmezcuaCorreaRi1] High energy laser transmission in hollow core fibers (Invited20 min)
*Rodrigo Amezcua Correa*

16.00 **Mo.D4.2** [YerolatsitisSi1] Controlling the transmission bandwidth of anti-resonant hollow-core fibers (Invited20 min)
*S. Yerolatsitis, J. Keohane, S. Vinta, R. Mears, K. Harrington, R. J. A. Francis-Jones, K. Kalli, K. Rusimova*

16.20 **Mo.D4.3** [YuFi1] Tailoring modal properties of photonic-bandgap hollow-core fibers (Invited20 min)
*Chaochao Shen, Fei Yu and Jonathan Knight*

16.40 **Mo.D4.4** [MelliFr1] 2D+1 and 3D Simulation Methods for Hollow Core Fibers Non-Idealities Analysis (15 min)
*Federico Melli, Kostiantyn Vasko, Lorenzo Rosa, Fetah Benabid, Luca Vincetti*

**Aula 9 - SWP, Monday July 15**

**16.00-18.00 Mo.D5 - SWP 3 metamaterials 1, Chair: Radu Malureanu**

16.00 **Mo.D5.1** [BrunettiGi1] Versatile Metasurfaces for Liquid Biopsy Applications (Invited20 min)
*Giuseppe Brunetti, Carlotta Panciera, Caterina Ciminelli*

16.20 **Mo.D5.2** [AndreaniLCi1] Optical chirality in metasurfaces empowered by bound states in a continuum (Invited20 min)
*Lucio Claudio Andreani, Luca Zagaglia, S. Zanotti, M. Liscidini, D. Gerace, M. Minkov*

16.40 **Mo.D5.3** [ChebenPi1] Recent advances in metamaterial silicon photonic devices and Huygens’ metawaveguides (Invited20 min)
*P. Cheben, J.H. Schmid, J. Zhang, M. Saad Bin-Alam, A. F. Hinestrosa, W. Fraser, R. Korček, J.M. Luque-González, C.P. Armenta, A. Sánchez-Postigo, A. Ortega-Moñux, J. G. Wangüemert-Pérez, . Molina-Fernández, R. Halir, P. Ginel-Moreno, D. Benedikovič, M. Dado, S. Khajavi, W. N. Ye, Z. Mokeddem, D. Melati, C. Alonso-Ramos, D. González-Andrade, L. Vivien, D. Sirmaci, I. Staude, D.-X. Xu, Y. Grinberg, S. Janz, S. Wang, M. Vachon, R. Cheriton, R. Fernández de Cabo, A. V. Velasco, C. Naraine, J. Bradley and A. Knights*

17.00 **Mo.D5.4** [CojocaruCi1] Tailoring gold plasmonic metasurfaces for efficient harmonic generation (Invited20 min)
*S. Mukhopadhyay, C. Cojocaru, M. A. Vincenti, K. Hallman, A. Mihi, M. Scalora, and J. Trull*

17.20 **Mo.D5.5** [ScaloraMi1] Hydrodynamic-Maxwell approach to light-matter interactions at the nanoscale: High Harmonic generation in Silicon (Invited20 min)
*M. Scalora, K. Hallman, S. Mukhopadhyay, J. Wallace, S. Stengel, M. Ferrera, M.A. Vincenti, D. de Ceglia, C. Cojocaru, J. Trull*

17.40 **Mo.D5.6** [DellOlioFi1] Strongly resonant all-dielectric metasurfaces: emerging applications in telecom and life sciences (Invited20 min)
*F. Dell’Olio*

**Aula 11 - D-Photon, Monday July 15**

**16.10-17.45 Mo.D6 - DCN, Chair: Moshe Zukerman**

16.10 **Mo.D6.1** [OkiEi1] Toward Increasing Switching Capacity of Twisted and Folded Clos Network Guaranteeing Admissible Blocking Probability (Invited20 min)
*Eiji Oki, Haruto Taka, and Takeru Inoue*

16.30 **Mo.D6.2** [ChungYi1] Unamplified 220-Gb/s × 20 km C-band Transmission using Simplified Heterodyne Detection System (Invited20 min)
*B. G. Kim and Y. C. Chung*

16.50 **Mo.D6.3** [PachnickeSi1] Ring-Cascaded Sequential Micro-Ring Resonators Array as a Photonic Reservoir for Signal Equalization in Intra-Data Center Networks (Invited20 min)
*Mohammad Seifi Laleh, Sebastian Kühl, Silas Oettinghaus, Annika Dochhan, Stephan Pachnicke*

17.10 **Mo.D6.4** C[astoldiPi1] Edge Orchestration Framework for AI-assisted Link Failure Forecasting and Recovery (Invited20 min)
*Piero Castoldi, Domenico Uomo, Andrea Sgambelluri, Filippo Cugini, Francesco Paolucci*

17.30 **Mo.D6.5** [WettlinTr1] Analysis of Four-Wave Mixing Penalties in 800G-LR4 Optical Links (15 min)
*Talha Rahman, Youxi Lin, Tom Wettlin, Nebojsa Stojanovic, Stefano Calabrò, Maxim Kuschnerov*

**Aula 13 - materials&devices, Monday July 15**

**16.00-17.40 Mo.D7 - PICAW 2, Chair: Geert Morthier**

16.00 **Mo.D7.1** [JamshidiKi1] Characterization of Free Carrier Nonlinearities in Silicon-on-Insulator Microring Resonators (Invited20 min)
*Menglong He, Hrishikesh Vithalani, Mircea Catuneanu, Abdou Shetewy, Kambiz Jamshidi*

16.20 **Mo.D7.2** [PorziCi1] Recent Progresses in Silicon Waveguide Bragg Grating Filters (Invited20 min)
*Claudio Porzi, Manuel Reza, Marc Sorel, Antonella Bogoni*

16.40 **Mo.D7.3** [LuqueGonzalezJMi1] Tailoring light spectrum in silicon photonics chips with high-performance optical filter (Invited20 min)
*José Manuel Luque González, Alejandro Fernández Hinestrosa, Alejandro Sánchez-Sánchez, Carlos Pérez Armenta, Alejandro Ortega Moñux, Robert Halir, J. Gonzalo Wangüemert-Pérez, Pavel Cheben, Jens H. Schmid, Shurui Wang, Winnie N. Ye, Íñigo Molina-Fernández*

17.00 **Mo.D7.4** [MendozaCastroJHi1] Photonic Integrated Circuit Assisted Photothermal Spectroscopy of liquids and Gases (Invited20 min)
*Giovanna Ricchiuti, Anton Walsh, Jesús Hernán Mendoza-Castro, Artem S. Vorobev, Maria Kotlyar, Simone Iadanza, Marco Grande, Bernhard Lendl and Liam O’Faolain*

17.20 **Mo.D7.5** [AlexandropoulosDi1] Laser written optical Physical Unclonable Functions: a route to commercialization (Invited20 min)
*Dimitris Alexandropoulos, Christos Tselios, Simone Mazzucato, Panagiotis Rizomiliotis, Konstantinos Moustakas and Thomas Kamalakis*

**DAY 2 - Tuesday July 16**

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

**Aula 1 - networks, Tuesday July 16**

**8.30 - 9.50 Tu.A1 - ICTON 1, Chairlady: Laia Nadal**

8.30 **Tu.A1.1** [WabnitzSi1] Optical Entropy Maximization Leads to Spatial Beam Self-Cleaning in Multimode GRIN Fibers (Invited20 min)
*Fabio Mangini, Mario Ferraro, Wasyhun A. Gemechu, Yifan Sun, Vincent Couderc, Stefan Wabnitz*

8.50 **Tu.A1.2** [BugarIi1] Cross-Switching of C-Band Pulses in Dual-Core Soft Glass Fibers with Different Measure of Asymmetry (Invited20 min)
*Mattia Longobucco, Sarah Pulikottil Alex, Edgar Kaksis, Dariusz Pysz, František Uherek, Ryszard Buczyński, Andrius Baltuška, Audrius Pugžlys, Ignác Bugár*

9.10 **Tu.A1.3** [BoscoloSi1] Digital Signal Processing for Fibre-Optical Parametrically Amplified Transmission Links (Invited20 min)
*Long H. Nguyen, Sonia Boscolo, and Stylianos Sygletos*

9.30 **Tu.A1.4** [BoteyMi1] Asymmetric mode-coupling in Antisymmetric non-Hermitian waveguides (Invited20 min)
*M N Akhter, R Herrero, K Staliunas, M Botey*

**Aula 3 - access, Tuesday July 16**

**8.30 - 9.50 Tu.A2 - MWP 1, Chair: Robert Minasian**

8.30 **Tu.A2.1** [AnandarajahPi1] Design of an RF Synthesizer using an Optical Frequency Comb and Active De-multiplexer (Invited20 min)
*Minghao Wei, Liam Lawlor, Chris McGuinness, Gaurav Jain, Frank Smyth, Aleksandra Kaszubowska-Anandarajah, and Prince M. Anandarajah*

8.50 **Tu.A2.2** [KetzakiDi1] Multi-beam Optical Beamformer PICs for LiDAR and RADAR Applications (Invited20 min)
*Dimitra Ketzaki, Ronis Maximidis, Stephanos Kovaios, Apostolos Tsakiridis, Miltiadis Moralis-Pegios, Nikolaos Pleros*

9.10 **Tu.A2.3** [GasullaIi1] Tunable microwave Hilbert transformer based on a dispersion-engineered few-mode fiber (Invited20 min)
*Elham Nazemosadat and Ivana Gasulla*

9.30 Tu.A2.4 [RoeloffzenCi1] Integrated microwave photonic functionalities on a hybrid integrated InP-Si3N4 PIC platform (Invited20 min)
*Chris Roeloffzen, Paul van Dijk, Peter Maat, Ilka Visscher, Marcel Hoekman, Lennart Wevers, Edwin Klein, Roelof Bernardus Timens, Charoula Mitsolidou, Ahmad Mohammad, Robert Grootjans, Furkan Şahin, Roel Botter, Carlos Ruiz Pineda, Rick Heuvink, Ronald Dekker, Dong Liang, Sami Musa, Luis Gonzalez-Guerrero, Guillermo Carpintero*

**Aula 5 - systems, Tuesday July 16**

**8.30 - 10.10 Tu.A3 - Qcomms 3, Chair: Nelson J. Muga**

8.30 **Tu.A3.1** [TafurMonroyIi1] Quantum secure communication using hybrid post-quantum cryptography and quantum key distribution (Invited20 min)
*Nick Aquina, Simon Rommel, Idelfonso Tafur Monroy*

8.50 **Tu.A3.2** [VegasOlmosJJi1] The zero-tax data center: a use case through quantum resilient communications (Invited20 min)
*Daniel Lawo, Michal Podleś, Raphael Frantz, Abraham Cano Aguilera, Dimosthenis Iliadis-Apostolidis, Jeronimo Sanchez, Sokol Kosta, Idelfonso Tafur Monroy, José Luis Ismaña, J.J. Vegas Olmos*

9.10 **Tu.A3.3** [BajoniDi1] A source of hyperentangled photon pairs with rate exceeding Gpair/s (Invited20 min)
*Daniele Bajoni*

9.30 **Tu.A3.4** [KolenderskiPi1] Applications of entangled photon pair for satellite quantum communication links (Invited20 min)
*Piotr Kolenderski*

9.50 **Tu.A3.5** [SilvaNi1] Impact of Limited Classical Channel Bandwidth on the Secret Key Rate of a CV-QKD System (Invited20 min)
*Nuno A. Silva, Margarida Almeida, Nelson J. Muga, Armando N. Pinto*

**Aula 7 - fibres, Tuesday July 16**

**8.30 - 9.50 Tu.A4 - MOF 4: Nonlinear and quantum phenomena in Microstructured Optical Fibers, Chair: Peter Mosley**

8.30 **Tu.A4.1** [NovoaDi1] Harnessing Light Quanta with Fibre-Based Molecular Modulators (Invited20 min)
*David Novoa*

8.50 **Tu.A4.2** [MosleyPi1] Microstructured fibre technologies for quantum networks (Invited20 min)
*Peter J. Mosley*

9.10 **Tu.A4.3** [RosaLi1] Hollow-core fibers as quantum photon source platform (Invited20 min)
*Lorenzo Rosa*

9.30 **Tu.A4.4** [LaegsgaardJi1] Power scaling of normal-dispersion continuum generation: Merging fiber and light structuring (Invited20 min)
*Jesper Lægsgaard and Federica Poli*

**9.50-10.05 Tu.A4 - MOF 5: Postdeadline session, Chair: Peter Mosley**

9.50 **Tu.A4.5** [DavisAr1] Tunable near-degenerate frequency conversion using doped photonic crystal fibre (15 min)
*Leah R Murphy, Mateusz J Olszewski, Petros Androvitsaneas, Will AM Smith, Anthony Bennett, Peter J Mosley, and Alex O C Davis*

**Aula 9 - SWP, Tuesday July 16**

**8.30 - 10.10 Tu.A5 - SWP 4 sensors, Chair: Trevor M Benson**

8.30 **Tu.A5.1** [GoussarovAi1] Experience on Fibre Optics Current Sensor operation in the JET harsh environment for the synthetic diagnostic validation (Invited20 min)
*Andrei Gusarov, Perry Beaumont, Prasad Dandu, and Marc Wuilpart*

8.50 **Tu.A5.2** [BeresPawlikEi1] Topological and networking aspects of optical fiber sensor networks based on FBGs (Invited20 min)
*Elżbieta Bereś-Pawlik, Jacek Palmowski , Sendy Phang, Alicja Anuszkiewicz, Tomasz Osuch, Yaping Zhang, Trevor Benson*

9.10 **Tu.A5.3** [WuilpartMi1] Plasma diagnosis for the ITER fusion reactor using a polarimetric fibre sensor (Invited20 min)
*Marc Wuilpart, Sung-Moon Kim, Alessandro Danisi, Prasad Dandu, and Andrei Gusarov*

9.30 **Tu.A5.4** [GoncharenkoIi1] Detectors of ionizing radiation on the base of slot waveguides filled with hyperlinked fluoropolymer (Invited20 min)
*I.A. Goncharenko, A.V. Il'yushonok, M. Marciniak, V.N. Reabtsev*

9.50 **Tu.A5.5** [MenduniGi1] Natural gas composition analysis with Quartz Tuning Fork-based spectroscopic techniques (Invited20 min)
*Giansergio Menduni, Andrea Zifarelli, Angelo Sampaolo, Marilena Giglio, Pietro Patimisco, Vincenzo Spagnolo*

**Aula 11 - D-Photon, Tuesday July 16**

**8.30 - 10.25 Tu.A6 - PNPA 1, Chair: Giancarlo C. Righini**

8.30 **Tu.A6.1** [SumetskyMi1] Complete inelastic transparency of time-modulated resonant photonic circuits (Invited20 min)
*M. Sumetsky*

8.50 **Tu.A6.2** [BarlandSi1] Photon thermalization in semiconductor media: from lasers to Bose Einstein condensates (Invited20 min)
*Stephane Barland*

9.10 **Tu.A6.3** [CalvezSi1] Visible-light modulators and power limiters based on spin crossover material thin films (Invited20 min)
*Stéphane Calvez, Lijun Zhang, Jesukpego Anorld Capo Chichi, Yuteng Zhang, Lionel Salmon, Gábor Molnár, Karl Ridier, and Azzedine Bousseksou*

9.30 **Tu.A6.4** [CaudanoYi1] Probing Goos-Hänchen shifts in surface nonlinear optics by quantum weak measurements (Invited20 min)
*Julien Bouchat, Julien Fagnart, and Yves Caudano*

9.50 **Tu.A6.5** [SanchezFi1] Self-starting all-fibered Erbium-doped Mamyshev oscillator (Invited20 min)
*Oumaima Ougrige, Florent Bessin, Hervé Leblond, Charles Ciret, and François Sanchez*

10.10 **Tu.A6.6** [FinotCr1] Optical Waveform Sculpturing of a Frequency Kerr Comb from a Brillouin Laser Cavity with Bichromatic Pumping (15 min)
*Anastasiia Sheveleva, Moise Deroh, Bertrand Kibler, Christophe Finot, Erwan Lucas*

**Aula 13 - materials&devices, Tuesday July 16**

**8.30 - 9.30 Tu.A7 - PICAW 3, Chair: Alexandre Pohl**

8.30 **Tu.A7.1** [SorbelloGi1] Physics-based design of integrated optics accelerating structures (Invited20 min)
*R. Palmeri, D. Guarnera, G. S. Mauro, A. Locatelli, A. Bacci, G. Torrisi, N. Salerno, S. C. Pavone, and G. Sorbello*

8.50 **Tu.A7.2** [XuRi1] Performance Optimization of Photonic Accelerators in Neuromorphic Computing via Structure Trimming (Invited20 min)
*Rongyang Xu, Shabnam Taheriniya, Akhil Varri, Frank Brückerhoff-Plückelmann, and Wolfram Pernice*

9.10 **Tu.A7.3** [RamirezJMi1] Heterogeneously integrated III-V/Si optical sources: Towards low cost, compact and efficient transceivers (Invited20 min)
*Amin Souleiman, Delphine Néel, Claire Besancon, Nicolas Vaissiere, Stéphane Malhouitre, Valentin Ramez, Karim Hassan, Jean Decobert, David Bitauld and Joan Manel Ramirez*

**posters & DEMOs area, Tuesday July 16**

 **8.30 - 10.30 Tu.A8 - DEMO 2, Chairs: Pol González, Francesco Paolucci, Luis Velasco**

**Tu.A8.1** [VelascoLd2] Experimental Demonstration of Optical Encryption Using Quantum Keys: Two Scenarios
*Morteza Ahmadian, Jaime Buruaga, Ruben Mendez, Juan P. Brito, Antonio Pastor, Jose M. Rivas, Jaume Comellas, Marc Ruiz, Vicente Martin, and Luis Velasco*

**Tu.A8.2** [RuizMr1] Demonstration of Integrated Control Plane for Service Flow Provisioning in Time Sensitive Networks
*M. Ruiz, A. Pagès, F. J. Moreno, A. Buendía, F. Agraz, S. Spadaro, and L. Velasco*

**Tu.A8.3** [VelascoLd1] Deployment of Genuine Multi-Agent Pipelines for Near-Real-Time Control of 6G Network Services
*P. González, M. Angoustures, A. Zahir, S. Barzegar, M. Ruiz, M. Groshev, V. Lefebvre, and L. Velasco*

**Tu.A8.4** [SgambelluriAr1] Augmented Reality App with AI-based Pervasive Latency Monitoring of RAN and Programmable Metro Packet-Optical Networks
*F. Alhamed, M. Guaitolini, P. González, R. Berozashvili, L. Ismail, H. Shakespear-Miles, S. Barzegar, L. Velasco, M. Ruiz, J.J. Olmos Vegas, A. Sgambelluri and F. Paolucci*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Tu.B - Tuesday noon parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 1 - networks, Tuesday July 16**

**10.20-12.20 Tu.B1 - MALOC 1, Chair: Carlos Castro**

10.20 **Tu.B1.1** [HirotaYi1] Machine Learning-based Spectrum Resource Assignment and End-to-End Path Reconfiguration for Flexible Optical Networks (Invited20 min)
*Yusuke Hirota, Yuta Goto, Hideaki Furukawa*

10.40 **Tu.B1.2** [TroiaSi1] Automated Data Ingestion Framework for Enhanced Control and Maintenance of Optical Networks (Invited20 min)
*Memedhe Ibrahimi, Keerthikumaran Selvamuthukumaran, Sebastian Troìa, Massimo Tornatore, Francesco Musumeci*

11.00 **Tu.B1.3** [ZibarDi1] Machine Learning Enabled Directly Modulated Lasers (Invited20 min)
*Sergio Hernandez, Christophe Peucheret, Francesco Da Ros, Darko Zibar*

11.20 **Tu.B1.4** [PellegriniGi2] Deep convolutional autoencoders for image reconstruction from incomplete Fourier amplitude measurements (Invited20 min)
*G. Pellegrini, J. Bertolotti*

11.40 **Tu.B1.5** [FinotCi1] Machine learning for ultrafast nonlinear fibre photonics (Invited20 min)
*Christophe Finot, Sonia Boscolo, Junsong Peng, Andrei Ermolaev, Anastasiia Sheveleva, John. M. Dudley*

12.00 **Tu.B1.6** [PanayiotouTi1] Multi-Step Traffic Prediction for Multi-Period Planning in Optical Networks (Invited20 min)
*Hafsa Maryam, Tania Panayiotou, Georgios Ellinas*

**Aula 3 - access, Tuesday July 16**

**10.40-12.15 Tu.B2 - MWP 2, Chairlady: Eszter Udvary**

10.40 **Tu.B2.1** [MinasianRi1] High-resolution integrated microwave photonics-based sensors (Invited20 min)
*R. A. Minasian and X. Yi*

11.00 **Tu.B2.2** [GhelfiPi1] Photonics for satellite radars: the SPACEBEAM project (Invited20 min)
*L. Rinaldi, F. Camponeschi, F. Scotti, V. Gemmato, A. Bogoni and P. Ghelfi*

11.20 **Tu.B2.3** [ZarzueloAi1] Photonic Integrated Local Oscillator Signal Generation for Satellite Communications (Invited20 min)
*Alberto Zarzuelo, Jessica César, Robinson Guzmán, Luis González, José Manuel Delgado Mendinueta, Charoula Mitsolidou, Roelof B. Timens, Paul van Dijk, Chris Roeloffzen, Fernando Martín, and Guillermo Carpintero*

11.40 **Tu.B2.4** [PonziniFi1] mm-wave Distributed MIMO Radio-over-Fiber Communication Architecture Using Sigma-Delta Modulation (Invited20 min)
*Husileng Bao, Filippo Ponzini, Luca Rinaldi, Christian Fager*

12.00 **Tu.B2.5** [WaseemMr1] Complexity-Reduced Estimation of the Transmitter Parameters in Radio Over PMMA Graded-Index POF (15 min)
*Muhammad Waseem, Alicia López, Pedro Luis Carro, María Ángeles Losada*

**Aula 5 - systems, Tuesday July 16**

**11.20-13.00 Tu.B3 - QUANCOM 1, Chairs: Alberto Gatto and Giampiero Pepe**

11:20 **Tu.B3.1** Welcome & Introduction
*Alberto Gatto, Politecnico di Milano and Giampiero Pepe, Università degli Studi di Napoli Federico II*

11:25 **Tu.B3.2** QUANCOM project description
*Giampiero Pepe, Università degli Studi di Napoli Federico II*

11:30 **Tu.B3.3** [FerrariMi1] Flexible Blind Information Reconciliation for QKD based on Rateless Protograph LDPC codes
*Marco Ferrari, Alberto Tarable, Rudi P. Paganelli*

11:50 **Tu.B3.4** [BruscinoCi1] Entanglement based Spontaneous Parametric Down Conversion sources for Quantum Key Distribution applications
*Ciro Bruscino, Matteo Di Giancamillo, Pasquale Ercolano, Mikkel Ejrnaes, Daniela Salvoni, Syed Muhammad Junaid Bukhari, Martina Peluso, Paolo Martelli, Loredana Parlato, Mario Martinelli, Giovanni Piero Pepe*

12:10 **Tu.B3.5** [SgobbaFi1] Quantum interferometry via temporal quantum erasing
*Fabrizio Sgobba, Andrea Andrisani, Deborah Katia Pallotti, Luigi Santamaria Amato*

12:35 **Tu.B3.6** [ZavattaAi2] Quantum communications for real-world use cases
*Alberto Zarzuelo, Jessica César, Robinson Guzmán, Luis González, José Manuel Delgado Mendinueta, Charoula Mitsolidou, Roelof B. Timens, Paul van Dijk, Chris Roeloffzen, Fernando Martín, and Guillermo Carpintero*

**Aula 7 - fibres, Tuesday July 16**

**10.40-12.20 Tu.B4 - MOF 6: Microstructured optical fiber devices, Chair: Pier Sazio**

10.40 **Tu.B4.1** [BigotLi1] Some Recent Advances on Few-Mode Fibers and Multicore Fibers for Space-Division Multiplexing (Invited20 min)
*Laurent Bigot, Maroun Bsaibes, Alex Chedid, Jean-Baptiste Trinel, Martin Deduytschaever, Marianne Bigot, Pierre Sillard, Esben Andresen, Yves Quiquempois*

11.00 **Tu.B4.2** [RicciardiAi1] Active fibers: integration of miniaturized optoelectronic devices on optical fibers (Invited20 min)
*Armando Ricciardi, Federica Piccirillo, Alberto Micco, Martino Giaquinto, Norbert Witz, Michael Zimmer, Michael Jetter, Simone Luca Portalupi, Andrea Cusano*

11.20 **Tu.B4.3** [SivankuttySi1] Ultra-thin endoscopes: two-photon imaging at the tip of a bare fiber with wavefront shaping (Invited20 min)
*Fatima El Moussawi, Matthias Hofer, Siddharth Sivankutty, Luca Genchi, Damien Labat, Andy Cassez, Geraud Bouwmans, Rosa Cossart, Olivier Vanvincq, Herve Rigneault, Esben Ravn Andresen*

11.40 **Tu.B4.4** [HonzatkoPi1] Acoustic vibrations sensitivity of negative curvature hollow core optical fibres (Invited20 min)
*Pavel Honzatko, Andrei Borodkin, Yauhen Baravets, Ondrej Moravec, Ondrej Podrazky, Ivo Barton, Ali Jasim*

12.00 **Tu.B4.5** [HuXi1] Temperature measurement utilizing tilted Bragg gratings in solution-filled specialty optical fiber (Invited20 min)
*Yang Liu, Hang Qu, Christophe Caucheteur, and Xuehao Hu*

**Aula 9 - SWP, Tuesday July 16**

**10.40-12.00 Tu.B5 - SWP 5 biosensors, Chairlady: Yaping Zhang**

10.40 **Tu.B5.1** [YuCYi1] Non-invasive Vital Signs Monitoring Based on Optical Fiber Mach-Zehnder Interferometer (Invited20 min)
*Yu Wang, Yaxi Yan, Weimin Lyu, Chao Lu, Lei Wei, and Changyuan Yu*

11.00 **Tu.B5.2** [CelajSi1] Semi-conductor nanocrystal emission within polymeric microcavities for whispering gallery modes observation (Invited20 min)
*Sergei Celaj, Charlie Kersuzan, Willy Daney de Marcillac, Justine Laurent Gulliver, Thomas Pons, Agnès Maître*

11.20 **Tu.B5.3** [GoudaMi1] Clustering and Classification of Fungal Cells and PMMA Microparticles: Unsupervised and Supervised Learning using K-Means, PCA, Logistic Regression and Spiking Neural Networks on Event-Based Cytometry Datasets (Invited20 min)
*Muhammed Gouda, Steve Abreu, and Peter Bienstman*

11.40 **Tu.B5.4** [IsmailTi1] Optical Screening System Using Biospeckle Imaging and Texture-Based Analysis for Breast Cancer Detection (Invited20 min)
*Doaa Youssef, Somia A.M. Soliman, Jala El-Azab, Tawfik Ismail*

**Aula 11 - D-Photon, Tuesday July 16**

**10.40-12.40 Tu.B6 - PNPA 2, Chair: Richard De La Rue**

10.40 **Tu.B6.1** [LiberaleCi1] Novel 3D-printed fiber-based devices with two-photon lithography (Invited20 min)
*Carlo Liberale*

11.00 **Tu.B6.2** [RaghunathanVi1] Two-dimensional Layered Material-Based Nonlinear Optical Upconverters (Invited20 min)
*Varun Raghunathan, Rabindra Biswas, and Jyothsna K.M*

11.20 **Tu.B6.3** [BoscoloSi2] Breathing Soliton Dynamics in Ultrafast Fibre Lasers (Invited20 min)
*Sonia Boscolo, Junsong Peng, Xiuqi Wu, Ying Zhang, Christophe Finot, and Heping Zeng*

11.40 **Tu.B6.4** [HuttunenMi1] Engineering properties of collective plasmonic–diffractive excitations via medium dispersion (Invited20 min)
*Mikko J. Huttunen, Jussi Kelavuori, Ali Panah pour*

12.00 **Tu.B6.5** [QuandtAi2] Frequency conversion to augment power conversion efficiency in photovoltaic devices (Invited20 min)
*Sandile Kumalo, Daniel Wamwangi, Alexander Quandt and Emily Aradi*

12.20 **Tu.B6.6** [AlonsoRamosCi1] Optical and optomechanical nonlinear interactions in silicon nanostructures (Invited20 min)
*P. Nuño Ruano, J. Zhang, D. González-Andrade, H. E. B. Ferhart, T. T. D. Dinh, D. Medina-Quiroz, S. Edmond, P. Cheben, D. Marris-Morini, E. Cassan, L. Vivien, N. D. Lanzillotti-Kimura and C. Alonso-Ramos*

**Aula 13 - materials&devices, Tuesday July 16**

**10.40-12.20 Tu.B7 - NAON, Chair: Sylwester Latkowski**

10.40 **Tu.B7.1** [GerkenMi1] Nanooptical Substrates for Resonance-Enhanced Gold Growth (Invited20 min)
*Jan Schardt, Moritz Paulsen, Martina Gerken*

11.00 **Tu.B7.2** [HeitzJi1] Nano-scale photonic ripples, dots, grids, and heterostructures on polymeric substrates produced by UV laser processing (Invited20 min)
*Johannes Heitz, Martin Kührer, Cristina Plamadeala, Gerda Buchberger*

11.20 **Tu.B7.3** [KildishevAi1] Optimal Poloidal Multipole Expansion Centres (Invited20 min)
*Alexander V. Kildishev, Karim Achouri, and Daria Smirnova*

11.40 **Tu.B7.4** [StefaniukTi1] Optical response of electric memristive systems (Invited20 min)
*Alexander Korneluk, Katarzyna Brańko, Tomasz Stefaniuk*

12.00 **Tu.B7.5** [KarsentyAi1] From Passive to Active: Towards Optical Communication with Reconfigured Nanoelectronics Devices (Invited20 min)
*Avi Karsenty*

**posters & DEMOs area, Tuesday July 16**

**10.20 - 10.40 Tu.P1 - MOF 7: Poster Session**

Tu.P1.1 Dakun WU: Nanosecond pulse delivery at 1064 nm in a multimode antiresonant hollow core fibre
*(paper not available)*

Tu.P1.2 Xinyue ZHU: High Power Single Frequency Fiber Gas Raman Lasers
*(paper not available)*

Tu.P1.3 Si CHEN: In-situ background-free Raman probe using double-cladding anti-resonant hollow-core fibers
*(paper not available)*

**12.20 - 13.00 MOF 7: Poster Session cntd.**

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Tu.C - Tuesday afternoon parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 1 - networks, Tuesday July 16**

**13.40-15.40 Tu.C1 - MOON 1, Chair: Andrea Fumagalli**

13.40 **Tu.C1.1** [CurriVi1] GNPy Experimental Validation in a C+L Multiband Optical Multiplex Section (Invited20 min)
*Andrea D’Amico, Vittorio Gatto, Antonino Nespola, Giacomo Borraccini, Yanchao Jiang, Pierluigi Poggiolini, Esther Le Rouzic, Arturo Mayoral Lopez de Lerma, Gert Grammel, Roberto Manzotti, Vittorio Curri*

14.00 **Tu.C1.2** [CasellasRi1] Multi-Domain Transparent Service Provisioning in Multi-Band Optical Networks (Invited20 min)
*Ramon Casellas, Enrique Fernández, Ricardo Martínez, Ricard Vilalta, Raül Muñoz, Antonio Buendia-López, Pablo Pavón-Marino*

14.20 **Tu.C1.3** [DuranRi1] Protection Methods Analysis in a Hybrid C/C+L Optical Network (Invited20 min)
*Soheil Hosseini, Ramón J. Durán Barroso, Ignacio de Miguel, Oscar González de Dios, Noemí Merayo, Juan Carlos Aguado, Patricia Fernández, Rubén M. Lorenzo, Evaristo J. Abril*

14.40 **Tu.C1.4** [HanikNi1] Challenges in Extending the Transmission Bandwidth of SSMFs into the S- C- and L-Bands (Invited20 min)
*Bensu Baran-Akin, Tasnad Kernetzky, Norbert Hanik*

15.00 **Tu.C1.5** [EiraAi1] Proactive Spectrum Assignment for Transient Mitigation in Multi-Band Networks (Invited20 min)
*António Eira, André Souza, João Pedro*

15.20 **Tu.C1.6** [PedroJi1] Techno-Economic Analysis of Wideband Transmission in Optical Transport Networks (Invited20 min)
*André Souza, Bruno Correia, Antonio Napoli, Vittorio Curri, Nelson Costa, João Pedro, João Pires*

**Aula 3 - access, Tuesday July 16**

**13.40-15.20 Tu.C2 - OSC/MWP, Chair: Luca Rinaldi**

13.40 **Tu.C2.1** [ChanVi1] Orchestrated Routing for Optical Satellite Networks (Invited20 min)
*Vincent W. S. Chan*

14.00 **Tu.C2.2** [CiminelliCi1] Reconfigurable Optical Beam Forming Network for Telecom Payloads (Invited20 min)
*Caterina Ciminelli, Nabarun Saha, Giuseppe Brunetti, Annarita di Toma, Mario N. Armenise*

14.20 **Tu.C2.3** [MateraFr1] Cross Domain Orchestration and Management of Optical Links in Terrestrial-Non Terrestrial Networks (15 min)
*F. Matera, P. Salvo, M. Settembre, N. Sambo, G. Cossu, E. Ciaramella. A. Rago, G. Piro, L. A. Grieco, S. Morosi*

14.35 **Tu.C2.4** [AbdellatifAr1] Optical Injection Locking Techniques for Performance Improvement in Analog mm-Wave Systems (15 min)
*Ahmed Abdellatif and Zoran Vujicic*

14.50 **Tu.C.25** [CarroPLr1] Experimental Single Carrier LORA-modulation performance in Analog Radio over SI-POF links for IoT applications (15 min)
*P. L. Carro, M.A. Losada, P. García-Dúcar, A. Valdovinos, J. de Mingo, J.A. Casao, A. López, J. Mateo*

15.05 **Tu.C.26** [MendezRr1] Photonic frequency conversion for the analog radio-over-fiber fronthaul (15 min)
*Rodrigo Méndez, Miquel Masanas, Josep Segarra, Vicent Sales, Víctor Polo, María C. Santos, Josep Prat*

**Aula 5 - systems, Tuesday July 16**

**14.00-15.40 Tu.C3 - QUANCOM 2, Chairs: Alberto Gatto and Giampiero Pepe**

14:00 **Tu.C3.1** [CicconettiCi1] Secure Computation Offloading with ETSI MEC+QKD
*Claudio Cicconetti, Marco Conti, Andrea Passarella*

14:25 **Tu.C3.2** [VirziSi1] INRiM solutions for QKD real-world network implementations
*Salvatore Virzì, Alice Meda, Cecilia Clivati, Gianluca Bertaina, Simone Donadello, Marco Gramegna, Ivo Pietro Degiovanni, Marco Genovese, Davide Calonico*

14:50 **Tu.C3.3** [GiorgettiAi1] Software-defined control of integrated QKD and classical optical networks
*N. Andriolli, E. Paolini, M. Brunero, P. Martelli, A. Gatto, M. Ferrari, A. Giorgetti*

15:15 **Tu.C3.4** [PaduanelliGi1] Quantum-assisted digital signature: a new service for future quantum-integrated optical networks
*Gennaro Paduanelli, Marco Ferrari, Alessio Giorgetti, Nicola Andriolli, Elisabetta Storelli, Antonino Cacicia, Rudi Paganelli, Alberto Tarable, Emilio Paolini, Giada Sajeva, Marco Brunero, Alessandro Gagliano, Paolo Martelli, Pietro Noviello, Giovanni Schmid, Alberto Gatto*

**Aula 7 - fibres, Tuesday July 16**

**13.40-15.20 Tu.C4 - Novel Glasses 1, Chair: Jan Mrázek**

13.40 **Tu.C4.1** [BaldaRi1] Near-infrared and upconversion emission of Tm3+ and Tm3+-Yb3+ codoped transparent oxyfluoride glass-ceramics (Invited20 min)
*M. Sedano, S. Babu, J. Fernández, A. Durán, M.J. Pascual, R. Balda*

14.00 **Tu.C4.2** [FerrariMaurizioi1] Glass Photonics: a brilliant successful story (Invited20 min)
*John Ballato, Wilfried Blanc, Maurizio Ferrari, Anna Lukowiak, Francesco Prudenzano, Giancarlo C. Righini*

14.20 **Tu.C4.3** [VigreuxCi1] Design of a hybrid optical component for the early detection of plant diseases (Invited20 min)
*Ali Houssein Aldrouby, Martin Khouri, Raphaël Escalier, Ryad Bendoula, Dominique Barry-Etienne, Ahmad Mehdi and Caroline Vigreux*

14.40 **Tu.C4.4** [FuerbachAi1] Femtosecond laser waveguide inscription in linear and nonlinear mid-infrared transparent glasses (Invited20 min)
*Alex Fuerbach, Thuy Trong Ha, Wajahat Hussain, Toney Fernandez*

15.00 **Tu.C4.5** [SazioPi1] Repurposing optical fibre technology for renewable energy (Invited20 min)
*Pier Sazio, Bruno Moog, Chris Craig, Dan Hewak, Matthew Potter, Daniel Stewart, Robert Raja and Mike Thomas*

**Aula 9 - SWP, Tuesday July 16**

**13.20-15.15 Tu.C5 - SWP 6 metamaterials 2, Chair: Giuseppe Brunetti**

13.20 **Tu.C5.1** [YiYSi1] Metasurface Lens With Artificial Focus Pattern (Invited20 min)
*Mao Ye, Vishva Ray, Yasha Yi*

13.40 **Tu.C5.2** [MartinOJFi1] Hybrid metasurfaces for light processing (Invited20 min)
*Debdatta Ray, Andrei Kiselev, Sergejs Boroviks, Olivier J.F. Martin*

14.00 **Tu.C5.3** [DOrazioAi1] Transparent Reflective Metasurfaces: from RIS to near-eye displays (Invited20 min)
*Giovanni Magno, Ilaria Marasco, and Antonella D’Orazio*

14.20 **Tu.C5.4** [MalureanuRi1] On the use of membrane metasurfaces for high-efficiency third harmonic generation (Invited20 min)
*Maxim Nikitin, Osamu Takayama, Radu Malureanu, Andrei Lavrinenko*

14.40 **Tu.C5.5** [VincentiAi1] Exploiting quasi-Bound States in the Continuum for Laser-Induced Selective Crystallization in Metasurfaces (Invited20 min)
*Marco Gandolfi, Maria Eugenia Serrano Flores, Jesse Frantz, Jason Myers, Robel Bekele, Jas Sanghera, Anthony Clabeau, Natalia Litchinister, and Maria Antonietta Vincenti*

15.00 **Tu.C5.6** [HattoriHTr1] Large Rabi splitting and Purcell factor in coupled Ag metamaterial cavity and MoS2 monolayer (15 min)
*Andergachew Mekonnen Berhe, A A Odebowale, Khalil As’ham, Haroldo T. Hattori, and Andrey E. Miroshnichenko*

**Aula 11 - D-Photon, Tuesday July 16**

**13.20-15.40 Tu.C6 - PNPA 3, Chair: Luigi Sirleto**

*13.20* ***Tu.C6.1*** *[PasquaziAi1] Interaction of Continuous Waves and Laser Cavity Solitons in Micro-Resonators: Enhancing Stability* (Invited20 min) *A. Pasquazi, A. Cutrona, V. Cecconi, P. H. Hanzard, M. Rowley, D. Das, A. Cooper, L. Peters, L. Olivieri, B. Wetzel, R. Morandotti, S. T. Chu, B. E. Little, D. J. Moss, J. S. Totero Gongora and M. Peccianti*

13.40 **Tu.C6.2** [GauthierLafayeOi1] CRIGFs : Spectral filters, but also modal filters and combiners (Invited20 min)
*A. Rouxel, A. Monmayrant, P. Dubreuil, S. Calvez and O. Gauthier-Lafaye*

14.00 **Tu.C6.3** [DumeigeYi1] GaP WGM microdisks for second order nonlinear optics (Invited20 min)
*Rasool Saleem-Urothodi, Pierre Guillemé, Julie Le Pouliquen, Tony Rohel, Rozenn Bernard, Laurent Bramerie, Christelle Velly, Alejandro Lorenzo-Ruiz, Alexandre Beck, Antoine Létoublon, Olivier De Sagazan, Charles Cornet, Yannick Dumeige, Yoan Léger*

14.20 **Tu.C6.4** [ColumboLi1] Solitary Structures in ring Quantum Cascade Lasers (Invited20 min)
*Lorenzo Columbo*

14.40 **Tu.C6.5** [KolkowskiRi1] Probing nonradiating states of light in photonic nanostructures using nonlinear optical processes (Invited20 min)
*Radoslaw Kolkowski, Huayu Bai, Matti Kaivola, Andriy Shevchenko*

15.00 **Tu.C6.6** [DeLuciaFi1] Poled Fibers for Nonlinear Photonics: Recent Advances and Future Perspectives (Invited20 min)
*Francesco De Lucia, Nicolas Englebert, Rex Bannerman, Muhammad I. M. Abdul Khudus, Simon-Pierre Gorza, Gilberto Brambilla, James Gates, Pier Sazio, Francois Leo*

15.20 **Tu.C6.7** [WengHZi1] Multi-color frequency combs in the Kerr microresonators (Invited20 min)
*Haizhong Weng, Vikash Kumar, Huilan Tu, Qiaoyin Lu, Weihua Guo, Dmitry Skryabin, John Donegan*

**Aula 13 - materials&devices, Tuesday July 16**

**13.40-15.00 Tu.C7 - PICAW 4, Chairlady: Dana Seyringer**

13.40 **Tu.C7.1** [DagensBi1] Towards high-resolution all-optical spatial light modulators (Invited20 min)
*Marius Crouzier, Fei Mao, Vy Yam, Giovanni Magno, Thomas Lopez, Beatrice Dagens*

14.00 **Tu.C7.2** [PassaroVi1] Sb2S3-based resonant non-volatile multilevel optical memory (Invited20 min)
*Martino De Carlo, Francesco De Leonardis, Richard Soref and Vittorio M.N. Passaro*

14.20 **Tu.C7.3** [PohlAi1] Fabrication of Y-Branch Power Splitters using Additive Manufacturing (Invited20 min)
*Francisco Cano Silva Cezar, Carlos Ernesto Morales-Alvarado, Neri Volpato, Andreia Gerniski Macedo, Paula Cristina Rodrigues, and Alexandre de Almeida Prado Pohl*

14.40 Tu.C7.4 [ThomsonDJi1] All-silicon optical modulators and detectors (Invited20 min)
*D. J. Thomson, W. Zhang, K. Li, J. Zhu, T-Y. Chang, M. Ebert, B. Pant, R. S. Pokharia, C. J. Mitchell, B. Chen, S. Liu, F. Meng, X. Yan, H. Du, M. Banakar, D. T. Tran, C. G. Littlejohns, F. Gan and G. T. Reed*

**posters & DEMOs area, Tuesday July 16**

**13.30 - 16.00 Tu.P2 - Poster 2**

**Tu.P2.1** [AsgariSr2] Multi-band graphene-based Terahertz Anisotropic Metamaterial Absorber
*Somayyeh Asgari and Tapio Fabritius*

**Tu.P2.2** [AssisKDRr1] Slicing and QoS-aware Resilience in Multipath Routing Problem of Elastic Optical Networks
*K. D. R. Assis, R. C. Almeida Jr, R. Boutaba, Hojjat Baghban, L. Carrea, M. Reed, T. A. C. Melo, H. Li, S. Yan and D. Simeonidou*

**Tu.P2.3** [BartonIr1] Nanoceramic materials for power lasers operating in short- mid-infrared
*Ivo Bartoň, Ondřej Podrazký, Petr Vařák, Jana Proboštová, Jan Mrázek*

**Tu.P2.4** [GrecoSr1] Advanced Electromagnetism and Nanoplasmonics in FEniCSx
*Stefano Greco, Michele Castriotta, Cristian Ciracì*

**Tu.P2.5** [SirletoLp1] Relative intensity noise measurements in SRS microscope based on three femtosecond laser
*Rajeev Ranjan, Giovanni Costa, Maria Antonietta Ferrara, Mario Sansone and Luigi Sirleto*

**Tu.P2.6** [SirletoLp2] Image denoising based on two widespread algorithms in femtosecond stimulated Raman scattering microscopy
*Giovanni Costa, Rajeev Ranjan, Maria Antonietta Ferrara, Mario Sansone and Luigi Sirleto*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Tu.D - Tuesday evening parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 1 - networks, Tuesday July 16**

**16.00-17.55 Tu.D1 - MOON 2, Chair: Vittorio Curri**

16.00 **Tu.D1.1** [FumagalliAi1] Enhancing Optical Network Emulation (ONE) Engine with Multi-Container Scalability and B400G Signal Modeling (Invited20 min)
*Muhammad Ridwanur Rahim, Aparaajitha Gomathinayakam Latha, Tianliang Zhang, Marco Tacca, Andrea Fumagalli*

16.20 **Tu.D1.2** [EtezadiEi1] Joint Fragmentation- and QoT-Aware RBMSA in Dynamic Multi-Band Elastic Optical Networks (Invited20 min)
*Ehsan Etezadi, Farhad Arpanaei, Carlos Natalino, Erik Agrell, Lena Wosinska, Paolo Monti, David Larrabeiti, Marija Furdek*

16.40 **Tu.D1.3** [AmbrosoneRr1] Optical Amplified Line Self-Healing Using GNPy as a Service by the SDN Control (15 min)
*Renato Ambrosone, Andrea D’Amico, Rocco D’Ingillo, Emanuele Virgillito, Stefano Straullu, Francesco Aquilino, Vittorio Curri*

16.55 **Tu.D1.4** [ArpanaeiFr1] ML-Assisted Optimal Power and GSNR Estimation in Multi-band Elastic Optical Networks (15 min)
*K. Ghodsifar, F. Arpanaei, H. Beyranvand, M. Ranjbar Zefreh, C. Natalino, P. Monti, S. Yan, O. Gonzalez de Dios, J. M. Rivas-Moscoso, J. P. Fernandez-Palacios, A. Sanchez-Macian, D. Larrabeiti, and J. A. Hernandez*

17.10 **Tu.D1.5** [GuoNr1] Performance analyses of wavelength assignment algorithms in wideband fixed-grid/flex-rate optical networks (15 min)
*Ningning Guo, Bruno Correia, Gangxiang Shen, and Vittorio Curri*

17.25 **Tu.D1.6** [ZitkovichMr1] N-Try buffer allocation strategy for advanced reservation in dynamic Multiband-EON networks (15 min)
*Mirko Zitkovich and Danilo Borquez-Paredes*

17.40 **Tu.D1.7** [MasoodMUr1] Impact of Waveband and Wavelength Switching in the Next-Generation Optical Networks (15 min)
*Muhammad Umar Masood, Ihtesham Khan, Bruno Correia, Lorenzo Tunesi, Andrea Marchisio, Enrico Ghillino, Paolo Bardella, Andrea Carena, Vittorio Curri*

**Aula 3 - access, Tuesday July 16**

**16.00-16.55 Tu.D2 - SDN-NFV, Chair: Luiz Henrique Bonani**

16.00 **Tu.D2.1** [CallegatiFi1] Software Defined and Secure Industrial Networks for the Industry 4.0 (Invited20 min)
*Riccardo Bacca, Chiara Grasselli, Giulio Tripi, Andrea Melis, Luiz Henrique Bonani and Franco Callegati*

16.20 **Tu.D2.2** [deMiguelIi1] MEC in the 5G Era: Enhancing Reliability Through Backup Strategies and Technology Integration (Invited20 min)
*Maryam Masoumi, Fabrizio Brasca, Emanuele Bonfani, Gianluca Rizzi, Ignacio de Miguel and Ramón J. Durán Barroso*

16.40 **Tu.D2.3** [SamboNr1] On the Control of Multi-Function Reprogrammable Silicon Chip for ROADMs and Sliceable Transceivers (15 min)
*M. Lawson, M. Ali , M. Radovic, N. Sambo, R. Casellas, F. Cugini, M. Svaluto Moreolo, A. Santome-Valverde*

**Aula 5 - systems, Tuesday July 16**

**16.00-17.55 Tu.D3 - RONEXT, Chair: Piero Castoldi**

16.00 **Tu.D3.1** [MasMachucaCi1] Impact of graphs and methodologies on optical access networks planning (Invited20 min)
*Cristian Bermudez Serna, Anjali Sharma and Carmen Mas-Machuca*

16.20 **Tu.D3.2** [NadimiGokiPi1] Pragmatic Authentication Technique in Fiber Optical Networks (Invited20 min)
*Pantea Nadimi Goki, Ramin Solaimani, Luca Poti*

16.40 **Tu.D3.3** [AbbadeMi1] Propagation of Optical Signals Encrypted with Spectral Phase Encoding and Signal/Polarisation Shuffling (Invited20 min)
*João Pedro de Lima Cassiano Pereira, Marcelo Pereira Nogueira, Eric Alberto de Mello Fagotto, Ivan Aldaya, and Marcelo Luís Francisco Abbade*

17.00 **Tu.D3.4** [KowalczykMi1] Harmful attacks threat and counteracting them in optical networks (Invited20 min)
*Marcin Kowalczyk, Michal Marzecki, Jerzy Siuzdak*

17.20 **Tu.D3.5** [MontiPi1] Proactive Relocation for Survivable Cloud Services (Invited20 min)
*Carlos Natalino, Paolo Monti*

17.40 **Tu.D3.6** [BalsamAr1] Comprehensive comparison between versions CVSS v2.0, CVSS v3.x and CVSS v4.0 as vulnerability severity measures (15 min)
*Artur Balsam, Maciej Nowak, Michał Walkowski, Jacek Oko, Sławomir Sujecki*

**Aula 7 - fibres, Tuesday July 16**

**16.00-17.35 Tu.D4 - Novel Glasses 2, Chair: Maurizio Ferrari**

16.00 **Tu.D4.1** [NekvindovaPi1] Enhancement of RE ions emission by silica glass nanostructuring (Invited20 min)
*Petr Vařák, Jakub Volf, Jan Mrázek, Vítězslav Jarý, Pavla Nekvindová*

16.20 **Tu.D4.2** [NemecPi1] Low temperature synthesis of GeTe nanoparticles and their characterization (Invited20 min)
*M. Bouška, Y. Milasheuskaya, M. Šlouf, P. Knotek, S. Pechev, L. Prokeš, L. Pečinka, J. Havel, R. Jambor, P. Němec*

16.40 **Tu.D4.3** [TheodosiouAi1] Low-loss fusion splicing of silica and fluoride fibers (Invited20 min)
*Antreas Theodosiou, Yuhan Baravets, Ori Sapir-Henderson, Oliver T. Cobcroft, Samuel M. Sentschuk, Jack A. Stone, David J. Ottaway, Pavel Honzatko, Pavel Peterka*

17.00 **Tu.D4.4** [WisniewskiKi1] Spectroscopic properties of lead-silicate glasses with MoO3 admixture and rare earth dopants (Invited20 min)
*K. Wisniewski, M. Środa, K. Naveenkumar, P. Syam Prasad, P. Płóciennik, A. Zawadzka*

17.20 **Tu.D4.5** [KhouriMi1] Simulating and Fabricating Chalcogenide-based Waveguides for Agro-Environmental Applications (15 min)
*Martin Khouri, Raphäel Escalier, Daphné Heran, Mikhaël Myara, Raphäel Kribich, Caroline Vigreux, Ryad Bendoula*

**Aula 9 - SWP, Tuesday July 16**

**16.00-18.20 Tu.D5 - SWP 7 plasmonics, Chair: Olivier Martin**

16.00 **Tu.D5.1** [LembrikovBi1] Modulation of Optical Signals in a Plasmonic Waveguide with a Smectic A Liquid Crystal (SALC) Layer as a Core (Invited20 min)
*B.I. Lembrikov, D. Ianetz, Y. Ben-Ezra*

16.20 **Tu.D5.2** [PetruzzelliVi1] Magneto-plasmonic waveguides for non-reciprocal devices (Invited20 min)
*G. Calò, G. Magno, V. Petruzzelli, V. Yam, B. Dagens*

16.40 **Tu.D5.3** [SmajicJi1] Plasmonic Electro-Optic Modulators – A Review (Invited20 min)
*Jasmin Smajic, Juerg Leuthold*

17.00 **Tu.D5.4** [VasilevskiyMi1] Coupled oscillators approach to modelling a graphene-based plasmonic sensor (Invited20 min)
*Diogo Cunha, Yuliy Bludov, Mikhail Vasilevskiy*

17.20 **Tu.D5.5** [HuangJJi1] Surface-Acoustic Waves Actuated Amplification in a Plasmonic Waveguide (Invited20 min)
*Rohit Gupta, Kuntal Barman, Liang-Yun Lee, Anuj Chauhan, Cheng-Yi Cheng, Jian-Jang Huang*

17.40 **Tu.D5.6** [BaghdasaryanHi1] Reflection-mode electro-optical plasmonic modulator: electromagnetic modelling by the method of single expression (Invited20 min)
*Hovik V. Baghdasaryan, Tamara M. Knyazyan, Tamara T. Hovhannisyan, Gurgen R. Mardoyan, Tigran Baghdasaryan, Erich Leitgeb, Marian Marciniak*

18.00 **Tu.D5.7** [RichterIi1] Three-dimensional Magnetooptic Rigorous Coupled Wave Analysis – Application to Nonreciprocal Guiding (Invited20 min)
*Pavel Kwiecien, Ivan Richter, Vladimír Kuzmiak, and Jiří Čtyroký*

**Aula 11 - D-Photon, Tuesday July 16**

**16.00-18.00 Tu.D6 - PNPA 4, Chair: Luigi Sirleto**

16.00 **Tu.D6.1** [SavoRi1] Second-order Nonlinear Disordered Photonics: from versatile wavelength conversion to deep computing (Invited20 min)
*Romolo Savo*

16.20 **Tu.D6.2** [SchiattarellaCi1] Near-field nanoscopy of THz split-ring resonators with a localized graphene layer in the gap: a new platform for efficient third harmonic generation in graphene (Invited20 min)
*Chiara Schiattarella, Alessandra Di Gaspare, Leonardo Viti, M. Alejandro Justo Guerrero, Miriam S. Vitiello*

15.40 **Tu.D6.3** [RimoldiCi1] Impact of Oxide Aperture Geometry on Noise Performance Degradation in 850 nm Multimode VCSELs for Datacom Applications (Invited20 min)
*Cristina Rimoldi, Lorenzo L. Columbo, Alberto Tibaldi, Pierluigi Debernardi, Sebastian Romero García, Christian Raabe, Mariangela Gioannini*

17.00 **Tu.D6.4** [CincottiGi2] Can a quantum detector surpass the non-linear Shannon limit? (Invited20 min)
*Matteo Rosati and Gabriella Cincotti*

17.20 **Tu.D6.5** [VenanziTi1] Nonlinear hydrodynamic behavior of free electrons in plasmonic doped-InGaAs nanoantennas (Invited20 min)
*A. Rossetti, H. Hu, T. Venanzi, A. Bousseksou, F. De Luca, T. Deckert, V. Giliberti, M. Pea, I. Sagnes, G. Beaudoin, P. Biagioni, E. Bau, S. A. Maier, A. Tittl, D. Brida, R. Colombelli, M. Ortolani, and C. Ciracì*

17.40 Tu.D6.6 [SimovicPavlovicMi1] Breaking Barriers: Molding Thermodynamics by Geometry of Nanostructures (Invited20 min)
*Marina Simović Pavlović, Maja Pagnacco, Bojana Bokić, Darko Vasiljević, Marija Radmilović-Rađenović, Branislav Rađenović, Branko Kolarić*

**Aula 13 - materials&devices, Tuesday July 16**

**16.00-17.20 Tu.D7 - PICAW 5, Chair: Prince Anandarajah**

16.00 **Tu.D7.1** [LatkowskiSi1] Optical Alignment Optimization for High Throughput Testing of Photonic Integrated Circuits (Invited20 min)
*Ruud Jansen, Dzmitry Pustakhod, Bart Combee, Xaveer Leijtens, Kevin Williams, and Sylwester Latkowski*

16.20 **Tu.D7.2** [TomasiunasRi1] Green light second-harmonic generation in a planar quasi-symmetrical GaN waveguide structure (Invited20 min)
*R. Tomasiunas, D. Kezys, M. Kolenda, I. Dailidenas, A. Kadys, I. Reklaitis, S. Melnikas, L. Grineviciute, R. Petruskevicius, V. Vaicaitis, A. Tarre, K. Kukli*

16.40 **Tu.D7.3** [DeVittorioMi1] Optical fiber integrated functional elements fabricated by two-photon polymerization (Invited20 min)
*Stella Aslanoglou, Barbara Spagnolo, Ferruccio Pisanello, Massimo De Vittorio*

17.00 **Tu.D7.4** [SeyringerDi1] 512-channel SiN-based AWG-spectrometer for OCT on a chip (Invited20 min)
*Dana Seyringer, Paul Müllner, Moritz Eggeling, Anja Agneter, Quang Nguyen, Elisabet A. Rank, Martin Sagmeister, Jochen Kraft, Alejandro Maese-Novo, Wolfgang Drexler, Rainer Hainberger*

**DAY 3 - Wednesday July 17**

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

**Aula 1 - networks, Wednesday July 17**

**8.40-9.55 We.A1 - EWOC, Chair: Zoran Vujicic**

8.40 We.A1.1 Zoran Vujičić: Welcome and introductory talk on the EWOC project (15min)

8.55 **We.A1.2** keynote1 [GaudinoRi1] Future Evolutions of Fronthauling Architectures over Passive Optical Networks (30 min)
*Safana Alzoubi, Sandra Arnaout, Md Arifur Rahman, and Roberto Gaudino*

9.25 **We.A1.3** keynote2 [GelabertXi1] Redefining Next Generation Fronthaul for the Interplay Between Communication and Sensing Data (30 min)
*Xavier Gelabert, Bleron Klaiqi, Noè Bernadas i Busquets*

**Aula 3 - access, Wednesday July 17**

**8.40-9.40 We.A2 - NOFSeT, Chairs: Giuseppe Rizzelli & Caterina Ciminelli**

8.40 **We.A2.1** [MartinsHi1] Recent progress in calibrated optical fibre distributed sensing for full-bandwidth seismology (Invited20 min)
*Hugo F. Martins, Pedro J. Vidal-Moreno, María R. Fernández-Ruiz, Sonia Martin-Lopez, Miguel Gonzalez-Herraez*

9.00 **We.A2.2** [RizzelliGi1] Overview and analysis of optical sensing techniques over deployed telecom networks (Invited20 min)
*Ann Margareth Rosa Brusin, Giuseppe Rizzelli, Marco Fasano, Jacopo Morosi, Saverio Pellegrini, Valter Ferrero, Gabriella Bosco, Dario Pilori, Paola Parolari, Andrea Madaschi, Marco Brunero, Pierpaolo Boffi and Roberto Gaudino*

9.20 **We.A2.3** [CurriVi2] A Machine Learning-Driven Smart Optical Network Grid for Earthquake Early Warning (Invited20 min)
*Hasan Awad, Fehmida Usmani, Emanuele Virgillito, Rudi Bratovich, Roberto Proietti, Stefano Straullu, Rosanna Pastorelli, Vittorio Curri*

**Aula 5 - systems, Wednesday July 17**

**8.40-10.00 We.A3 - SDM for High-Capacity Transmission, Chair: Fabio Aparecido Barbosa**

8.40 **We.A3.1** [BarbosaFAi1] Modal Dispersion Performance of Mode Vector Modulation (Invited20 min)
*F. Barbosa, F. Ferreira, A. Brisson, A. Biswas, M. Dadras, E. Fink, I. Roudas, and X. Jiang*

9.00 **We.A3.2** [CarnielloPi1] Is the Weak Coupling Nonlinear SDM Channel Worse Than the Strong Coupling One? (Invited20 min)
*Paolo Carniello, Chiara Lasagni, Filipe M. Ferreira, Norbert Hanik*

9.20 **We.A3.3** [GotoYi1] LCOS-based Flexible Optical Switch for Heterogeneous SDM Fiber Networks (Invited20 min)
*Yuta Goto, Satoshi Shinada, Yusuke Hirota, and Hideaki Furukawa*

9.40 **We.A3.4** [AlvesTi1] Neural Network-Assisted Self-Coherent MCF Systems Impaired by ICXT and Laser Phase Noise (Invited20 min)
*Tiago M. F. Alves, Lucas Oliveira and Adolfo V. T. Cartaxo*

**Aula 7 - fibres, Wednesday July 17**

**8.40-10.00 We.A4 - Fibre Lasers 1, Chair: Sergey Sergeyev**

8.40 **We.A4.1** [CucinottaAi1] Yellow Fiber Laser System for the Treatment of Ocular Diseases (Invited20 min)
*Annamaria Cucinotta, Foroogh Khozeymeh, Wahida Chowdry, Valentina Serafini, Guido Perrone*

9.00 **We.A4.2** [VarakPi1] Fluorescence lifetime of highly rare-earth-doped silica optical fibers – the influence of composition and fabrication processing (Invited20 min)
*Petr Vařák, Pavel Peterka, Michal Kamrádek, Jan Aubrecht, Ondřej Podrazký, Ivo Bartoň, Ivan Kašík, Pavel Honzátko*

9.20 **We.A4.3** [SujeckiSi1] Energy level population dynamics in terbium doped chalcogenide selenide glass fibre under pulsed pumping (Invited20 min)
*Sławomir Sujecki, Łukasz Sójka, Łukasz Pajewski, Sendy Phang, Mark Farries, David Furniss, Emma Barney, Trevor Benson, Angela Seddon*

9.40 **We.A4.4** [RodriguezCuevasAi1] Achieving Multiple-Days Stability in a Single-Cavity Dual-Comb laser for Spectroscopic Applications (Invited20 min)
*Alberto Rodriguez Cuevas, Dmitrii Stoliarov, Hani Kbashi and Sergey Sergeyev*

**Aula 9 - SWP, Wednesday July 17**

**8.40-10.00 We.A5 - SWP 8 new materials & phenomena 1, Chair: Giovanni Pellegrini**

8.40 **We.A5.1** [HattoriHTi1] Active devices based on novel materials (Invited20 min)
*Khalil As’ham, Sanjida Akter, Ibrahim Al’Ani and Haroldo T. Hattori*

9.00 **We.A5.2** [TaboukhatSi1] Investigating the Relationship Between Molecular Structure and Nonlinear Optical Behavior in Specific Organic and Organometallic Compounds (Invited20 min)
*Said Taboukhat, Aouatif Aamoum, Dmytro Shulha, Dominique Guichaoua, Robert Wielgosz, Anatoliy Andrushchak, and Bouchta Sahraoui*

9.20 **We.A5.3** [ChiappiniAi1] Self-assembled colloidal structures for photonics (Invited20 min)
*A. Chiappini, A. Carpentiero, M. Bollani, R. Mudi, B.M. Squeo, M. Pasini, L. Pasquardini, B.N. Shivakiran Bhaktha, K. Debnath, T. Virgili*

9.40 **We.A5.4** [SahraouiBi1] Unveiling the Nonlinear Optical Potential of N719 Dye-Based Thin Film (Invited20 min)
*H. El Karout, A. Marjanowska, A. Zawadzka, P. Płóciennik, A. Andrushchak, R. Wielgosz and B. Sahraoui*

**Aula 11 - D-Photon, Wednesday July 17**

**9.40-10.20 We.A6 - SWP 9 microresonators, Chair: Stefano Pelli**

9.40 **We.A6.1** [PopovEi1] Extraordinary enhancement of second harmonic generation in cavity-resonator integrated grating couplers (Invited20 min)
*Evgeny Popov, Anne-Laure Fehrembach, Elizabeth Hemsley, François Renaud, Antoine Monmayrant, Olivier Gauthier-Lafaye, Stéphane Calvez*

10.00 **We.A6.2** [MeixnerAi1] Strong coupling of organic semiconductors in a tuneable Fabry-Pérot microresonator (Invited20 min)
*Christoph Kertzscher, Michael Mauch, Jakob Keck, Frank Wackenhut, Saeed Nosrati, Alfred J. Meixner*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* We.B - Wednesday noon parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 1 - networks, Wednesday July 17**

**10.40-12.40 We.B1 - OWW 1, Chairlady: Tanya Politi**

10.40 **We.B1.1** [WolfMi1] A review of advanced modulation schemes for band limited wireless optical systems based on intensity modulation and direct detection (Invited20 min)
*Mike Wolf and Martin Haardt*

11.00 **We.B1.2** [CiaramellaEi1] Prospects of Optical Wireless Communications in Non-Terrestrial Networks (Invited20 min)
*S. Basu, L. Oliviero, G. Cossu, C. Cantore, A. D’Orazio, and E. Ciaramella*

11.20 **We.B1.3** [DjordjevicIi1] Entanglement Assisted Radars Operated over Strong Atmospheric Turbulence Channels (Invited20 min)
*Ivan B. Djordjevic and Vijay Nafria*

11.40 **We.B1.4** [GalzeranoGi1] Mid-infrared free-space optical link at 10.6 µm (Invited20 min)
*S. Graziano, D. Gatti, L. Resteghini, A. Milani, R. Nebuloni, L. Luini, G. Galzerano*

12.00 **We.B1.5** [SamboNi1] Control of free-space optical links and networks (Invited20 min)
*N. Sambo, A. Sgambelluri, G. Cossu, F. Paolucci, E. Ciaramella*

12.20 **We.B1.6** [CossuGi1] Realizing an indoor OWC system by means of a Luminescent Solar Concentrator (Invited20 min)
*G. Cossu, L. Oliviero, L. Gilli, A. Pucci, M. Meucci, M. Aresti, J. Catani, E. Ciaramella*

**Aula 3 - access, Wednesday July 17**

**10.40-11.40 We.B2 - THz 1, Chair: Christos Tsokos**

10.40 **We.B2.1** [KawanishiTi1] Design of dependable THz transmitters under severe weather conditions (Invited20 min)
*Tetsuya Kawanishi*

11.00 **We.B2.2** [KajiTi1] Terahertz optical modulators using electro-optic polymer waveguides and non-coplanar patch antennas (Invited20 min)
*Takahiro Kaji, Toshiki Yamada, Naoya Wada, Akira Otomo*

11.20 **We.B2.3** [CesarCuelloJi1] Integrated Photonic Circuits for the Detection of Millimeter and Submillimeter Radio Signals for Space Applications (Invited20 min)
*Jessica César-Cuello, Alberto Zarzuelo, Gabriel Santamaría, Enderson Falcón-Gómez, Robinson Guzmán, Luis Gonzalez, José Manuel Delgado Mendinueta, Luis E. García-Muñoz and Guillermo Carpintero*

**Aula 5 - systems, Wednesday July 17**

**10.40-12.20 We.B3 - SDM-WDM 1, Chair: Mattia Longobucco**

10.40 **We.B3.1** [ChovanJi1] Coupling Properties of Asymmetric High Index Contrast Soft Glass Dual-Core Fibers in C-Band (Invited20 min)
*Jozef Chovan, Ignác Bugar, Dariusz Pysz, Ryszard Buczynski, František Uherek*

11.00 **We.B3.2** [NeskorniukVi1] MIMO DSP in Direct Detection SDM Systems Based on Weakly-Coupled Multicore Fibers (Invited20 min)
*Vladislav Neskorniuk, Igor Koltchanov, Artur Chaikovski, André Richter*

11.20 **We.B3.3** [CartaxoAi1] Impact of the combined effect of random core-dependent and splice losses on intercore crosstalk performance in weakly-coupled multicore fibers (Invited20 min)
*João L. Rebola, Adolfo V. T. Cartaxo, Tiago M. F. Alves*

11.40 **We.B3.4** [ZitelliMi1] A thermodynamic study of low-power modal multiplexed systems (Invited20 min)
*Mario Zitelli*

12.00 **We.B3.5** [ShenGXi1] Provisioning Spatial Super-Channels in Fiber Space Division Multiplexing (FSDM) Optical Networks: Analytical Model and Performance Analysis (Invited20 min)
*Shudan Han, Yongcheng Li, Lian Xiang, Lin Sun, Gangxiang Shen*

**Aula 7 - fibres, Wednesday July 17**

**10.40-12.35 We.B4 - Fibre Lasers 2, Chair: Sławomir Sujecki**

10.40 **We.B4.1** [SergeyevSi1] Vector Subharmonic Entrainment (Invited20 min)
*S. V. Sergeyev, D. Stoliarov, H. Kbashi, F. Wu, Q. Huang, and C. Mou*

11.00 **We.B4.2** [MrazekJi1] Transparent ceramics for high-power infrared lasers operating above 2 μm (Invited20 min)
*Jan Mrázek, Ondřej Podrazký, Petr Vařák, Ivo Bartoň, Jana Proboštová*

11.20 **We.B4.3** [PoliFi1] Optimizing Dysprosium-Doped Fiber Lasers for Direct Yellow Emission: A Comprehensive Numerical Analysis (Invited20 min)
*Federica Poli, Michelangelo Federico*

11.40 **We.B4.4** [PerroneGi1] Novel laser structures for high-power applications (Invited20 min)
*Guido Perrone*

12.00 **We.B4.5** [RochetteMi1] All-fiber devices compatible with the mid-infrared (Invited20 min)
*Martin Rochette*

12.20 **We.B4.6** [AnelliFr2] Indium Fluoride Optical Fiber End-Pump Combiner for High-Power All-Fiber Sources (15 min)
*Francesco Anelli, Andrea Annunziato, Antonella Maria Loconsole, Vito Vincenzo Francione, Md. Imran Khan, Solenn Cozic, Samuel Poulain, and Francesco Prudenzano*

**Aula 9 - SWP, Wednesday July 17**

**10.40-12.00 We.B5 - SWP 10 new materials & phenomena 2, Chair: Bouchta Sahraoui**

10.40 **We.B5.1** [InabaTi1] Er-doped rare earth oxides for optical quantum memory on Si substrate (Invited20 min)
*Tomohiro Inaba, Xuejun Xu, Yuki Wakabayashi, Takuma Otsuka, Takehiko Tawara, Hiroo Omi, Hideki Yamamoto, Katsuya Oguri and Haruki Sanada*

*(We.B5.2 cancelled)*

11.00 **We.B5.3** [FillautJLi1] Surface post-modifications of 3D-printed micro/nano-materials (Invited20 min)
*Nicolas Fournier-Le Ray, Jean-Luc Fillaut, Rana Mhanna, Stephania Abdallah, Jean-Pierre Malval*

11.20 **We.B5.4** [PellegriniGi1] Low-contrast one-dimensional photonic crystals for optical chirality enhancement (Invited20 min)
*G. Pellegrini, F. Michelotti, A. Occhicone, M. Celebrano, M. Finazzi, and P. Biagioni*

12.40 **We.B5.5** [GnilitskyiIi1] Femtosecond laser-induced periodic surface structures: a tool to create functional surfaces (Invited20 min)
*Iaroslav Gnilitskyi, Dominique Guichaoua and Said Taboukhat*

**Aula 11 - D-Photon, Wednesday July 17**

**10.40-12.20 We.B6 - PAM, Chair: Misha Sumetsky**

10.40 **We.B6.1** [BorghiMi1] Squeezed light photon number statistics from a microresonator without photon number resolving detectors (Invited20 min)
*Massimo Borghi, Emanuele Brusaschi, Marcello Bacchi, Marco Liscidini, Matteo Galli and Daniele Bajoni*

11.00 **We.B6.2** [DaRosFi1] Microring Resonator-based Photonic Reservoir Computing (Invited20 min)
*Bernard J. Giron Castro, Christophe Peucheret, Francesco Da Ros*

11.20 **We.B6.3** [PelliSi1] Photoacustics and phototermal spectroscopy in micro-bubble optical resonators (Invited20 min)
*Stefano Pelli, Gabriele Frigenti, Lucia Cavigli, Fulvio Ratto, Sonia Centi, Tupak García-Fernández, Daniele Farnesi,* *Silvia Soria, Gualtiero Nunzi Conti*

11.40 **We.B6.4** [HorakPi1] Alignment Properties of Finite-Size and Non-Spherical Optical Microresonators (Invited20 min)
*William J. Hughes, Thomas H. Doherty, Jacob A. Blackmore, Joseph F. Goodwin, and Peter Horak*

12.00 **We.B6.5** [IoppoloTi1] Electric and Magnetic Field Sensors Based of Dielectric Resonators (Invited20 min)
*Tindaro Ioppolo*

**Aula 13 - materials&devices, Wednesday July 17**

**10.40-11.55 We.B7 - DACINT, Chairlady: Aleksandra Kaszubowska-Anandarajah**

10.40 **We.B7.1** [ElGorashiTi1] Resilience in PON-based data centre architectures with two-tier cascaded AWGRs (Invited20 min)
*Mohammed Alharthi, Sanaa H. Mohamed, Taisir E. H. El-Gorashi, Jaafar M. H. Elmirghani*

11.00 **We.B7.2** [OzolinsOi1] SiP Ring Resonator Modulator-based Transmitters for Short-Reach Applications (Invited20 min)
*Armands Ostrovskis, Toms Salgals, Michael Koenigsmann, Azra Farid, Aleksandrs Marinins, Benjamin Krüger, Fabio Pittalà, Ryan P. Scott, Hansjoerg Haisch, Lu Zhang, Xianbin Yu, Rafael Puerta, Sandis Spolitis, Richard Schatz, Katia Gallo, Markus Gruen, Hadrien Louchet, Kazuo Yamaguchi, Vjaceslavs Bobrovs, Xiaodan Pang, Oskars Ozoliņš*

11.20 **We.B7.3** [KonishiTi1] Light path modeling using a guided light change passing through a 3D co-packaged optical device (Invited20 min)
*Tsuyoshi Konishi, Shizen Nakayama, and Junpei Funatsuki*

11.40 **We.B7.4** [DIngilloRr1] Enhancing Data Center Interconnects Efficiency with Integrated SOAs in InP Mach-Zehnder Modulators: an Experimental Validation (15 min)
*Rocco D'Ingillo, Stefano Straullu, Rocco Siano, Michele Belmonte, Vittorio Curri*

**posters & DEMOs area, Wednesday July 17**

**10.40-12.40 We.P3 Poster 3 - EWOC**

**We.P3.1** [AbdellatifAp1] Machine Learning Methods Towards Analog mm-Wave Systems
*Ahmed Abdellatif and Zoran Vujicic*

**We.P3.2** [AhmadNp1] Performance Analysis of UAV-Aided THz-based 6G Networks: A Stochastic Geometry Approach
*N. Ahmad, A. Karasuwa, J. Rodriguez, A. Roula*

**We.P3.3** [AlzoubiSp1] Modelling Coherent Transmission over Passive Optical Networks for 5G/6G Mobile Fronthauling
*Safana Alzoubi and Roberto Gaudino*

**We.P3.4** [ArnaoutSp1] Resource Scheduling for 6G Optical and Radio Converged Network Architecture
*Sandra Arnaout, Md Arifur Rahman, Sławomir Hausman, and Piotr Korbel*

**We.P3.5** [BernadasNp1] Coverage and Fronthaul Requirements in Beyond 5G C-RAN Deployments
*Noè Bernadas i Busquets, Xavier Gelabert, Bleron Klaiqi, Slimane Ben Slimane, Ki Won Sung*

**We.P3.6** [MendezRp1] Characterization of Photonic Frequency Conversion Techniques for mmWave Systems
*Rodrigo Méndez, María C. Santos*

**We.P3.7** [MyshianovSp1] Simulation Framework for Radio Resource Management Design in 5G and Beyond Networks
*Sergei Myshianov, Alexander Pyattaev*

**We.P3.8** [PousaRp1] Dynamic Functional Split Orchestration
*Ricardo J. B. Pousa, Mauri Seidel, Giang Nguyen, Frank Fitzek*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* We.C - Wednesday afternoon parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 1 - networks, Wednesday July 17**

**13.40-15.40 We.C1 - OWW 2, Chair: Mike Wolf**

13.40 **We.C1.1** [AlvaradoAi1] A simplified FSO Channel Model with Weak Turbulence and Pointing Errors (Invited20 min)
*Carmen Álvarez Roa, Yunus Can Gültekin, Kaiquan Wu, C. Willem Korevaar, Alex Alvarado*

14.00 **We.C1.2** [WohlgemuthEi1] Robust coherent FSO using ultrashort pulses (Invited20 min)
*Eyal Wohlgemuth, Roi Lesnik, Roi Cohen, Ido Attia, Florian Emaury, Thibault Michel, Olivier Jacques-Sermet, Pu Jian, Ran Vered, and Dan Sadot*

14.20 **We.C1.3** [PolitiCTi1] Integrated sensing, communication and lighting visible light communication for indoor 6G networks (Invited20 min)
*Christina (Tanya) Politi, Helena Serpi, Christos Tselios, Spyros Denazis*

14.40 **We.C1.4** [WenFi1] Deep learning-based optical vector-eigenmode processing (Invited20 min)
*Feng Wen, Jian-Jun Li, Shui-Qiu Diao and Feng Yang*

15.00 **We.C1.5** [DixitAi1] Irradiance Distribution and Performance Analysis of Vector Vortex Beams in Atmospheric Turbulence (Invited20 min)
*Vaishali Bhatt and Abhishek Dixit*

15.20 **We.C1.6** [FernandesMi1] Flexible and Cost-Efficient Auto-Alignment for Bidirectional Optical Wireless Communications (Invited20 min)
*André C. Campos, Marco A. Fernandes , Gil M. Fernandes , Paulo P. Monteiro , and Fernando P. Guiomar*

**Aula 3 - access, Wednesday July 17**

**13.40-15.15 We.C2 - THz 2, Chair: Tetsuya Kawanishi**

13.40 **We.C2.1** [StoehrAi1] Phase Noise of Optically Generated Terahertz Signals employing an InP-based Photonic IC (Invited20 min)
*Y. Uçar, N. Schulz, M. Grzeslo, J. Tebart, M. Hofmann, C. Brenner, and A. Stöhr*

14.00 **We.C2.2** [TsokosCi1] Analysis of Photonics-Enabled FMCW THz Spectrometers for Non-Destructive Thickness Measurements (Invited20 min)
*E. Loukisa, C. Tsokos, P. Groumas, A. Raptakis, G. Megas, E. Andrianopoulos, L. Liebermeister, Robert B. Kohlhaas, Ch. Kouloumentas, and H. Avramopoulos*

14.20 **We.C2.3** [ScamarcioGi1] Modulating graphene/electrolyte interface response in the terahertz range (Invited20 min)
*Gaetano Scamarcio, Syed Muhammad Abouzar Sarfraz, Haroon Ahmad*

14.40 **We.C2.4** [VogelTi1] Roadmap for the next generation of laser-based, high-power THz-Time Domain Spectrometer (Invited20 min)
*Tim Vogel, Yicheng Wang, Mohsen Khalili, Samira Mansourzadeh, and Clara J. Saraceno*

15.00 **We.C2.5** [AsgariSr1] Dual-Band Linear Polarization Converter Based on Tunable Graphene Metamaterial in Terahertz (15 min)
*Somayyeh Asgari and Tapio Fabritius*

**Aula 5 - systems, Wednesday July 17**

**13.40-15.40 We.C3 - SDM-WDM 2, Chair: Salvatore Spadaro**

13.40 **We.C3.1** [LeivaLopezAi1] Dynamic Multicore Elastic Optical Networks: A Comparative Study of Performance using Heuristics and Artificial Intelligence (Invited20 min)
*Juan Pinto-Ríos, Ariel Leiva, Barbara Dumas Feris, Daniel Iglesias, Catalina Cuevas, Nicolas Jara, Ricardo Olivares, Patricia Morales, Danilo Borquez-Paredes, Gabriel Saavedra*

14.00 **We.C3.2** [WalkowiakKi1] Adaptive Provisioning of Time-Varying Traffic in Translucent SDM Elastic Optical Networks (Invited20 min)
*Adam Włodarczyk, Aleksandra Knapińska, Piotr Lechowicz, Salvatore Spadaro, Krzysztof Walkowiak*

14.20 **We.C3.3** [PerelloJi1] Probabilistic Constellation Shaping in Flex-Grid over Multicore Fibre Optical Backbone Networks: An Energy Savings Evaluation (Invited20 min)
*Jordi Perelló, Joan M. Gené, Junho Cho, and Salvatore Spadaro*

14.40 **We.C3.4** [LongobuccoMr1] Ultrafast Dual-Wavelength 1 µm – 2 µm All-Optical Switching Based on All-Solid Dual-Core Fiber (15 min)
*Mattia Longobucco, Dariusz Pysz, Ryszard Buczyński, Ignác Bugár*

14.55 **We.C3.5** [deSousaAr1] On the Trade-off between the Maximum Capacity and the Length of a Multicore Fiber Link (15 min)
*Amaro de Sousa, Piotr Lechowicz*

15.10 **We.C3.6** [SavvaGr1] A Fragmentation and Crosstalk-aware RMSCA Framework for SDM-EONs (15 min)
*Sadananda Behera, Swarup Mohapatra, Sitaram Nayak, Giannis Savva, Konstantinos Manousakis, and Georgios Ellinas*

15.25 **We.C3.7** [PedroJr1] Node Architectures for High-Capacity Multi-band Over Space Division Multiplexed (MBoSDM) Optical Networks (15 min)
*Andre Souza, Nelson Costa, Laia Nadal, Ramon Casellas, Antonio Melgar, Jose Manuel Rivas-Moscoso, Marco Quagliotti, Emilio Riccardi, Antonio Napoli, Joao Pedro*

**Aula 7 - fibres, Wednesday July 17**

**13.40-15.40 We.C4 - OMT, Chair: George A. Stanciu**

13.40 **We.C4.1** [StanciuGi1] Correlated images by using two scattering -Scanning near optical microscopy techniques (Invited20 min)
*G.A. Stanciu, D. E. Tranca, S. G. Stanciu, C. Stoichita*

14.00 **We.C4.2** [TrancaDEi1] Analysis of visible and infrared spectroscopic detection in scattering scanning near-field optical microscopy (Invited20 min)
*Denis E. Tranca, Stefan G. Stanciu, Radu Hristu, George A. Stanciu*

14.20 **We.C4.3** [KotynskiRi1] Single-Pixel Imaging at High Pixel-Resolutions with Nonuniform Sampling Patterns (Invited20 min)
*Rafał Stojek, Anna Pastuszczak, Piotr Wróbel, Rafał Kotyński*

14.40 **We.C4.4** [SzalkowskiMi1] Photon avalanche emission in lanthanide doped nanomaterials for super-resolution imaging (Invited20 min)
*Marcin Szalkowski, Artur Bednarkiewicz, Dawid Piątkowski, Sebastian Maćkowski*

15.00 **We.C4.5** [PisanelloFi1] Focusing supercontinuum laser through multimode optical fibers beyond the fiber facet: overcoming challenges with ps-pulsed sources (Invited20 min)
*Linda Piscopo, Liam Collard, Filippo Pisano, Antonio Balena, Massimo De Vittorio, Ferruccio Pisanello*

15.20 **We.C4.6** [FuEGi1] Ab initio study of the electronic and optical properties of Ga intrinsic vacancies in β-Ga2O3 by hybrid functional combined with the shell DFT-1/2 approach (Invited20 min)
*Engang Fu, Liyu Hao, Shangkun Shen, Xing liu, Yufei Wang, Shuangle Zhang, Jinlong Du*

**Aula 9 - SWP, Wednesday July 17**

**13.40-15.45 We.C5 - SWP 11 new light sources, Chairlady: Maria Antonieta Vincenti**

13.40 **We.C5.1** [FernandezJi1] A simple model for a dye-based solid state random laser (Invited20 min)
*I. Iparraguirre, J. Azkargorta, S. García-Revilla, Rolindes Balda, Joaquín Fernández*

14.00 **We.C5.2** [HerreroRi1] Generation of hybrid frequency combs in Kerr cavities by non-Hermitian modulations (Invited20 min)
*S. B. Ivars, M. Botey, K. Staliunas, R. Herrero*

14.20 **We.C5.3** [SubramaniaGi1] Nanostructuring wide bandgap semiconductors for light manipulation (Invited20 min)
*Ganapathi Subramania*

14.40 **We.C5.4** [LupuAi1] Insight on the optimal design of non-Hermitian DFB lasers and experimental results (Invited20 min)
*Y. Liang, Q. Gaimard, J.R. Coudevylle, A. Garreau, A. Wilk, O. Delorme, H. Benisty, A. Ramdane, and A. Lupu*

15.00 **We.C5.5** [MochalovLr2] Structural properties and Luminescence of PECVD-prepared β-Ga2O3:ZnO thin films (15 min)
*Leonid Mochalov, Mikhail Kudryashov, Sergey Telegin, Ekaterina Slapovskaya, and Edik Rafailov*

15.15 **We.C5.6** [KudryashovMr1] Structural and Optical Properties of PECVD-prepared Cadmium Telluride Thin Films (15 min)
*Leonid Mochalov, Maksim Vshivtsev, Mikhail Kudryashov, Ekaterina Slapovskaya, and Sophia Safronova*

15.30 **We.C5.7** [KudryashovMr2] Plasma-prepared GaSe films for visible light emitting devices (15 min)
*Mikhail Kudryashov, Leonid Mochalov, Sergey Telegin and Yuliya Kudryashova*

**Aula 11 - D-Photon, Wednesday July 17**

**13.40-14.55 We.C6 - GOC, Chairlady: Anjali Sharma**

13.40 **We.C6.1** [ValcarenghiLi1] Coordinated vDU relocation for an Energy Efficient PON-based Open SD-RAN (Invited20 min)
*L. Valcarenghi*

14.00 **We.C6.3** [MartinezRi1] Autonomous Control Operations for Energy-Efficient Packet Optical Networks (Invited20 min)
*Ricardo Martínez, Ramon Casellas, Carlos Hernández-Chulde, F. Javier Vílchez, Ricard Vilalta, Raül Muñoz, Óscar González de Dios, Juan Pedro Fernández-Palacios*

14.20 **We.C6.4** [SunWi1] Offloading computing from your headsets - how viable is a HomeCloud? (Invited20 min)
*Xinghan Chen and Weiqiang Sun*

14.40 **We.C6.5** [AlshahraniMr1] Energy Efficient Service Placement for IoT Networks (15 min)
*Mohammed A. Alshahrani, Ahmad Adnan Qidan, Taisir E. H. El-Gorashi, and Jaafar M. H. Elmirghani*

**posters & DEMOs area, Wednesday July 17**

**13.40 - 15.40 We.P4 Poster 4**

**We.P4.1** [GuichaouaDp1] Photophysical study of 2,3-Diphenyl Quinoxaline thin films for potential applications in optoelectronic devices
*I. E. Ouedghiri-Idrissi, Z. Sofiani, A. Talbi, Y. El Kouari, D. Guichaoua, A. Andrushchak, D. Shulha, R. Wielgosz, P. Płociennik, S. Taboukhat, A. Zawadzka and B. Sahraoui*

**We.P4.2** [KertzscherCr1] A tunable Fabry-Pérot microcavity enables systematic investigation of strong light-matter coupling and energy transfer at distances of several µm
*Christoph Kertzscher, Michael Mauch, Jakob Keck, Alfred J. Meixner*

**We.P4.3** [KotynskiRp1] Coupling Sommerfeld-Zenneck surface waves for enhancing absorption in infrared detectors with deeply subwavelength absorber layers
*Andrzej Janaszek, Piotr Wróbel, Maciej Dems, and Rafał Kotyński*

**We.P4.4** [MohamedASp1] Enabling Enhanced In-Building Solutions Fronthaul Connectivity: The Role of Mode Division Multiple Access in Mobile Networks
*Ahmed S. Mohamed, Eszter Udvary*

**We.P4.5** [NiewczasDp1] Modelling, Fabrication and Optimization of Anti-reflective coatings Designed for Mid-infrared Quantum Cascade Lasers
*Dominika Niewczas, Krzysztof Hejduk, Dorota Pierścińska, Agata Krząstek, Paweł Kozłowski, Grzegorz Sobczak, Tomasz Stefaniuk, Kamil Pierściński*

**We.P4.6** [ProbostovaJr1] Yttrium aluminium garnet doped fiber lasers operating at 2 μm
*Jana Proboštová, Michal Kamrádek, Ivo Bartoň, Ondřej Podrazký, Jan Aubrecht, Petr Vařák, Jan Mrázek*

**We.P4.7** [SorianoDiazSr1] Amplified spontaneous emission and lasing in perovskite nanocomposites
*Sandra Soriano-Díaz, Jaume Noguera-Gómez, Juan P. Martínez-Pastor, Pablo P. Boix, Rafael Abargues and Isaac Suárez*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* We.D - Wednesday evening parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 1 - networks, Wednesday July 17**

**16.00-17.40 We.D1 - OWW 3, Chair: Ernesto Ciaramella**

16.00 **We.D1.1** [ZamingaSi1] Securing free-space optical communication link with a robust programmable photonic processor (Invited20 min)
*F. Grillot, S. Zaminga, A. Martinez, H. Huang, F. Morichetti, and A. Melloni*

16.20 **We.D1.2** [PetruzzelliVi2] Thin-Film Lithium Niobate Optical Phased Arrays for reconfigurable on-chip communications (Invited20 min)
*Muhammad Khalid, Simone Ferraresi, Gaetano Bellanca, Vincenzo Petruzzelli and Giovanna Calò*

16.40 **We.D1.3** [CantoreCr1] Laboratory emulation of LEO downlink optical feeder link employing commercial transceivers (15 min)
*Carla Cantore, Ilaria Marasco, Davide Monopoli, Giovanni Magno, Antonella D’Orazio*

16.55 **We.D1.4** [DjordjevicIBr1] Amplified Entanglement Assisted Communication Outperforming Classical Laser Communication in Strong Atmospheric Turbulence Regime (15 min)
*Vijay Nafria and Ivan B. Djordjevic*

17.10 **We.D1.5** [HamadAr1] Intelligent Reflecting Surfaces assisted Laser-based Optical Wireless Communication Networks (15 min)
*Ahrar N. Hamad, Walter Zibusiso Ncube, Ahmad Adnan Qidan, Taisir E.H. El-Gorashi and Jaafar M. H. Elmirghani*

17.25 **We.D1.6** [MonopoliDr1] BPM-based atmospheric turbulence propagator for optical ground-to-space links through extended Rayleigh Sommerfield theory and phase screen generation (15 min)
*Davide Monopoli, Carla Cantore, Giovanni Magno, Antonella D’Orazio*

**Aula 3 - access, Wednesday July 17**

**16.00-17.40 We.D2 - Access 2, Chair: Nicola Calabretta**

16.00 **We.D2.1** [SegarraJi1] Converged 5G/6G access-metro network combining RoF and coherent PONs (Invited20 min)
*Josep Segarra, Vicent Sales, Víctor Polo, Miquel Masanas, Rodrigo Méndez, María C. Santos, Josep Prat, J. Camilo Velásquez*

16.20 **We.D2.2** [CastroAi1] Integrating Optical and Mobile Networks: A Comprehensive End-to-End Simulation Platform (Invited20 min)
*M. Rodriguez, M. Pirri, L. Ingles, C. Rattaro, and A. Castro*

16.40 **We.D2.3** [NapoliAi1] Design of Scalable Filterless Horseshoe-and-Spur Networks with Coherent Point-to-Multipoint Transceivers (Invited20 min)
*Mohammad M. Hosseini, Joao Pedro, Carlos Castro, Antonio Napoli*

17.00 **We.D2.4** [SantosJi1] Enabling Cost-Effective Fiber Sensing with Quasi-Coherent Detection for PON Infrastructure (Invited20 min)
*João Santos, Carla Rodrigues, Francisco Rodrigues, Paulo Duarte, Patrícia Carvalho, António Teixeira*

17.20 **We.D2.5** [BoffiPi1] Sensing in-service PON infrastructure by a sustainable interferometric sensor (Invited20 min)
*M. Fasano, A. Madaschi, P. Parolari, M. Hovsepyan, F. Carpentieri, P. Boffi*

**Aula 5 - systems, Wednesday July 17**

**16.00-17.00 We.D3 - NetOrch, Chair: Lluís Gifre**

16.00 **We.D3.1** [GifreLi1] Transport DataPlane-in-a-box: Using the TeraFlowSDN Controller to Manage Packet-Optical Transport Networks (Invited20 min)
*Ll. Gifre, R. Vilalta, R. Muñoz*

16.20 **We.D3.2** [RaffaelliCi1] Challenges and Solutions towards Practical End-to-End Service Orchestration (Invited20 min)
*Gianluca Davoli, Gaetano Francesco Pittalà, Davide Borsatti, Walter Cerroni, Carla Raffaelli*

16.40 **We.D3.3** [FumagalliAi2] An IPoDWDM Implementation Leveraging OpenROADM Standards for Enhanced Service Orchestration (Invited20 min)
*Moojan Kamalzadeh, Tianliang Zhang, Andrea Fumagalli, and Roberto Manzotti*

**Aula 7 - fibres, Wednesday July 17**

**16.00-17.20 We.D4 - SRIS, Chair: Rafał Kotyński**

16.00 **We.D4.1** [ZalevskyZi1] Quantum-adapted all-optical time multiplexing super-resolved imaging (Invited20 min)
*Ariel Ashkenazy, Nadav Shabairou, Dror Fixler, Eliahu Cohen and Zeev Zalevsky*

16.20 **We.D4.2** [NarimanovEi1] Fundamental resolution limit of label-free far-field microscopy (Invited20 min)
*Evgenii Narimanov*

16.40 **We.D4.3** [PoffoLi1] High-quality factor microsphere as sensors (Invited20 min)
*Luiz Poffo, El Metouy Et-Tijani, Christelle Velly, Laetitia Abel-Tiberini*

17.00 **We.D4.4** [AlexandrovSi1] Label free nano-sensitive optical imaging beyond resolution limit of the imaging system (Invited20 min)
*Sergey Alexandrov, Ryan McAuley, Rajib Dey, and Martin Leahy*

**Aula 9 - SWP, Wednesday July 17**

**16.00-17.30 We.D5 - SWP 12 photovoltaics, Chair: Krzysztof Wiśniewski**

16.00 **We.D5.1** [QuandtAi1] Some Interesting Analytical Approaches to Simulate Photovoltaic Devices (Invited20 min)
*Alexander Quandt and Daniel Wamwangi*

16.20 **We.D5.2** [ZawadzkaAi1] Low-temperature hybrid perovskites thin films solar cell (Invited20 min)
*Anna Zawadzka, Agnieszka Marjanowska, Amina Laouid, Krzysztof Wiśniewki, Michał Zawadzki, Przemysław Płócennik*

16.40 **We.D5.3** [PlociennikPi1] ZnO-based thin-film transparent contacts for applications in perovskite solar cells (Invited20 min)
*P. Płóciennik, A. Zawadzka, Ismail Elouedghiri Idrissi, Zouhair Sofiani, K. Wiśniewski, A. Laouid, A. Marjanowska and Z. Łukasiak*

17.00 **We.D5.4** [MarjanowskaAr1] Argon Environment Influence on Perovskite Thin Film Durability (15 min)
*A. Marjanowska, H. El Karout, A. Zawadzka, P. Płóciennik, D. Guichaoua, B. Sahraoui*

17.15 **We.D5.5** [LaouidAr1] Investigation of the Physical Properties of Doped ZnS Thin Films Manufactured by PVD (15 min)
*Amina Laouid, Amine Alaoui Belghiti, Krzysztof Wisniewski, Przemyslaw Plociennik, Abdelowahed Hajjaji, Anna Zawadzka*

**DAY 4 - Thursday July 18**

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

**Aula 1 - networks, Thursday July 18**

**8.40 - 10.00 Th.A1 - MALOC 2, Chair: Sebastian Troìa**

8.40 **Th.A1.1** [AibinMi1] Cloud Resource Allocation Recommendation Based on Machine Learning (Invited20 min)
*Arpit Semwal, Xiaofeng Yue, Yuzhe Shen, Michal Aibin*

9.00 **Th.A1.2** [AbdelliKi1] Computer Vision for Anomaly Detection in Optical Networks with State of Polarization Image Data: Opportunities and Challenges (Invited20 min)
*Khouloud Abdelli, Matteo Lonardi, Jurgen Gripp, Samuel Olsson, Fabien Boitier, and Patricia Layec*

9.20 **Th.A1.3** [BiancoAi1] Synthetic Data Generation using Diffusion Models for ML-based Lightpath Quality of Transmission Estimation Under Extreme Data Scarcity (Invited20 min)
*Davide Andreoletti, Cristina Rottondi, Omran Ayoub, Andrea Bianco*

9.40 **Th.A1.4** [YanSi1] Unified Monitoring and Telemetry Platform for Future Intelligent Optical Networks (Invited20 min)
*Sen Shen, Jing Han, Haiyuan Li, Yiran Teng, Shuangyi Yan, Dimitra Simeonidou*

**Aula 3 - access, Thursday July 18**

8**.40 - 10.15 Th.A2 - WAOR 1, Chair: Salvatore Spadaro**

8.40 **Th.A2.1** [VarvarigosEi1] Optimizing Light-Tree and Edge Resource Placement for Diverse Latency Needs (Invited20 min)
*P. Soumplis, K. Yiannopoulos, K. Christodoulopoulos, E. Varvarigos*

9.00 **Th.A2.2** [WaldmanHi1] A Comparison between the Erlang and Engset Traffic Models in the Provisioning of an Optical Link (Invited20 min)
*Helio Waldman, Rodrigo C. Bortoletto, Vinicius F. de Souza*

9.20 **Th.A2.3** [AibinMi2] Reinforcement Learning for Power Management in Low-margin Optical Networks (Invited20 min)
*Sze Ka Tse, Xiaoyang Zhao, Anita Chan, Di Tang, Aanchan Mohan, Carlos Natalino, Michal Aibin*

9.40 **Th.A2.4** [BonaniLHi1] Improving the Performance of C/C+L Optical Networks with All-optical Wideband Wavelength Converters and Route Segmentation (Invited20 min)
*Felipe A. S. Tavares, , Eric A. M. Fagotto, Franco Callegati, Luiz H. Bonani*

10.00 **Th.A2.5** [RinconDr1] Deep Reinforcement Learning-Based Joint Scheduling and Routing for Time-Sensitive Networks (15 min)
*Sergi Garcia-Cantón, Cristina Cervelló-Pastor, David Rincón-Rivera, Sebastià Sallent-Ribes*

**Aula 5 - systems, Thursday July 18**

**8.40 - 10.25 Th.A3 - Qcomms 4, Chair: Jaume Comellas**

8.40 **Th.A3.1** [MartelliPi1] Role of the uncertainty principle in observing interference (Invited20 min)
Paolo Martelli

9.00 **Th.A3.2** [MugaNi1] Coexistence of Classical and Quantum Signals in Hybrid Fiber and Free-Space Optics Links for QKD Integration (Invited20 min)
*Nelson J. Muga, Sara Mantey, Diogo Cruz, Ana Rocha, Nuno A. Silva, Marco A. Fernandes, Gil M. Fernandes, Fernando P. Guiomar, Paulo Monteiro, Armando N. Pinto*

9.20 **Th.A3.3** [ValloneGi1] Recent advances in quantum communication and random number generation (Invited20 min)
*Giuseppe Vallone*

9.40 **Th.A3.4** [SebastianLombranaAr1] A purpose-specific design for the next iteration of the Madrid quantum network (15 min)
*Alberto Sebastián-Lombraña, David Rincón, Juan P. Brito, Laura Ortiz and Vicente Martín*

9.55 **Th.A3.5** [AdillonPr1] CV-QKD in Coexistence with 1 Gb/s Classical Channel Using Electrical Frequency Division Multiplexing (15 min)
*P. Adillon, S. Sarmiento, J. Tabares, E. Llanos, H. de Riedmatten, and S. Etcheverry*

10.10 **Th.A3.6** [IsmailTr2] Exploring Quantum Key Distribution for Secure Communication in High-Altitude Platforms (15 min)
*Nancy Alshaer and Tawfik Ismail*

**Aula 7 - fibres, Thursday July 18**

**8.40 - 10.10 Th.A4 - ICTON 2, Chair: Farhad Arpanaei**

8.40 **Th.A4.1** [CastelloLurbeDi1] Supercontinuum for accurate nonlinearity measurements (Invited20 min)
*David Castelló-Lurbe, Christian Cuadrado-Laborde, Enrique Silvestre, Antonio Díez, and Miguel V. Andrés*

9.00 **Th.A4.2** [XuTi1] GMI Optimisation for End-to-End Learning-based Probabilistic Constellation Shaping in 400-Gbits/s/λ DP-64QAM Optical Communication System (Invited20 min)
*Fengyuan Tian, Zheng Liu, Ji Qi, Mark Leeson, Gan Zheng, Tianhua Xu*

9.20 **Th.A4.3** [VirgillitoEi1] Observation and Modeling of Filtering Penalties in Optical Switched Networks (Invited20 min)
*Emanuele Virgillito, Stefano Straullu, Andrea Castoldi, Fransisco M. Rodriguez, Rosanna Pastorelli, Vittorio Curri*

9.40 **Th.A4.4** [YankovMi1] Rate adaptive constellation shaping for heterogeneous optical networks with variable QoT (Invited20 min)
*Metodi P. Yankov, Smaranika Swan, Ognjen Jovanovic, Darko Zibar and Francesco Da Ros*

10.00 **Th.A4.5** [TorresFerrerar1] Analytical Model for Performance Estimation of Coherent Digital Subcarrier Multiplexing Systems Affected by Filtering, Optical and Electrical Noise (post-deadline, 10 min)
*Pablo Torres-Ferrera, Giuseppe Parisi, Giuseppe Rizzelli, Roberto Gaudino, Antonio Napoli*

**Aula 9 - SWP, Thursday July 18**

**8.40 - 10.10 Th.A5 - SWP 13 sensors & biosensors, Chairlady: Anna Zawadzka**

8.40 **Th.A5.1** [ZhangYr1] A High-speed Scanning Module Based on a DBR Tunable Laser for FBG Sensor Systems (15 min)
*Wenqian Yuan, Kun Shang, Chongqian Zhu Haikun Zhang, Yanan Zhai, Xingwei Sun, Yaping Zhang*

8.55 **Th.A5.2** [AnelliFr1] Enhancing Sensing Capabilities: Fabrication of Tapered Optical Fiber Sensors in Fluoride Glasses (15 min)
*Francesco Anelli, Andrea Annunziato, Antonella Maria Loconsole, Vito Vincenzo Francione, Md. Imran Khan, Solenn Cozic, Samuel Poulain, and Francesco Prudenzano*

9.10 **Th.A5.3** [IsmailTr1] Telecom Tower Stability Monitoring System: Integration of Environmental Sensors for Structural Health Assessment (15 min)
*Irene S. Fahim, Mohamed Tawfik, Tawfik Ismail*

9.25 **Th.A5.4** [MochalovLr1] CVD-prepared PbSe films for mid-IR photodetectors with high detectivity (15 min)
*Ekaterina Slapovskaya, Leonid Mochalov, Mikhail Kudryashov and Edik Rafailov*

9.40 **Th.A5.5** [MendozaCastroJHr1] Polycrystalline Silicon metasurfaces enabling multi-scenario sensing applications in the mid-infrared (15 min)
*J.H. Mendoza-Castro, A.S. Vorobev, S. Iadanza, G. Malvicini, A. D’Orazio, M. Grande, G. Magno, B. Lendl, and L. O’Faolain*

9.55 **Th.A5.6** [DellOlioFr1] Performance Assessment of Silicon Nitride Ring Resonators for Biosensing Applications (15 min)
*A. la Grasta, M. I. Gómez-Gómez, A. Griol, M. De Carlo, V.M.N. Passaro, A. Martínez, F. Dell’Olio*

**Aula 11 - D-Photon, Thursday July 18**

 **8.40-9.30 Th.A6 - Re-scheduled Presentations session 1, Chair: Marian Marciniak**

8.40 **Th.A6.1** [WuGi1] Implementation of Time Zone in China to Save Energy (Invited20 min)
*Guang Wu, Shaomin Yan*

9.00 **Th.A6.2** [WuGp1] Alignments and Trimmed Alignments: Their Characteristics and Phylogenetic Trees (10 min)
*Guang Wu, Shaomin Yan*

9.10 **Th.A6.3** [WuGp2] Effects of Substitution Matrices, Trimming and Outliers on Alignments and Phylogenetic Tree Constructions of Big Dataset (10 min)
*Guang Wu, Shaomin Yan*

9.20 **Th.A6.4** [WuGp3] N-terminal Domain (NTD) of Spike Protein from SARS-CoV-2 May Cause COVID-19 Multiple Tropisms and Serve as a Potential Drug Target (10 min)
*Guang Wu, Shaomin Yan*

**Aula 13 - materials&devices, Thursday July 18**

**8.40 - 10.10 Th.A7 - PICAW 6, Chair: Kamil Pierściński**

8.40 **Th.A7.1** [CabritaPr1] Experimental Validation of Ring-Assisted Mach-Zehnder Interferometers for Optical Communications (15 min)
*Pedro Cabrita, Maria Carvalhais, Inês Venâncio, António Figueiredo, Mário Lima, António Teixeira*

8.55 **Th.A7.2** [CaloGr1] Thin Film Lithium Niobate 1xN Multimode Interference Splitters (15 min)
*Pezhman Yousefi, Muhammad Khalid, Vincenzo Petruzzelli, Giovanna Calò*

9.10 **Th.A7.3** [DeCarloMr1] Bragg-grating-coupled Fano resonator with dissipative coupling for anti-PT-symmetric gyroscopes (15 min)
*Martino De Carlo, Francesco De Leonardis, Francesco Dell’Olio, Pietro Peliti, Fabrizio Berton, Mario Lucchesini, Vittorio M.N. Passaro*

9.25 **Th.A7.4** [MarquesAr1] Parametrization study of SiP Optical Ring Resonators as add-drop filters (15 min)
*Ana Marques, Maria João Carvalhais, Inês Venâncio, António Figueiredo, António Teixeira*

9.40 **Th.A7.5** [PierscinskaDr1] Thermoreflectance Spectroscopy Technique: An Advanced Tool for Investigation of Thermal Phenomena in Semiconductor Devices (15 min)
*Dorota Pierścińska, Agata Krząstek, Michał Nagowski, Katarzyna Pieniak, Dominika Niewczas, Artur Broda, Kamil Pierściński*

9.55 **Th.A7.6** [VenancioIr1] Influence of contra-directional couplers’ design parameters in optical filtering for telecommunications (15 min)
*Inês Venâncio, Maria João Carvalhais, Joana Tátá, João Santos, Francisco Rodrigues, Mário Lima, António Teixeira*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Th.B - Thursday noon parallel sessions \*\*\*\*\*\*\*\*\*\*\*\*\*\**

**Aula 3 - access, Thursday July 18**

**11.55-12.15 Th.B2 - WAOR 2, Chair: Emmanouel Varvarigos**

10.40 **Th.B2.1** [SpadaroSi1] On the Path Computation for E2E deterministic services in future 6G networks (Invited20 min)
*Salvatore Spadaro, Albert Pagès, Enric Guasch, Fernado Agraz*

11.00 **Th.B2.2** [PavonMarinoPi1] An evaluation of Flex-Algo traffic engineering techniques in Segment-Routing networks (Invited20 min)
*A. G. Buendía-López, F.J. Moreno-Muro, L. M. Contreras, J. Folgueira, P. Pavon*

11.20 **Th.B2.3** [RomeroReyesRi1] Robust Restoration of IP Traffic from Optical Failures by Deep Reinforcement Learning and Graph Neural Networks (Invited20 min)
*Malek Bekri, Ronald Romero Reyes, Thomas Bauschert*

11.40 **Th.B2.4** [KnapinskaAr1] Impact of Geographical Constraints on the Performance of Intent-Based Networks (15 min)
*Aleksandra Knapińska, Piotr Lechowicz, Krzysztof Walkowiak*

**Aula 7 - fibres, Thursday July 18**

**10.40-12.30 Th.B4 - ICTON 3, Chair: Emanuele Virgillito**

10.40 **Th.B4.1** [LarrabeitiDi1] On the impact of VR/AR applications on optical transport networks: First experiments with Meta Quest 3 gaming and conferencing applications (Invited20 min)
*C. de Quinto, A. Navarro, G. Otero, N. Koneva, J. A. Hernández, M. Quagliotti, A. Sanchez-Macian, F. Arpanaei, P. Reviriego, O. González de Dios, J. M. Rivas-Moscoso, E. Riccardi, D. Larrabeiti*

11.00 **Th.B4.2** [SgambelluriAi1] Open Optical Software Development Kit (OpenOSDK) for Optical Line System Components (Invited20 min)
*Andrea Sgambelluri, Piero Castoldi, Filippo Cugini*

11.20 **Th.B4.3** [FabregaJi1] Non Intrusive Optical Performance Monitoring in Fiber Optic Networks Using Coherent Receivers as Spectrum Analyzers (Invited20 min)
*Josep M. Fabrega, Laia Nadal, Javier Vilchez, Michela Svaluto Moreolo, Mumtaz Ali, Raül Muñoz*

11.40 **Th.B4.4** [WangXi1] Undersea Cable Path Planning with Curvature Constraints: Undersea Cable Path Planning with Curvature Constraints (Invited20 min)
*Xinyu Wang, Fahan Chen, Zengfu Wang, Tianjiao Wang, Elias Tahchi, Bill Moran, Moshe Zukerman*

12.00 **Th.B4.5** [BessinFr1] Parametric Modulation Instability in Dual Polarization Driven Passive Fiber Cavities Induced by Periodic Polarization Rotation (15 min)
*Florent Bessin, Auro Perego*

12.15 **Th.B4.6** [GuerreroJr1] System-level Simulation of Pulse Amplitude Modulation (PAM) Transmission through PMMA-POFs with Various Index Profiles (15 min)
*Jorge Guerrero, Dwight Richards, M. Angeles Losada, Alicia Lopez, Javier Mateo, N. Antoniades, Nicholas Madamopoulos, and Xin Jiang*

**Aula 9 - SWP, Thursday July 18**

**10.40-12.25 Th.B5 - SWP 14 metasurfaces, Chairlady: Crina Cojocaru**

10.40 **Th.B5.1** [CiminelliCr1] Trapping and destruction of virus through dielectric-plasmonic hybrid nanobowtie dimer (15 min)
*Paola Colapietro, Giuseppe Brunetti, Aurora Elicio, Francesco Ferrara, Caterina Ciminelli*

10.55 **Th.B5.2** [WrobelPr1] Ellipsometric characterization of chiral plasmonic nanostructures (15 min)
*Piotr Wróbel, N. Scott Lynn Jr.*

11.10 **Th.B5.3** [FilogranoFr1] Selective Color Reflection through Guided Mode Resonance Transparent Metasurfaces (15 min)
*Francesca Filograno, Ilaria Marasco, Béatrice Dagens, Olivier Gauthier-Lafaye, Vincenzo Petruzzelli, Giovanna Calò, and Giovanni Magno*

11.25 **Th.B5.4** [PiscopoGr1] Dielectric meta-platform for Mid-IR enhancing applications (15 min)
*Giovanni Piscopo, Artem S. Vorobev, Giovanni Magno, Liam O’Faolain*

11.40 **Th.B5.5** [MagnoGr1] Transparent antenna with reconfigurable pattern based on programmable graphene parasitic elements (15 min)
*Sana Ullah, Ilaria Marasco, Antonella D’Orazio, Giovanni Magno*

11.55 **Th.B5.6** [MarascoIr1] Design and analysis of a graphene-based metasurface modulator for 6G wireless communications (15 min)
*Ilaria Marasco, Carla Cantore, Antonella D’Orazio, Giovanni Magno*

12.10 **Th.B5.7** [KhanMIr1] Ultra-Thin Metasurface for High Gain and Beam Steering at 5G Millimeter Wave Applications (15 min)
*Md. Imran Khan, Francesco Anelli, Antonella Maria Loconsole, Vito Vincenzo Francione, Francesco Prudenzano*

**Aula 11 - D-Photon, Thursday July 18**

**10.40-12.15 Th.B6 - Re-scheduled Presentations sessions 2, Chair: Marian Marciniak**

10.40 **Th.B6.1** [ThylenLi1] Integrated Nanophotonics and Nanoelectronics and the Quest for Novel Photonics and Electronics Materials (Invited20 min)
*Lars Thylén*

11.00 **Th.B6.2** [ObayyaSi1] Novel Finite Element Complex Domain Beam Propagation Method for Photonic Devices (Invited20 min)
*Salah S. A. Obayya*

11.20 **Th.B6.3** [GhalaiiMi1] Multiple-Antenna Continuous-Variable Quantum Cryptography (Invited20 min)
*Masoud Ghalaii, Ahmed Q. Lawey, and Mohsen Razavi*

11.40 **Th.B6.4** [GonzalezEstebanezLi1] Multi-AGV load transport: a TSN use case (Invited20 min)
*Jesús Enrique Sierra García, Laura González Estébanez*

12.00 **Th.B6.5** [AlhazmiASr1] Access-Point to Access-Point Connectivity for PON-based OWC Spine and Leaf Data Centre Architecture (15 min)
*Abrar S. Alhazmi, Sanaa H. Mohamed, Ahmad Qidan, T. E. H. El-Gorashi, and Jaafar M. H. Elmirghani*

**12.30 Closing Ceremony & Announcement of ICTON 2025**