# ICTON 2009 Technical Programme

## Sunday, June 28

**SESSION Su.A (15:30 – 18:00)** — ***Room: North Auditorium (A2 )***

**EURO-FOS Workshop on Photonic Systems**

**Su.A.1** **15:30** Organizers introduction
*I. Tomkos, E. Kehayas*

**Su.A.2** **15:40** EURO-FOS: Pan-European photonics task force: Integrating Europe's expertise on photonic subsystems
*E. Kehayas*

**Su.A.3** **16:00** Non-linear processes enabling optical signal processing
*R. Manning*

**Su.A.4** **16:30** Approaching terabit/second switching
*H.C. Hansen Mulvad*

**Su.A.5** **17:00** Progress of photonic switching systems for enabling advanced routing functionalities: From bulk UNIs to fully integrated photonic routers
*L. Stampoulidis*

**Su.A.6** **17:30** Scalable photonic packet routers
*H. Dorren*

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| **16:00 – 18:30** | **Early registration and collection of proceedings and offers** |
| **18:30 – 20:00** | **Wine and Cheese Cocktail (Local: Ponta Delgada University )** ***Cultural program: University TUNA*** |

## Monday, June 29

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| **8:00** | **Registration** |

**Opening Ceremony (9:15 – 9:30)** — ***Room: Main Auditorium (A1)***

**SESSION Mo.A (9:30 – 11:00)** — ***Room: Main Auditorium (A1)***

**Plenary Session** *Chair: Hans-Georg Unger*

**Mo.A.1** **9:30** Fiber-optic sensors – An overview (***Invited***)
*O. Strobel, D. Seibl, J. Lubkoll, R. Rejeb*

**Mo.A.2** **10:00** Optical flow switching: A new "green" transport mechanism for fiber networks (***Invited***)
*V.W.S. Chan*

**Mo.A.3** **10:30** Soft glass microstructured optical fibers: Recent progress in fabrication and opportunities for novel optical devices (***Invited***)
*H. Ebendorff-Heidepriem, T.M. Monro*

| 11:00 - 11:30 *Coffee-break* | 11:00 - 11:30 *Coffee-break* | 11:00 - 11:30 *Coffee-break* | 11:00 - 11:30 *Coffee-break* | 11:00 - 11:30 *Coffee-break* |
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| **SESSION Mo.B1** (11:30 – 13:10) ***Room: Main Auditorium (A1)*** **SWP WG3 I** **Supercontinuum generation** *Chair: Krassimir Panajotov* | **SESSION Mo.B2** (11:30 – 13:10) ***Room: North Auditorium (A2)*** **ICTON I** **Systems I** *Chair: Armin Ehrhardt* | **SESSION Mo.B3** (11:30 – 13:10) ***Room: South Auditorium (A3)*** **WAOR I** *Chair: Josep Solé-Pareta* | **SESSION Mo.B4** (11:30 – 13:10) ***Room: Small Auditorium (A6)*** **MARS I** *Chair: Giorgio M. Tosi Beleffi* | **SESSION Mo.B5** (11:30 – 13:15) ***Room: 12 (A4)*** **FSO** *Chair: Craig Michie* |
| **Mo.B1.1** 11:30 Enhanced supercontinuum generation in the nanosecond pump regime using specialty microstructured fibers (***Invited***) *J. Cascante-Vindas, A. Díez, S. Torres-Peiró, J.L. Cruz, M.V. Andrés* | **Mo.B2.1** 11:30 An optically powered fibre network for heterogeneous subscribers (***Invited***) *W. Freude, M. Röger, M. Dreschmann, M. Huebner, A.W. Bett, J. Becker, J. Leuthold* | **Mo.B3.1** 11:30 Power reduction techniques in multilayer traffic engineering (***Invited***) *B. Puype, W. Vereecken, D. Colle, M. Pickavet, P. Demeester* | **Mo.B4.1** 11:30 Economics and markets of semiconductor optical amplifiers (***Invited***) *L. Spiekman* | **Mo.B5.1** 11:30 Channel models for optical wireless communication systems (***Invited***) *H. Joshi, R.J. Green, M.S. Leeson* |
| **Mo.B1.2** 11:50 Shaping the supercontinuum spectral profile (***Invited***) *J.J. Miret, E. Silvestre, P. Andrés* | **Mo.B2.2** 11:50 Remote functionalities in next generation networks (***Invited***) *G.M. Tosi Beleffi, A.L.J. Teixeira, N. Wada* | **Mo.B3.2** 11:50 Control plane issues in cross-layer optimized dynamic optical networks (***Invited***) *C. Vijaya Saradhi, E. Salvadori, A. Zanardi, S. Dalsass, R. Piesiewicz, I. Tomkos* | **Mo.B4.2** 11:50 The prospects of FTTH deployments and their impact on our (broadband) world (***Invited***) *I. Tomkos, M. Angelou* | **Mo.B5.2** 11:50 Reliable optical wireless links used as feeder links between earth and satellite (***Invited***) *E. Leitgeb, P. Brandl, T. Plank, M. Löschnigg, F. Ozek, M.S. Awan, M. Wittig* |
| **Mo.B1.3** 12:10 Effects of pulse self-focusing on supercontinuum generation in multimode optical fibers (***Invited***) *P. Horak, F. Poletti* | **Mo.B2.3** 12:10 Orthogonal frequency division multiplexing (OFDM) in optical communications with direct detection for metro networks (***Invited***) *W. Rosenkranz, A. Ali, J. Leibrich* | **Mo.B3.3** 12:10 Differentiated resilience for anycast flows in MPLS networks *T.E.H. El-Gorashi, J.M.H. Elmirghani* | **Mo.B4.3** 12:10 Economic analysis of future access network deployment and operation (***Invited***) *B. Lannoo, M. Kantor, L. Wosinska, Ko. Casier, J. Van Ooteghem, S Verbrugge, J. Chen, K. Wajda, M. Pickavet* | **Mo.B5.3** 12:10 Advances and prospects in high-speed information broadcast using phosphorescent white-light LEDs (***Invited***) *K.-D. Langer, J. Vučić, C. Kottke, L. Fernández del Rosal, S. Nerreter, J.W. Walewski* |

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| **Mo.B1.4** 12:30 | Rogue waves in femtosecond supercontinuum generation (***Invited***) *G. Genty, M. Erkintalo, J.M. Dudley* | **Mo.B2.4** 12:30 | PAPR reduction techniques for coherent optical OFDM transmission (***Invited***) *B. Goebel, S. Hellerbrand, N. Haufe, N. Hanik* | **Mo.B3.4** 12:25 | Efficient traffic routing for current and future demands in optical networks *K.D.R. Assis, K.C. Cruz, M.S. Savasini, H. Waldman* | **Mo.B4.4** 12:30 | The market, rationale and technology options for flexible transparent optical networks (***Invited***) *R. Dorward* | **Mo.B5.4** 12:30 | UMTS radio-over-fiber pico-cell interconnection employing low-cost VCSELs and multi-mode fibre *R. Alemany, R. Llorente* |
| **Mo.B1.5** 12:50 | High brilliance fiber lasers for the scribing of photovoltaic modules (***Invited***) *S. Selleri, A. Cucinotta, F. Poli, D. Passaro* | **Mo.B2.5** 12:50 | All-optical processing, still a chance with DP-DQPSK (***Invited***) *R. Morais, P. Monteiro, P. Marques* | **Mo.B3.5** 12:40 | Differentiated resilience with dynamic traffic grooming for WDM mesh networks *T.E.H. El-Gorashi, J.M.H. Elmirghani* | **Mo.B4.5** 12:50 | A new approach to provide the differentiated levels of network survivability under a double node failure (***Invited***) *J. Rak, W. Molisz* | **Mo.B5.5** 12:45 | MEO optical intersatellite network: Performance evaluation *V. Carrozzo, G. Parca* |
| | | | | **Mo.B3.6** 12:55 | The performance for heuristic algorithms for virtual topology design in all optical WDM networks *F. El-Khamy, M. Nasr, H.M.H. Shalaby, HT. Mouftah* | | | **Mo.B5.6** 13:00 | Background noise limitations on optical intersatellite links for data relay applications *E. Duca* |
| 12:40 - 14:10 | ***Lunch break*** | 12:40 - 14:10 | ***Lunch break*** | 12:40 - 14:10 | ***Lunch break*** | 12:40 - 14:10 | ***Lunch break*** | 12:40 - 14:10 | ***Lunch break*** |
| **SESSION Mo.C1** (14:10 – 15:50) ***Room: Main Auditorium (A1)*** **SWP WG3 II** **Quantum Dots** *Chair: Jose Pozo* | | **SESSION Mo.C2** (14:10 – 15:40) ***Room: North Auditorium (A2)*** **ICTON II** **Systems II** *Chair: Madeleine Glick* | | **SESSION Mo.C3** (14:10 – 15:50) ***Room: South Auditorium (A3)*** **WAOR II** **Optical Burst Switching I** *Chair: Darli Mello* | | **SESSION Mo.C4** (14:10 – 15:45) ***Room: Small Auditorium (A6)*** **MARS II** *Chair: Bostjan Batagelj* | | **SESSION Mo.C5** (14:10 – 15:45) ***Room: 12 (A4)*** **GOWN I** *Chair: Eszter Udvary* | |
| **Mo.C1.1** 14:10 | Quantum dot waveguides: ultrafast dynamics and applications (***Invited***) *Y. Chen, J. Mørk* | **Mo.C2.1** 14:10 | 40 Gb/s optical single-sideband transmission resorting to pseudolinear regime and electrical dispersion compensation (***Invited***) *D. Fonseca, A. Cartaxo, P. Monteiro* | **Mo.C3.1** 14:10 | A performance survey on deflection routing techniques for OBS networks (***Invited***) *O. Pedrola, S. Rumley, D. Careglio, M. Klinkowski, P. Pedroso, J. Solé-Pareta, C. Gaumier* | **Mo.C4.1** 14:10 | A statistical model for CapEx fast calculation in optical transport networks (***Invited***) *A.N. Pinto, C. Pavan, R.M. Morais* | **Mo.C5.1** 14:10 | Convergence of optical and millimeter-wave broadband wireless access networks (***Invited***) *M.C.R. Medeiros, R. Avó, P. Laurêncio, I. Darwazeh, J.E. Mitchell, P.M.N. Monteiro, H.J.A. da Silva* |
| **Mo.C1.2** 14:30 | Polarization instabilities and nonlinear dynamics in a quantum dot laser (***Invited***) *Ł. Olejniczak, M. Sciamanna, H. Thienpont, K. Panajotov, A. Mutig, F. Hopfer, D. Bimberg* | **Mo.C2.2** 14:30 | Recent developments in 40 Gsymbol/s coherent WDM (***Invited***) *F.C. Garcia-Gunning, A.D. Ellis, J. Zhao, S. Ibrahim, P. Frascella, B. Cuenot* | **Mo.C3.2** 14:30 | Adaptive burst admission and forwarding in OBS networks (***Invited***) *S. Rumley, O. Pedrola, M. Klinkowski, P. Pedroso, C. Gaumier, D. Careglio, J. Solé-Pareta* | **Mo.C4.2** 14:30 | Importance of reliability when dimensioning an optical transparent network with physical impairments awareness (***Invited***) *A. Morea, T. Zami, F. Leplingard* | **Mo.C5.2** 14:30 | Experimental analysis of temperature dependence in multimode optical fiber links for Radio-over-Fiber applications *D.S. Montero, I. Gasulla, I. Möllers, D. Jäger, J. Capmany, C. Vázquez* |
| **Mo.C1.3** 14:50 | Optimum filtering schemes for performing wavelength conversion with quantum-dot SOA (***Invited***) *S. Sygletos, R. Bonk, T. Vallaitis, A. Marculescu, P. Vorreau, J. Li, R. Brenot, F. Lelarge, G.H. Duan, W. Freude, J. Leuthold* | **Mo.C2.3** 14:50 | Field trial to improve the fibre infrastructure towards 40 Gbit/s transmission and beyond and decrease economically efficient the link PMD by exploitation of a POTDR (***Invited***) *A. Ehrhardt, M. Paul, L. Schürer, C. Gerlach, W. Krönert, D. Fritzsche, D. Breuer, V. Fürst, N. Cyr, H. Chen, G.W. Schinn* | **Mo.C3.3** 14:50 | Routing with prioritization based on statistics in OBS networks (***Invited***) *M. Escolar Díaz, X. Hesselbach* | **Mo.C4.3** 14:50 | Management platform for next generation optical networks (***Invited***) *K. Janicki, P. Mrozicki, P. Wiatr* | **Mo.C5.3** 14:45 | Experimental evaluation of the transmission in a low cost SCM/WDM radio over fiber system employing optical broadband sources and interferometric structures *F. Grassi, J. Mora, B. Ortega, J. Capmany* |
| **Mo.C1.4** 15:10 | Optical fibre sensing and analytical imaging with semiconductor nanocrystals (***Invited***) *P.A.S. Jorge, C. Maule, H. Rodrigues, J.C.G. Esteves da Silva, F. Farahi* | **Mo.C2.4** 15:10 | Analysis of NRZ- and RZ-DQPSK for 112 Gb/s DWDM transmission *L. Wang, M. Forzati, J. Martensson* | **Mo.C3.4** 15:10 | Evaluation of resource reservation protocols for IP over OBS networks (***Invited***) *J.J.P.C. Rodrigues, B. Vaidya* | **Mo.C4.4** 15:10 | Rationale for polymer optical fibres in-building cabling (***Invited***) *S. Abrate, R. Gaudino, A. Nocivelli* | **Mo.C5.4** 15:00 | Extension of a 40 Gbps link with a directly detected 2.5 Gbps subcarrier channel *M. Chaciński, R. Schatz, U. Westergren, A. Djupsjöbacka* |
| **Mo.C1.5** 15:30 | Ultrafast processes in InAs/GaAs quantum dot based electro-absorbers (***Invited***) *T. Piwonski, J. Pulka, G. Madden, J. Houlihan,* | **Mo.C2.5** 15:25 | Estimation of non-linear effects and chromatic dispersion compensation on propagation of 100 Gb/s signals *M. Karásek, J. Vojtěch,* | **Mo.C3.5** 15:30 | Traffic grooming in OBS networks based on virtual optical memories (***Invited***) *N. Boudriga, W. Abdallah, M. Hamdi* | **Mo.C4.5** 15:30 | Mechanisms for cost-effective P2P traffic management *M. Kantor, J. Derkacz, P. Chołda, S. Soursos, G. Stamoulis* | **Mo.C5.5** 15:15 | A heuristic for fault-tolerance provisioning in multi-radio hybrid wireless-optical broadband access network *G. Schütz, N.S.C. Correia* |

*G. Huyet, E.A. Viktorov, T. Erneux, P. Mandel*

*J. Radil*

**Mo.C5.6** 15:30 Hybrid communication system applying electric CDMA over optical WDM
*A. Amador, A. Teixeira, M. Lima*

**15:30 - 16:15** *Coffee-break*

## SESSION Mo.D1
(16:15 – 17:45)
***Room: Main Auditorium (A1)***
**SWP WG3 III**
**VCSELs**
*Chair: Severine Philippe*

**Mo.D1.1** 16:15 Recent developments in long wavelength VCSELs based on localized wafer fusion (***Invited***)
*E. Kapon, A. Sirbu, V. Iakovlev, A. Mereuta, A. Caliman, G. Suruceanu*

**Mo.D1.2** 16:35 Vectorial analysis of dielectric photonic crystal VCSEL (***Invited***)
*Il-Sug Chung, J. Mørk*

**Mo.D1.3** 16:55 Characterization of GaSb based VCSE and MQW lasers for 2.3 μm sensing application (***Invited***)
*S. Civiš, J. Cihelka, I. Matulková*

**Mo.D1.4** 17:15 VCSEL laser characterization and modelling for future optical transceiver at the Super Large Hadron Collider
*S. Silva, H.M. Salgado*

**Mo.D1.5** 17:35 Temperature reduction in vertical-external-cavity surface-emitting-lasers (VECSEL) active region
*M. Wasiak, R.P. Sarzała, A. Jasik*

## SESSION Mo.D2
(16:15 – 17:50)
***Room: North Auditorium (A2)***
**ICTON III**
**Networks**
*Chair: Roger Green*

**Mo.D2.1** 16:15 Increasing scope for circuit switching in the optical Internet (***Invited***)
*M. Zukerman*

**Mo.D2.2** 16:35 A generic time driven fractional wavelength OCS (***Invited***)
*Z. Rosberg, D. Ostry*

**Mo.D2.3** 16:55 Management and control of transparent optical network considering physical impairments (***Invited***)
*M. Suzuki, T. Tsuritani*

**Mo.D2.4** 17:15 Performance analysis of Harmony: An optical, multi-domain network resource broker (***Invited***)
*S. Figuerola, J.A. García-Espín, J. Ferrer, A. Willner*

**Mo.D2.5** 17:35 Method for placing bypass capable nodes in two-layer networks
*M. Schlosser, E. Patzak*

## SESSION Mo.D3
(16:15 – 17:40)
***Room: South Auditorium (A3)***
**WAOR III**
**Optical Burst Switching II**
*Chair: Manos Varvarigos*

**Mo.D3.1** 16:15 Lightpath establishment in PCE-based dynamic transparent optical networks assisted by end-to-end quality of transmission estimation (***Invited***)
*N. Sambo, Y. Pointurier, F. Cugini, P. Castoldi, I. Tomkos*

**Mo.D3.2** 16:35 Optimized node dimensioning in OBS networks using contention minimization in the wavelength domain (***Invited***)
*J. Pedro, P. Monteiro, J. Pires*

**Mo.D3.3** 16:55 Anycast routing in OBS based grid networks under heterogeneous traffic
*W. Adlan, T.E.H. El-Gorashi, J.M.H. Elmirghani*

**Mo.D3.4** 17:15 On avoiding-minimizing burst collisions in optical burst-switched networks without wavelength conversion
*J. Triay, J. Perelló, C. Cervelló-Pastor, S. Spadaro*

**Mo.D3.5** 17:35 An optical burst switched access and distribution architecture
*G. Franzl*

## SESSION Mo.D4
(16:15 – 17:35)
***Room: Small Auditorium (A6)***
**MARS III**
*Chair: Wojciech Molisz*

**Mo.D4.1** 16:15 FTTH networks deployment in Slovenia (***Invited***)
*B. Batagelj*

**Mo.D4.2** 16:35 ICT and telecommunication competencies in the Mediterranean (***Invited***)
*R. Angeletti*

**Mo.D4.3** Effects of liberalization of telecom markets in developing countries: Armenia 1998-2008 case study (***Invited***)
*V. Baghdasaryan*
***(Cancelled)***

**Mo.D4.4** 16:55 Optical packet switch and transport: A new metro platform to reduce costs and power by 50% to 75% while simultaneously increasing deterministic performance levels (***Invited***)
*J. Dunne, T. Farrell, J. Shields*

**Mo.D4.5** 17:15 Optical transport networks: An industry perspective (***Invited***)
*Á. Carvalho*

## SESSION Mo.D5
(16:15 – 17:45)
***Room: 12 (A4)***
**GOWN II**
*Chair: Carmo Medeiros*

**Mo.D5.1** 16:15 External modulator linearization techniques for high performance radio over fiber transmission systems (***Invited***)
*A. Ferreira, T. Silveira, D. Fonseca, R. Ribeiro, P. Monteiro*

**Mo.D5.2** 16:35 Multifunctional SOAs in optical communication systems (***Invited***)
*E. Udvary, T. Berceli*

**Mo.D5.3** 16:55 Microwave photonics processing controlling the speed of light in semiconductor waveguides (***Invited***)
*W. Xue, Y. Chen, S. Sales, S. Blaaberg, J. Mørk, J. Capmany*

**Mo.D5.4** 17:15 Simulation of mm-wave over fiber systems employing up-conversion using external modulators
*H. Vargues, R. Avó, P. Laurêncio, M.C.R. Medeiros*

**Mo.D5.5** 17:35 Novel photonic RF instantaneous frequency measurement system using a HiBi fiber-based interferometer
*M. Drummond, P. Monteiro, R. Nogueira*

**SESSION Bone WP 15**
**(18:00 – 19:00)**
***Room: 12 (A5)***

**19:30 – 24:00** **Ocean View Dinner** (Hotel Açores Atlantico) ***Cultural Program: Fado/Portuguese Guitar***

# Tuesday, June 30

**8:30** *Registration*

## SESSION Tu.A1
(9:00 – 10:40)
***Room: Main Auditorium (A1)***
**SWP WG3 IV**
**Nonlinearity**
*Chair: Katia Gallo*

**Tu.A1.1** 9:00 Phase locked harmonics etalon localization in opaque materials (***Invited***)
*C. Cojocaru, V. Roppo, G. D'Aguanno, F. Raineri, J. Trull, R. Raj, R. Vilaseca, M. Scalora*

**Tu.A1.2** 9:20 Some selected and functionalised organometallic molecules for NLO applications (***Invited***)
*B. Sahraoui, R. Czaplicki, J. Luc, J-L. Fillaut*

**Tu.A1.3** 9:40 Sensitivities of different nonlinear optical characterization techniques (***Invited***)
*G. Boudebs, K. Fedus*

**Tu.A1.4** 10:00 Second harmonic generation signal from full deep shade moisture plants using the two-photon laser scanning microscope (***Invited***)
*A.H. Reshak*

**Tu.A1.5** 10:20 Nonlinear optical response of water dispersions of iron oxide nanoparticles (***Invited***)
*S. Couris*

**10:30 - 11:15** *Coffee-break*

## SESSION Tu.A2
(9:00 – 10:50)
***Room: North Auditorium (A2)***
**ICTON IV**
**Amplification**
*Chair: Leo Spiekman*

**Tu.A2.1** 9:00 Ultra-long Raman fibre laser transmission links (***Invited***)
*V. Karalekas, J-D. Ania-Castañón, P. Harper, S.K. Turitsyn*

**Tu.A2.2** 9:20 Raman amplification challenges for next generation networks (***Invited***)
*P.S. André, B. Neto, C. Reis, A.M. Rocha, N. Wada, G.M. Tosi Beleffi, A. Teixeira*

**Tu.A2.3** 9:40 Spontaneous emission from saturated parametric amplifiers (***Invited***)
*K. Rottwitt, J. Raunkjær Ott, H. Steffensen, S. Ramachandran*

**Tu.A2.4** 10:00 All-optical conversion to vestigial sideband through self-phase modulation in semiconductor optical amplifier (***Invited***)
*T. Silveira, A. Ferreira, A. Teixeira, P. Monteiro*

**Tu.A2.5** 10:20 Transmission of 20x10GE channels over 334 km in a cascade of three TDM-pumped RFAs
*M. Karásek, J. Vojtěch, J. Radil*

**Tu.A2.6** 10:35 Experimental evaluation of modulation induced by continuous waves in a semiconductor optical amplifier
*S. Di Bartolo, E. Duca, D.M. Forin, S. Betti, A.L.J. Teixeira*

**10:30 - 11:15** *Coffee-break*

## SESSION Tu.A3
(9:00 – 10:45)
***Room: South Auditorium (A3)***
**WAOR IV**
**Impairment-Aware Routing**
*Chair: Davide Careglio*

**Tu.A3.1** 9:00 Impairment aware wavelength assignment for all-optical networks based on evolutionary computation (***Invited***)
*C.J.A. Bastos-Filho, D.A.R. Chaves, F.S.F. e Silva, R.V.B. Carvalho, H.A. Pereira, J.F. Martins-Filho*

**Tu.A3.2** 9:20 Improving IA-RWA algorithms in translucent networks by regenerator allocation (***Invited***)
*E. Marín-Tordera, R. Martínez, R. Muñoz, R. Casellas, J. Solé-Pareta*

**Tu.A3.3** 9:40 Cross layer RWA in WDM networks: Is the added complexity useful or a burden? (***Invited***)
*K. Christodoulopoulos, P. Kokkinos, K. Manousakis, E.A. Varvarigos*

**Tu.A3.4** 10:00 RWA algorithm aware of PMD and ASE for all-optical networks
*M. Massimino-Feres, L.C. Trevelin*

**Tu.A3.5** 10:15 Online physical-layer impairment-aware routing with quality of transmission constraints in translucent optical networks
*S. Pachnicke, N. Luck, P.M. Krummrich*

**Tu.A3.6** 10:30 Novel physical-layer impairment-aware routing algorithm for translucent optical networks with 43 Gb/s and 107 Gb/s channels
*S. Pachnicke, N. Luck, P.M. Krummrich*

**10:30 - 11: 15** *Coffee-break*

## SESSION Tu.A4
(9:00 – 10:30)
***Room: Small Auditorium (A6)***
**SWP WG1 I**
**Applications**
*Chair: Nigel P Johnson*

**Tu.A4.1** 9:00 Recent advances in interferometry using suspended core fibres (***Invited***)
*O. Frazão, J.M. Baptista, J.L. Santos, J. Kobelke, K. Schuster*

**Tu.A4.2** 9:20 Perfect lens tomography (***Invited***)
*K.P. Gaikovich*

**Tu.A4.3** 9:40 Scanning laser microscopy: From far field to near field (***Invited***)
*G.A. Stanciu, C. Stoichita, S.G. Stanciu*

**Tu.A4.4** 10:00 Metal nanolens transforming far-field into far-field
*P. Wrobel, T.J. Antosiewicz, J. Pniewski, T. Szoplik*

**Tu.A4.5** 10:15 Superfocusing on a dielectric-metal-dielectric apertureless scanning near-field optical microscope probe
*T.J. Antosiewicz, P. Wrobel, T. Szoplik*

**10:30 - 11: 15** *Coffee-break*

## SESSION Tu.A5
(9:00 – 10:35)
***Room: 12 (A4)***
**GOWN III**
*Chair: František Uherek*

**Tu.A5.1** 9:00 Ultra-wideband radio-over-fibre in transparent optical networks (***Invited***)
*R. Llorente, M. Morant, M. Beltran*

**Tu.A5.2** 9:20 Issues and solutions in mobile WiMAX and wired backhaul network integration (***Invited***)
*L. Valcarenghi, P. Monti, I. Cerutti, P. Castoldi, L. Wosinska*

**Tu.A5.3** 9:40 Integrated optical wireless access: Advanced topologies for future access networks (***Invited***)
*C. Bock, T. Quinlan, M.P. Thakur, S.D. Walker*

**Tu.A5.4** 10:00 Advanced PON topologies with wireless connectivity (***Invited***)
*M. Milosavljevic, P. Kourtessis, A. Gliwan, J.M. Senior*

**Tu.A5.5** 10:20 OFDM signals in WDM radio-over-fiber networks with fiber Bragg grating selection
*D. Coelho, H.M. Salgado*

**10:30 - 11: 15** *Coffee-break*

## SESSION Tu.B1
(11:15 – 12:45)
***Room: Main Auditorium (A1)***

### SWP WG3 V
### Fibers
*Chair: Crina Cojocaru*

**Tu.B1.1** 11:15 Highly functional all optical control using ultrafast nonlinear phenomena in optical fibers (***Invited***)
*N. Nishizawa*

**Tu.B1.2** Frequency doubling by nonlinear diffraction in nonlinear photonic crystals (***Invited***)
*S.M. Saltiel , D.N. Neshev, W. Krolikowski, A. Arie, Y.S. Kivshar*
(***Cancelled***)

**Tu.B1.3** 11:35 Photonic crystal fiber devices fabricated by air hole control using $CO_2$ laser irradiation technique (***Invited***)
*H. Yokota, Y. Imai, Y. Sasaki*

**Tu.B1.4** 11:55 Control of modal properties and modal effects in air guiding photonic bandgap fibres (***Invited***)
*M.N. Petrovich, F. Poletti, D.J. Richardson*

**Tu.B1.5** 12:15 Transmission properties of highly nonlinear photonic crystal fiber with huge air-fraction volume and doped core
*M. Lucki*

**Tu.B1.6** 12:30 Negative chromatic dispersion in selected types of photonic crystal fibers obtained by bending
*M. Lucki*

**12:40 - 14:00** ***Lunch break***

## SESSION Tu.B2
(11:15 – 12:20)
***Room: North Auditorium (A2)***

### ICTON V
### Systems III
*Chair: Werner Rosenkranz*

**Tu.B2.1** 11:15 Simplified back-propagation equalization in WDM coherent polarization multiplexed systems (***Invited***)
*L.M. Pessoa, H.M. Salgado, I. Darwazeh*

**Tu.B2.2** 11:35 Rate-adaptive non-binary-LDPC-coded polarization-multiplexed multilevel modulation with coherent detection for optically-routed networks
*M. Arabaci, I.B. Djordjevic, R. Saunders, R.M. Marcoccia*

**Tu.B2.3** 11:50 Impact of inter-symbol interference on optical DQPSK systems performance evaluation using equivalent differential phase
*N.M.S. Costa, A.V.T. Cartaxo*

**Tu.B2.4** 12:05 Transience analysis of bursty traffic with erbium doped fiber amplifiers
*C. Reis, B. Neto, R. Dionisio, G. Incerti, G. Tosi Beleffi, D. Forin, A. M. Rocha, A.L.J. Teixeira, P.S. André*

**12:40- 14:00** ***Lunch break***

## SESSION Tu.B3
(11:15 – 12:50)
***Room: South Auditorium (A3)***

### WAOR V
### Architecture
*Chair: Aldo Campi*

**Tu.B3.1** 11:15 Admission control policies in flow-aware networks (***Invited***)
*J. Domżał, R. Wójcik, A. Jajszczyk, V. López, J.A. Hernández, J. Aracil*

**Tu.B3.2** 11:35 An experimental GMPLS-controlled network test-bed enabling sub-wavelength connection provisioning (***Invited***)
*F. Agraz, L. Velasco, J. Perelló, M. Ruiz, S. Spadaro, G. Junyent, J. Comellas*

**Tu.B3.3** 11:55 Storage area networks extension scenarios in a wide area WDM mesh architecture under heterogeneous traffic (***Invited***)
*T.E.H. El-Gorashi, A. Mujtaba, W. Adlan, J.M.H. Elmirghani*

**Tu.B3.4** 12:15 Some open issues in multi-domain/multi-operator/multi-granular ASON/GMPLS networks (***Invited***)
*S. Spadaro, L. Velasco, J. Perelló, F. Agraz, J. Comellas, G. Junyent*

**Tu.B3.5** 12:35 Performance evaluation of a QoS technique for bufferless optical packet switches
*V. Eramo, A. Germoni, A. Cianfrani, F. Lo Buono*

**12:40 - 14:00** ***Lunch break***

## SESSION Tu.B4
(11:15 – 12:50)
***Room: Small Auditorium (A6)***

### SWP WG2 I
*Chair: Bjorn Maes*

**Tu.B4.1** 11:15 Magnetic tuning of optical fibre long period gratings utilizing ferrofluids (***Invited***)
*M. Konstantaki, A. Candiani, S. Pissadakis*

**Tu.B4.2** 11:35 Organic-inorganic hybrids for the new generation of optical networks (***Invited***)
*R.A.S. Ferreira, C.M.S. Vicente, E. Pecoraro, P.S. André, R. Nogueira, V. Zea-Bermudez, P.V.S. Marques, S.J.L. Ribeiro, L.D. Carlos*

**Tu.B4.3** 11:55 Dielectric and plasmon slot waveguides for photonic integration (***Invited***)
*B. Jaskorzynska, Y. Song, N. Zhu, Z. Wang, M. Qiu, L. Wosinski*

**Tu.B4.4** 12:15 Asymmetric split ring resonators for organic sensing (***Invited***)
*B. Lahiri, S.G. McMeekin, A.Z. Khokhar, R.M. De La Rue, N.P. Johnson*

**Tu.B4.5** 12:35 Hybrid organic active waveguide for C-band applications
*S. Penna, A. Reale, G.M. Tosi Beleffi, S. Shinada, M. Nakao, N. Wada, A.L.J. Teixeira, P.S.B. Andre*

**12:40 - 14:00** ***Lunch break***

## SESSION Tu.B5
(11:15 – 12:50)
***Room: 12 (A4)***

### BONE-SARDANA I
*Chair: Karin Ennser*

**Tu.B5.1** 11:15 Technologies and practical aspects of next generation optical networking (***Invited***)
*M. Cvijetic*

**Tu.B5.2** 11:35 Next generation PON systems – Current status (***Invited***)
*M. Hajduczenia, Z. Boshan, H.J.A. da Silva*

**Tu.B5.3** 11:55 On the symmetry requirements for tomorrow's fibre access networks (***Invited***)
*M. Forzati, C. Popp Larsen*

**Tu.B5.4** 12:15 Agile reconfigurable and traffic adapted all-optical access-metro networks (***Invited***)
*J. Segarra, V. Sales, J. Prat*

**Tu.B5.5** 12:35 Cost effectiveness of site reduction in optical access networks: A CapEx based comparison of different technologies
*C. Lange, D. Breuer, R. Huelsermann*

**12:40 - 14:00** ***Lunch break***

**13:45 - 14:15 Poster Exhibition (Session I)**

## SESSION Tu.C1
(14:00 – 15:40)
***Room: Main Auditorium (A1)***

**SWP WG3 VI**
**Modelling**
*Chair: Igor Nefedov*

**Tu.C1.1** 14:00 Gain/loss periodic spatial modulated materials on a wavelength scale (***Invited***)
*K. Staliunas, R. Herrero, R. Vilaseca*

**Tu.C1.2** 14:20 Scattering of transformed frequency on partial spherical waves induced by time change of the medium (***Invited***)
*A. Nerukh, N. Sakhnenko, T. Remayeva*

**Tu.C1.3** 14:40 Cylindrical multilayer dielectric waveguide with time-varying material properties (***Invited***)
*N. Sakhnenko, A. Nerukh*

**Tu.C1.4** 15:00 Numerical analysis of impact of DBRs' outermost layers on optical characteristics of a surface-normal electro-absorption modulator by the method of single expression (***Invited***)
*H.V. Baghdasaryan, T.M. Knyazyan, A.S. Berberyan, T.T. Hovhannisyan, M. Marciniak*

**Tu.C1.5** 15:20 Electromagnetic wave propagation in active and passive multilayered nanostructures (***Invited***)
*O. Shramkova, A. Bulgakov, V. Kononenko*

**Tu.C1.6** 15:40 Quasi-optical description of wave beams in smoothly inhomogeneous anisotropic media (***Invited***)
*A.I. Smirnov, A.A. Balakin, L.A. Smirnov*

**15:40 - 16:20** ***Coffee-break***

## SESSION Tu.C2
(14:00 – 15:40)
***Room: North Auditorium (A2)***

**ICTON VI**
**Systems IV**
*Chair: Norbert Hanik*

**Tu.C2.1** 14:00 Enhancing performance of optical communication systems with advanced optical signal processing (***Invited***)
*I. Glesk*

**Tu.C2.2** 14:20 Performance analysis of 2D optical CDMA system with non-ideal optical hard-limiters (***Invited***)
*J. Chovan, F. Uherek*

**Tu.C2.3** 14:40 Important device limitations of transmitter and receiver concepts when designing 100G transmission systems (***Invited***)
*C. Arellano, H. Louchet, I. Koltchanov, A. Richter*

**Tu.C2.4** 15:00 Testbed methods to study physical layer path establishment in long haul optical wavelength switched networks (***Invited***)
*A. Morea, D.C. Kilper, I.S. Lin, F. Leplingard, S. Chandrasekhar, T. Zami, J-C. Antona*

**Tu.C2.5** 15:20 Optical frequency domain reflectometry: A review (***Invited***)
*K. Yuksel, M. Wuilpart, V. Moeyaert, P. Mégret*

**15:40 - 16:12** ***Coffee-break***

## SESSION Tu.C3
(14:00 – 15:40)
***Room: South Auditorium (A3)***

**RONEXT I**
**Economics**
*Chair: Wayne Grover*

**Tu.C3.1** 14:00 Impact of protection mechanisms on cost in PONs (***Invited***)
*L. Wosinska, J. Chen, C. Mas Machuca, M. Kantor*

**Tu.C3.2** 14:20 Cost efficiency of protection in future transparent networks (***Invited***)
*D. Staessens, D. Colle, M. Pickavet, P. Demeester*

**Tu.C3.3** 14:40 Experimental evaluation of the link cost impact in OSNR-based IRWA algorithms for GMPLS-enabled translucent WSON (***Invited***)
*R. Martínez, R. Casellas, R. Muñoz, T. Tsuritani*

**Tu.C3.4** 15:00 MILP formulations for scheduling lightpaths under periodic traffic (***Invited***)
*B. Garcia-Manrubia, R. Aparicio-Pardo, P. Pavon-Mariño, N. Skorin-Kapov, J. Garcia-Haro*

**Tu.C3.5** 15:20 The PlaNet-OTN module: A double layer design tool for optical transport networks (***Invited***)
*L. Tang, S. Billenahalli, W. Huang, M. Razo, A. Sivasankaran, H. Vardhan, P. Monti, M. Tacca, A. Fumagalli*

**15:40 - 16:20** ***Coffee-break***

## SESSION Tu.C4
(14:00 – 15:40)
***Room: Small Auditorium (A6)***

**MPM I**
*Chair: Alexander I. Nosich*

**Tu.C4.1** 14:00 Cavity-enhanced structural colour in extrudeable photonic crystals (***Invited***)
*J. Baumberg, D. Snoswell, A. Kontogeorgos, P. Spahn, O. Pursiainen*

**Tu.C4.2** 14:20 Fundamentals and applications of microsphere resonator circuits (***Invited***)
*V.N. Astratov*

**Tu.C4.3** 14:40 Multi-photon dynamics in multiple coupled-cavity defects in photonic crystal slabs
*S.R. Doutre, M.M. Dignam*

**Tu.C4.4** 14:55 Coupled photonic-crystal cavities and quantum-wire microlasers
*K.A. Atlasov, K.F. Karlsson, P. Gallo, M. Calic, A. Rudra, B. Dwir, E. Kapon*

**Tu.C4.5** 15:10 Unidirectional vertical emission from photonic crystal nanolasers
*S-H. Kim, Y-H. Lee, J. Huang, A. Scherer*

**Tu.C4.6** 15:25 Systematization of all resonance modes in circular dielectric cavities
*C.P. Dettmann, G.V. Morozov, M. Sieber, H. Waalkens*

**15:40 - 16:20** ***Coffee-break***

## SESSION Tu.C5
(14:00 – 15:40)
***Room: 12 (A4)***

**BONE-SARDANA II**
*Chair: Josep Segarra*

**Tu.C5.1** 14:00 BONE: Your gateway to European optical networks research (***Invited***)
*P. Van Daele*

**Tu.C5.2** 14:20 Performance evaluation methods of direct-detection OFDM systems (***Invited***)
*A. Cartaxo, T. Alves*

**Tu.C5.3** 14:40 Viability of in-service, low-cost and spatially unambiguous OTDR monitoring in TDM- and WDM-PON access networks
*L. Costa, J.A. Lázaro, V. Pólo, A. Teixeira*

**Tu.C5.4** 14:55 Optimization of passive optical networks by means of fiber nonlinearities interference reduction
*J.D. Reis, B. Neto, P.S. André, A. Teixeira*

**Tu.C5.5** 15:10 A passive optical network based on centralized wavelength and bandwidth scalable OFDM signals
*J.A.L. Silva, D.J.C. Coura, A.P. Lopez Barbero, M.E.V. Segatto*

**Tu.C5.6** 15:25 Transmission of 10 Gb/s per wavelength in a hybrid WDM/TDM access network providing bandwidth on-demand
*P.J. Urban, F.M. Huijskens, G.D. Khoe, A.M.J. Koonen, H. de Waardt*

**15:40 - 16:20** ***Coffee-break***

## SESSION Tu.D1
(16:20 – 18:00)
***Room: Main Auditorium (A1)***

### SWP WG3 VII
*Chair: Gaetano Assanto*

**Tu.D1.1** 16:20 Efficient physical random bit generation with lasers (***Invited***)
*T. Harayama, A. Uchida, K. Yoshimura, P. Davis*

**Tu.D1.2** 16:40 Chaotic quantum-dot InAs/InGaAsP/InP (100) twin-stripe lasers for secure encrypted communication (***Invited***)
*J. Pozo, E. Smalbrugge, T. de Vries, M.K. Smit, D. Lenstra, R. Nötzel*

**Tu.D1.3** 17:00 Polarized single photon emission for quantum cryptography based on colloidal nanocrystals (***Invited***)
*F. Pisanello, L. Martiradonna, P. Spinicelli, A. Fiore, J-P. Hermier, L. Manna, R. Cingolani, E. Giacobino, A. Bramati, M. De Vittorio*

**Tu.D1.4** 17:20 High order harmonic passive mode-locking in double-clad fiber laser (***Invited***)
*F. Amrani, A. Haboucha, M. Salhi, H. Leblond, F. Sanchez*

**Tu.D1.5** 17:40 Generation of parabolic pulses and applications for optical telecommunications (***Invited***)
*C. Finot, J.M. Dudley, D.J. Richardson, G. Millot*

## SESSION Tu.D2
(16:10 – 17:25)
***Room: North Auditorium (A2)***

### ICTON VII
### Signal Processing & Cryptography
*Chair: Wolfgang Freude*

**Tu.D2.1** 16:10 All-optical signal processing techniques with fiber based devices (***Invited***)
*R.N. Nogueira, M. Drummond, C. Marques, A. Teixeira, P. André, P. Monteiro*

**Tu.D2.2** 16:30 Signal processing based on trigonometric transforms for high-speed optical networks (***Invited***)
*M. Svaluto-Moreolo, V. Sacchieri, G. Cincotti*

**Tu.D2.3** 16:50 Cryptographic key distribution in optical systems: Quantum vs. chaos (***Invited***)
*A.A. Guerreiro*

**Tu.D2.4** 17:10 Quantum cryptography – The analysis of security requirements
*M. Niemiec*

## SESSION Tu.D3
(16:10 – 17:25)
***Room: South Auditorium (A3)***

### RONEXT II
### Protection
*Chair: Ricardo Martínez*

**Tu.D3.1** 16:10 A new approach to node-failure protection with span-protecting p-cycles (***Invited***)
*W.D. Grover, D. Onguetou*

**Tu.D3.2** 16:30 Performance evaluation of dynamic p-cycle protection methods in WDM optical networks (***Invited***)
*A. Eshoul, H.T. Mouftah*

**Tu.D3.3** 16:50 Dimensioning resilient optical Grids (***Invited***)
*C. Develder, J. Buysse, M. De Leenheer, B. Dhoedt*

**Tu.D3.4** 17:10 A novel protection mechanism in TDM-PON
*M.M. Carvalho, E.A. De Souza*

*)*

## SESSION Tu.D4
(16:10 – 17:35)
***Room: Small Auditorium (A6)***

### MPM II
*Chair: Vasily N. Astratov*

**Tu.D4.1** 16:10 Eigenmode evolution in an atom-cavity system (***Invited***)
*K. An*

**Tu.D4.2** 16:30 Spin superfluidity of exciton polaritons in microcavities (***Invited***)
*A. Kavokin*

**Tu.D4.3** 16:50 Silicon quantum dots in microdisk resonators: Stress-engineering of disk core for Q-factor tuning and enhancement
*M. Ghulinyan, A. Pitanti, M. Xie, D. Navarro-Urrios, A. Lui, G. Pucker, L. Pavesi*

**Tu.D4.4** 17:05 Micro resonator stabilization by thin film coating
*Y. Jestin, S. Berneschi, G. Nunzi-Conti, A. Chiapini, M. Ferrari, G.C. Righini*

**Tu.D4.5** 17:20 Dual wavelength $Er^{3+}$:ZBLALiP whispering gallery mode laser
*L. Xiao, S. Trébaol, Y. Dumeige, Z. Cai, M. Mortier, P. Féron*

## SESSION Tu.D5
(16:10 – 17:40)
***Room: 12 (A4)***

### BONE-SARDANA III
*Chair: Josep Prat*

**Tu.D5.1** 16:10 Extending reach of passive optical networks through optical amplification (***Invited***)
*K. Ennser, M. Zannin, S. Taccheo*

**Tu.D5.2** 16:30 Recent progresses in RSOA-based WDM PON (***Invited***)
*K.Y. Cho, S.P. Jung, A. Murakami, A. Agata, Y. Takushima, Y.C. Chung*

**Tu.D5.3** 16:50 Reflective semiconductor optical amplifiers for passive optical networks (***Invited***)
*C. Michie, A. Kelly, I. Andonovic*

**Tu.D5.4** 17:10 Remotely pumped erbium doped fibre bidirectional amplifier for gain transient mitigation
*F. Bonada, J.A. Lázaro, V. Polo, P. Chanclou, G.M. Tosi Beleffi, J. Prat*

**Tu.D5.5** 17:25 L-band in-line remote amplification for an extended WDM/PON ring architecture
*S. Chatzi, I. Tomkos, J.A. Lazáro, J. Prat*

**SESSION Bone WP 27**
**(18:00 – 19:00)**
***Room: 12 (A5)***

**19:30 – 24:00** **Regional Dinner (Solar da Garça Restaurant )** ***Cultural Program: Folklore***

# Wednesday, July 1

**8:30** ***Registration***

## SESSION We.A1
(9:00 – 10:45)
***Room: Main Auditorium (A1)***

### SWP WG3 VIII
### Amplifiers
*Chair: Bouchta Sahraoui*

**We.A1.1** 9:00 Laser sources based on rare earth doped glasses: Recent strategies (***Invited***)

## SESSION We.A2
(9:00 – 10:40)
***Room: North Auditorium (A2)***

### ICTON VIII
### Signal Processing
*Chair: Hitoshi Kawaguchi*

**We.A2.1** 9:00 Precise and high-speed lightwave control for huge-capacity transmission and

## SESSION We.A3
(9:00 – 10:40)
***Room: South Auditorium (A3)***

### WAOR VI
### Switching
*Chair: Noureddine Boudriga*

**We.A3.1** 9:00 Complexity/performance trade-off in optical packet switches (***Invited***)

## SESSION We.A4
(9:00 – 10:50)
***Room: 8 (A5)***

### MPM III
*Chair: Trevor M Benson*

**We.A4.1** 9:00 Experimental and theoretical investigation of microresonators at Jena

## SESSION We.A5
(9:00 – 10:35)
***Room: 12 (A4)***

### Novel Glasses I
*Chair: Heike Ebendorff-Heidepriem*

**We.A5.1** 9:00 Tg: The glass door to photonic devices and integrated circuits (***Invited***)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *L. Allegretti, G. Calò, A. Di Tommaso, A. D'Orazio, M. De Sario, M. Gallo, L. Mescia, T. Palmisano, V. Petruzzelli, F. Prudenzano* | | advanced optical signal processing (***Invited***) *T. Kawanishi, T. Sakamoto, A. Chiba* | | *F. Callegati, A. Campi, W. Cerroni* | | University (***Invited***) *C. Schmidt, A. Chipouline, T. Käsebier, E-B. Kley, A. Tünnermann, L.I. Deych, T. Pertsch* | | *A.B. Seddon, Z.G. Lian, W.J. Pan, D. Furniss, T.M. Benson* |
| **We.A1.2** 9:20 | Design, computation and characterization of thulium-doped photonic crystal fibre for emission around 1700 nm (***Invited***) *L. Labonté, N. Ducros, P. Roy, G. Humbert, S. Février, V. Rastogi, M. Pal, S.K. Bhadra* | **We.A2.2** 9:20 | Optical wavelet signal processing (***Invited***) *Y. Ben-Ezra, B.I. Lembrikov* | **We.A3.2** 9:20 | New generation of optical packet switching network based on multi-colored packets (***Invited***) *N. Wada* | **We.A4.2** 9:20 | High-brightness single photon sources based on photonic wires (***Invited***) *J. Claudon, J. Bleuse, M. Bazin, N.S. Malik, P. Jaffrennou, P. Lalanne, N. Gregersen, J.M. Gérard* | **We.A5.2** 9:20 | Novel nanophotonic waveguides based on metal, semiconductor or soft glass modified photonic crystal fibers (***Invited***) *M.A. Schmidt, H. Tyagi, H. Lee, P. St.J. Russell* |
| **We.A1.3** 9:40 | Novel design for noise controlled semiconductor optical amplifier (***Invited***) *S. Philippe, F. Surre, K. Carney, R. Lennox, A.L. Bradley, P. Landais* | **We.A2.3** 9:40 | Photonic signal processing using arrayed-waveguide gratings (***Invited***) *H. Tsuda* | **We.A3.3** 9:40 | All-optical packet switch at data-rate beyond 160 Gb/s (***Invited***) *N. Calabretta, H-D. Jung, E. Tangdiongga, T. Koonen, H. Dorren* | **We.A4.3** 9:40 | Whispering-gallery modes in dielectric microspheres for biosensing applications (***Invited***) *P. Borri, J. Lutti, W. Langbein* | **We.A5.3** 9:40 | Red fiber ring lasers (***Invited***) R. Al-Mahrous, R. Caspary, W. Kowalsky |
| **We.A1.4** 10:00 | Extreme events in fiber based amplifiers *K. Hammani, C. Finot, B. Kibler, J.M. Dudley, G Millot* | **We.A2.4** 10:00 | All-optical nonlinear fibre signal processing (***Invited***) *S.K. Turitsyn, S. Boscolo* | **We.A3.4** 10:00 | An all-optical grooming switch with regenerative capabilities (***Invited***) *J. Leuthold, R. Bonk, P. Vorreau, S. Sygletos , D. Hillerkuss, W. Freude, G. Zarris, D. Simeonidou, C. Kouloumentas, M. Spyropoulou, I. Tomkos, F. Parmigiani, P. Petropoulos, D.J. Richardson, R. Weerasuriya, S. Ibrahim, A.D. Ellis, C. Meuer, D. Bimberg, R. Morais, P. Monteiro, S. Ben-Ezra, S. Tsadka* | **We.A4.4** 10:00 | Periodical patterning of spherical micro-resonator surfaces for nonlinear light generation (***Invited***) *J. Martorell* | **We.A5.4** 10:00 | Glass-based erbium activated micro-nano photonic structures (***Invited***) *G. Alombert-Goget, C. Armellini, S. Berneschi, S.N.B. Bhaktha, B. Boulard, A. Chiappini, A. Chiasera, C. Duverger-Arfuso, P. Féron, M. Ferrari, Y. Jestin, L. Minati, A. Monteil, E. Moser, G. Nunzi-Conti, S. Pelli, F. Prudenzano, G.C. Righini, G. Speranza* |
| **We.A1.5** 10:15 | Self-pulsation in Raman fiber amplifiers *M.E.V. Pedersen, J.R. Ott, K. Rottwitt* | **We.A2.5** 10:20 | Coherent soliton collisions in photorefractive semiconductor InP:Fe for reconfigurable optical communications (***Invited***) *M. Alonzo, C. Dan, D. Wolfersberger, E. Fazio* | **We.A3.5** 10:20 | "Light-mess" time division multiplexing for CWDM/DWDM networks (***Invited***) *A. Jüttner, J. Zhang* | **We.A4.5** 10:20 | Spectroscopy of coherently coupled whispering gallery modes in supermonodispersive bispheres *S. Yang, V.N. Astratov* | **We.A5.5** 10:20 | Garnett films as promising materials for RF-absorbance *K. Ozga, I. Kityk, A. Slezak* |
| **We.A1.6** 10:30 | Non-white noise generation method for ASE noise simulation in systems with Raman amplification *N.J. Muga, M.C. Fugihara, M.F.S. Ferreira, A.N. Pinto* | | | | | **We.A4.6** 10:35 | Using nanocavity plasmons to improve solar cell efficiency *B. Soares, S. Mahajan, A. Campbell, N. Greenham, S. Guldin, S. Huettner, U. Steiner, J. Baumberg* | | |
| **10:40 - 11:15** | ***Coffee-break*** | **10:40 - 11:15** | ***Coffee-break*** | **10:40 - 11: 15** | ***Coffee-break*** | **10:40 - 11: 15** | ***Coffee-break*** | **10:40 - 11: 15** | ***Coffee-break*** |

## SESSION We.B1
(11:15 – 12:50)
***Room: Main Auditorium (A1)***

### SWP WG3 IX
### Lasers
*Chair: Jost Adam*

**We.B1.1** 11:15 A microscopic approach for THz intersubband challenges (***Invited***)
*M.F. Pereira*

**We.B1.2** 11:35 Single-frequency waveguide lasers and their design
*S. Taccheo, M. Tahaer, D. Milanese, H. Gebavi, J. Lousteau, G. Della Valle, D. Barbier*

**We.B1.3** 11:50 Above-threshold analysis in an optimized three phase-shift DFB laser structure for stable single-mode operation
*J.A.P. Morgado, C.A.F. Fernandes, J.B.M. Boavida*

**We.B1.4** 12:05 Influence of laser chirp on the performance of 40 Gbit·s$^{-1}$ optically compensated directly modulated systems
*J.A.P. Morgado, A.V.T. Cartaxo*

**We.B1.5** 12:20 A novel approach to distributed feedback in liquid crystals
*D. Donisi, R. Asquini, A. D'Alessandro, G. Assanto*

**We.B1.6** 12:35 Temperature dependences of the second order susceptibilities in the novel borate $LiCsB_4O_7$ single crystal
*A.H. Reshak, I.V. Kityk*

**12:40 - 14:00** ***Lunch break***

## SESSION We.B2
(11:15 – 13:00)
***Room: North Auditorium (A2)***

### ICTON IX
### Power Issues
*Chair: Philippe Roy*

**We.B2.1** 11:15 On using all-optical burst-mode power equalization in converged metro-access networks (***Invited***)
*S. Pato, P. Monteiro, H. Silva*

**We.B2.2** 11:35 Power efficiency of 40 Gbit/s and 100 Gbit/s optical Ethernet (***Invited***)
*S. Aleksić*

**We.B2.3** 11:55 Performance and power consumption of digital signal processing based transceivers for optical interconnect applications (***Invited***)
*M. Glick, Y. Benlachtar, R. Killey*

**We.B2.4** 12:15 Power consumption analysis of optical cross-connect equipment for future large capacity optical networks
*M. Murakami, K. Oda*

**We.B2.5** 12:30 Wavelength path optimization in optical transport networks for energy saving
*A. Silvestri, A. Valenti, S. Pompei, F. Matera, A. Cianfrani*

**We.B2.6** 12:45 Path monitoring for restoration functions in optical packet-switched networks
*R. Vilar, J. García, Y. Kim, S. LaRochelle, R. Llorente, F. Ramos*

**12:40 - 14:00** ***Lunch break***

## SESSION We.B3
(11:15 – 12:50)
***Room: South Auditorium (A3)***

### RONEXT III
### Survivability
*Chair: Nina Skorin-Kapov*

**We.B3.1** 11:15 Network performance improvement in survivable WDM networks considering physical layer constraints (***Invited***)
*A. Tzanakaki, K. Georgakilas, K. Katrinis, L. Wosinska, A. Jirattigalachote, P. Monti*

**We.B3.2** 11:35 Survivability in metro WDM storage area networks
*B. Pranggono, J.M.H. Elmirghani*

**We.B3.3** 11:50 Quantifying the benefit of BER-based differentiated path provisioning in WDM optical networks
*A. Jirattigalachote, K. Katrinis, A. Tzanakaki, L. Wosinska, P. Monti*

**We.B3.4** 12:05 Experimental investigations on restoration techniques in a wide area Gigabit Ethernet optical test bed based on virtual private LAN service
*A. Valenti, P. Bolletta, S. Pompei, F. Matera*

**We.B3.5** 12:20 Multiple path based regenerator placement algorithm in translucent optical networks
*N. Sambo, N. Andriolli, A. Giorgetti, P. Castoldi, G. Bottari*

**We.B3.6** 12:35 Cost aware design of translucent WDM transport networks
*S. Rumley, C. Gaumier*

**12:40 - 14:00** ***Lunch break***

## SESSION We.B4
(11:15 – 13:00)
***Room: 8 (A5)***

### MPM IV
*Chair: Jiri Petráček*

**We.B4.1** 11:15 Ultrahigh-Q microcavities in diamond-based photonic crystal slabs (***Invited***)
*S. Tomljenovic-Hanic, A.D. Greentree, S. Prawer, C.M. de Sterke*

**We.B4.2** 11:35 Optical microfibers and microfiber resonators (***Invited***)
*M. Sumetsky*

**We.B4.3** 11:55 Whispering gallery modes in bottle microresonators (***Invited***)
*M.N. Zervas, G. Senthil-Murugan, J.S. Wilkinson*

**We.B4.4** 12:15 Large electric tuning of WGMs in liquid crystal droplets
*M. Humar, S. Pajk, I. Muševič*

**We.B4.5** 12:30 Simple numerical scheme for modelling of nonlinear pulse propagation in coupled microring resonators
*A. Sterkhova, J. Petráček, J. Luksch*

**We.B4.6** 12:45 Nonlinear coupling of microring resonators and applications
*A. Ghadi, S. Mirzanezhad, F. Sohbatzadeh*

**12:40 - 14:00** ***Lunch break***

## SESSION We.B5
(11:15 – 12:55)
***Room: 12 (A4)***

### Novel Glasses II
*Chair: Angela Seddon*

**We.B5.1** 11:15 Experimental studies of non-linear properties of chalcogenide glasses (***Invited***)
*E. Romanova, A. Afanasiev, V. Shiryaev, G. Snopatin, D. Furniss, A. Seddon, T. Benson, B. Derkowska, S. Guizard, N. Fedorov*

**We.B5.2** 11:35 Chalcogenide glasses and glass-ceramics for novel infrared optical technologies (***Invited***)
*X. Zhang, J-L. Adam*

**We.B5.3** 11:55 Telluride thick films deposited by co-thermal evaporation: Promising materials for far infrared applications (***Invited***)
*C. Vigreux, E. Barthélémy, S. Albert, A. Pradel*

**We.B5.4** 12:15 High quality erbium doped tellurite glass films using ultrafast laser deposition (***Invited***)
*G. Jose, D.P. Steenson, M. Irannejad, A. Jha*

**We.B5.5** 12:35 Highly doped $Tm^{3+}$ tellurite glasses for 2 µm laser source (***Invited***)
*J. Lousteau, H. Gebavi, E. Mazzon, D. Negro, M. Merlo, D. Milanese, S. Taccheo, M. Ferraris*

**12:40 - 14:00** ***Lunch break***

**13:45 – 14:15 Poster Exibition (Session II)**

## SESSION We.C1
(14:00 – 15:30)
***Room: Main Auditorium (A1)***

### SWP WG1 II
### Metamaterials
*Chair: Tomasz Szoplik*

**We.C1.1** 14:00 Field enhancement in a photonic band gap cavity assisted by metal grooves (***Invited***)
*V. Marrocco, M.A. Vincenti, G. Calò, M. De Sario, V. Petruzzelli, F. Prudenzano, A. D'Orazio*

**We.C1.2** 14:20 Non linear optical properties of nanostructured metallic surfaces (***Invited***)
*A. Belardini, M.C. Larciprete, M. Centini, E. Fazio, C. Sibilia, M. Bertolotti, A. Toma, D. Chiappe, C. Boragno, F. Buatier de Mongeot*

**We.C1.3** 14:40 Surface photonic modes propagating at the normal cut of periodic metal planes (***Invited***)
*V. Kazakevicius, R. Brazis*

**We.C1.4** 15:00 Enhanced photoluminescence from metals and nanoimprinted photonic crystals
*V. Reboud, N. Kehagias, M. Striccoli, T. Placido, A. Panniello, M.L. Curri, M. Zelsmann, J.A. Alducin, D. Mecerreyes, S. Newcomb, D. Iacopino, H. Doyle, G. Redmond, C.M. Sotomayor-Torres*

**We.C1.5** 15:15 Noble metal nanoparticles functionalized with novel organic luminophores
*E. Giorgetti, G. Dobrikov, D. Ivanova, I. Timtcheva, T. del Rosso, G. Margheri, M. Ferrari, A. Chiappini*

**15:30 - 16:10** ***Coffee-break***

## SESSION We.C2
(14:00 – 15:40)
***Room: North Auditorium (A2)***

### ICTON X
### Bragg Gratings
*Chair: Francesca Parmigiani*

**We.C2.1** 14:00 Alternative designs for high power single mode active optical fibers (***Invited***)
*P. Roy, M. Devautour, S. Février, L. Lavoute, K. Schuster, J. Kobelke, S. Grimm*

**We.C2.2** 14:20 Applications of Fabry-Perot Bragg grating cavities to optical networks (***Invited***)
*L. Pellegrino, R. Meleiro, D. Fonseca, R. Morais, P. André, P. Monteiro*

**We.C2.3** 14:40 Beam propagation through straight and bent Bragg waveguides: Numerical simulation (***Invited***)
*A. Popov, D. Prokopovich, A. Vinogradov*

**We.C2.4** 15:00 Wavelength converters based on fiber XPM and fiber Bragg gratings
*P. Honzatko*

**We.C2.5** 15:15 FBG dispersion compensation in a 43 Gbit/s WDM system: Comparing different FBG types and modulation formats
*A. Dochhan, S. Smolorz, H. Rohde, W. Rosenkranz*

**We.C2.6** 15:30 Effect of group velocity dispersion on all optical encoded labels in optical packet networks
*D. Pastor, W. Amaya, R. García-Olcina*

**15:30 - 16:10** ***Coffee-break***

## SESSION We.C3
(14:00 – 15:40)
***Room: South Auditorium (A3)***

### RONEXT IV
*Chair: Lena Wosinska*

**We.C3.1** 14:00 Interconnection of long-reach PON and backbone networks (***Invited***)
*P. Castoldi, F. Paolucci, A. Giorgetti, M. Maier*

**We.C3.2** 14:20 Design and development of a semantic information modelling framework for a service oriented optical Internet (***Invited***)
*C.E. Abosi, R. Nejabati, D. Simeonidou*

**We.C3.3** 14:40 An optical overlay network concept for hard QoS requirements (***Invited***)
*R. Forchheimer, L. Wosinska, P. Monti*

**We.C3.4** 15:00 On the risk of non-compliance with some plausible SLA requirements (***Invited***)
*H. Waldman, D.A.A. Mello*

**We.C3.5** 15:20 Reliability analysis of optical modules for future optical networks (***Invited***)
*R. Chandy*

## SESSION We.C4
(14:00 – 15:40)
***Room: 8 (A5)***

### MPM V
### Modelling
*Chair: Snjezana Tomljenovic-Hanic*

**We.C4.1** 14:00 The scope for analytical models of 3D resonators (***Invited***)
*T.M. Benson, A. Vukovic, P. Sewell*

**We.C4.2** 14:20 Theoretical investigation of two beams optical ring resonators for new generation photonic sensors (***Invited***)
*C. Ciminelli, C.E. Campanella, M.N. Armenise*

**We.C4.3** 14:40 Dynamics and instabilities in series of coupled nonlinear resonators (***Invited***)
*B. Maes, M. Fiers, K. Huybrechts, G. Morthier, P. Bienstman*

**We.C4.4** 15:00 Study of improved second harmonic generation in double microring resonators (***Invited***)
*M. Gandomkar, V. Ahmadi*

**We.C4.5** 15:20 Theoretical analysis of microring resonator filters made of plasmonic waveguides (***Invited***)
*O.C. Tsilipakos, T.V. Yioultsis, E.E. Kriezis*

**15:30 - 16:10** ***Coffee-break***

## SESSION We.C5
**(14:00 – 15:40)**
***Room: 12 (A4)***

### NAON I
### Quantum Dots
*Chair: Judy Rorison*

**We.C5.1** 14:00 Short pulse generation with 40 GHz passively-mode locked Q-dashed Fabry-Perot laser (***Invited***)
*S. Latkowski, R. Maldonado-Basilio, P. Landais*

**We.C5.2** 14:20 Ultrafast fiber lasers and nonlinear generation of light (***Invited***)
*P.J. Almeida, P. Dupriez, J. Clowes, E. Bricchi, M. Rusu, A.B. Grudinin*

**We.C5.3** 14:40 External electrical and optical effects in the operation of monolithic mode-locked laser diodes and the potential of nanostructure technologies in reducing these effects (***Invited***)
*E. Avrutin, B.M. Russell*

**We.C5.4** 15:00 Optical line width in semiconductor quantum dots (***Invited***)
*K. Král, M. Menšík*

**We.C5.5** 15:20 Influence of p-doping in quantum dot semiconductor optical amplifiers at 1.3 μm (***Invited***)
*D. Bimberg, C. Meuer, G. Fiol, H. Schmeckebier, D. Arsenijevic, G. Eisenstein*

**15:30 - 16:10** ***Coffee-break***

## SESSION We.D1
(16:10 – 17:10)
***Room: Main Auditorium (A1)***

### SWP WG2 II
### Applications
*Chair: Branislav Jelenkovic*

**We.D1.1** 16:10 Static Fourier-transform waveguide spectrometers (***Invited***)
*A. Delâge, P. Cheben, M. Florjańczyk, S. Janz, B. Lamontagne, J. Lapointe, A. Scott, B. Solheim, D-X. Xu*

**We.D1.2** 16:30 Integrated hybrid sol-gel devices for astronomical interferometry (***Invited***)
*P.V.S. Marques, A. Ghasempour, D. Alexandre, F. Reynaud, P.J.V. Garcia, A.M.P Leite*

**We.D1.3** 16:50 Photonic crystal heterostructure lasers (***Invited***)
*J. O'Brien, L. Lu, A. Mock, M. Bagheri*

## SESSION We.D2
(16:10 – 17:50)
***Room: North Auditorium (A2)***

### PICAW
*Chair: Stefano Taccheo*

**We.D2.1** 16:10 $Al_2O_3:Er^{3+}$ as a new platform for active integrated optics (***Invited***)
*M. Pollnau, J.D.B. Bradley, L. Agazzi, E. Bernhardi, F. Ay, K. Wörhoff, R.M. de Ridder*

**We.D2.2** 16:30 New scaling rules for MMI devices (***Invited***)
*L.W. Cahill, T.V. Clapp*

**We.D2.3** 16:50 Developing transmission and routing photonic systems using advanced hybrid integration technologies (***Invited***)
*E. Kehayas*

**We.D2.4** 17:10 VLSI photonics: Science and engineering of high-density photonic circuit integration in micro/nano-scale (***Invited***)
*E-H. Lee*

**We.D2.5** 17:30 Silicon-based integrated multiplexers for WDM systems (***Invited***)
*L. Wosinski, N. Zhu, B. Jaskorzynska*

## SESSION We.D4
(16:10 – 17:30)
***Room: 8 (A5)***

### ESPC
*Chair: Bozena Jaskorzynska*

**We.D4.1** 16:10 Light transport and limits of slow light in real photonic crystal structures in the presence of residual disorder (***Invited***)
*N. Le Thomas, J. Jágerská, H. Zhang, R. Houdré*

**We.D4.2** 16:30 The structure of light in photonic crystal waveguides (***Invited***)
D. van Oosten, M. Burresi, R.J.P. Engelen, A. Opheij, D. Mori, T. Baba, L. (Kobus) Kuipers

**We.D4.3** 16:50 Two-dimensional surface emitting photonic crystal laser with hybrid triangular-graphite structure (***Invited***)
L.J. Martínez, B. Alén, I. Prieto, C. Seassal, P. Viktorovitch, J.F. Galisteo-López, M. Galli, L.C. Andreani, P.A. Postigo

**We.D4.4** 17:10 Modelling of photonic-crystal VCSELs with semi-vectorial and vectorial models (***Invited***)
M. Dems

## SESSION We.D5
(16:10 – 17:25)
***Room: 12 (A4)***

### NAON II
### VCSELs
*Chair: Wlodzimierz Nakwaski*

**We.D5.1** 16:10 Photonic crystal vertical cavity surface emitting lasers (PC-VCSELs) – The future for high power single mode behaviour (***Invited***)
*J.M. Rorison, P. Ivanov*

**We.D5.2** 16:30 Circularly-polarized lasing in a (110)-oriented VCSEL with InGaAs/GaAs QWs (***Invited***)
*H. Kawaguchi*

**We.D5.3** 16:50 Orthogonally polarized bistable localized light structures in medium size vertical-cavity surface-emitting lasers (***Invited***)
*K. Panajotov, X. Hachair, H. Thienpont, G. Tissoni*

**We.D5.4** 17:10 Improvements on corrugation pitch modulated distributed coupling coefficient distributed feedback laser structures for single longitudinal mode operation
*J. Boavida, C. Fernandes, J. Morgado*

**18:00 – 21:00** **Barbeque (Caloura Beach)**

## Thursday, July 2

### SESSION Th.A1
(9:00 – 10:25)
***Room: Main Auditorium (A1)***

**SWP WG1 III**
***Chair:*** *Vladimir Kuzmiak*

**Th.A1.1** 9:00 Electrodynamics of periodic arrays of carbon nanotubes (***Invited***)
*I. Nefedov*

**Th.A1.2** 9:20 Nested structures approach for bulk 3D negative index materials (***Invited***)A. Andryieuski, R. Malureanu, *A.V. Lavrinenko*

**Th.A1.3** 9:40 Resetting of a planar superconducting quantum memory
R. Migliore, G. De Simone, M. Guccione, *A. Messina*

**Th.A1.4** 9:55 Optimisation of transmission properties and subwavelength imaging of silver-dielectric layered structures operating in the canalization regime
*A. Pastuszczak, R. Kotyński*

**Th.A1.5** 10:10 Near-field sounding of multilayered media
*P.K. Gaikovich*

**10:20- 10:50** ***Coffee-break***

### SESSION Th.A2
(9:00 – 10:05)
***Room: North Auditorium (A2)***

**ICTON XI**
**Systems V**
*Chair: Piero Castoldi*

**Th.A2.1** 9:00 Advanced optical limiting function based on effective understanding of physical phenomena (***Invited***)
*T. Konishi, H. Goto, T. Kato, K. Kawanishi*

**Th.A2.2** 9:20 Performance comparison of spectrally efficient intensity modulated formats in remodulated WDM PON
*N.B. Pavlović, L.N. Costa, A. Teixeira*

**Th.A2.3** 9:35 Improvement of DPSK transmission by phase-preserving amplitude regeneration using cascaded nonlinear amplifying loop mirrors
*C. Stephan, K. Sponsel, G. Onishchukov, B. Schmauss, G. Leuchs*

**Th.A2.4** 9:50 40 Gb/s all-optical RZ to NRZ format converter based on SOA and detuned filtering
*T. Silveira, A. Ferreira, D. Fonseca, A. Teixeira, P. Monteiro*

**10:20- 10:50** ***Coffee-break***

### SESSION Th.A3
(9:00 – 10:35)
***Room: South Auditorium (A3)***

**BONE-SARDANA IV**
**OCDMA**
*Chair: Ioannis Tomkos*

**Th.A3.1** 9:00 Scalability techniques in electronically processed CDMA for low cost and flexible optical access networks (***Invited***)
J.B. Rosas-Fernandez, J.D. Ingham, R.V. Penty, I.H. White

**Th.A3.2** 9:20 Development of OCDMA prototype for a next-generation, bandwidth-symmetric FTTH system (***Invited***)
*N. Kataoka*

**Th.A3.3** 9:40 Enhancing optical CDMA (***Invited***)
*M.S. Leeson, K. Cui, E.L. Hines*

**Th.A3.4** 10:00 Novel time domain spectral phase encoding/decoding technique for OCDMA application (***Invited***)
*X. Wang*

**Th.A3.5** 10:20 Multi-user application of code scrambling for enhanced optical layer confidentiality
*V. Sacchieri, S. Di Lucente, P. Teixeira, A. Teixeira, G. Cincotti*

**10:20 - 10: 50** ***Coffee-break***

### SESSION Th.A4
(9:00 – 10:20)
***Room: 8 (A5)***

**SWP WG2 III**
*Chair: Maciej Dems*

**Th.A4.1** 9:00 Planar optical quantum computing: Current status and future challenges (***Invited***)
*G. Cincotti*

**Th.A4.2** 9:20 Förster resonant energy transfer in quantum dot structures
*M. Lunz, L. Bradley, W-Y. Chen, Y.K. Gun'ko*

**Th.A4.3** 9:35 Design and fabrication of Si-based photonic crystal stamps
R. Jannesari, I. Bergmair, S. Zamiri, K. Hingerl

**Th.A4.4** 9:50 Parametric resonance and waves in periodic media
*A. Popov*

**Th.A4.5** 10:05 Existence and stability of of multihumped femtosecond solitons
*M. Facão, M.I. Carvalho, D.F. Parker*

**10:20- 10: 50** ***Coffee-break***

### SESSION Th.A5
(9:00 – 10:20)
***Room: 12 (A4)***

**NAON III**
*Chair: Eugene Avrutin*

**Th.A5.1** 9:00 Applications of superstructured fibre Bragg gratings in all optical signal processing (***Invited***)
*F. Parmigiani, P. Petropoulos, T.T. Ng, M. Ibsen, D.J. Richardson*

**Th.A5.2** 9:20 Ultrafast nonlinear optics on a chip: Application to signal processing (***Invited***)
*M. Pelusi, T.D. Vo, F. Luan, S.J. Madden, D-Y. Choi, D.A.P. Bulla, B. Luther-Davies, B.J. Eggleton*

**Th.A5.3** 9:40 Cost efficient pulse source for return-to-zero differential phase shift keyed transmission systems (***Invited***)
*P.M. Anandarajah, L.P. Barry*

**Th.A5.4** 10:00 Ultrahigh-speed all-optical modulation using intersubband transition quantum well waveguide and its application (***Invited***)
*K.S. Abedin*

## SESSION Th.B1
(10:50 – 12:20)
***Room: Main Auditorium (A1)***

### SWP WG1 IV
### Plasmons
*Chair: Hovik Baghdasaryan*

**Th.B1.1** 10:50 Dual-polarized plasmonic nano-cables (***Invited***)
*A. Soloviev, I. Nefedov, S Tretyakov*

**Th.B1.2** 11:10 Surface plasmon resonances in metal nanoparticles (***Invited***)
*V. Kuzmiak, V. Kolinský, K. Zdánský*

**Th.B1.3** 11:30 Plasmons on metal layers embedded in dielectric PBG cavity (***Invited***)
*V. Marrocco, M.A. Vincenti, M. De Sario, G. Calò, V. Petruzzelli, F. Prudenzano, A. D'Orazio*

**Th.B1.4** 11:50 Organic light-emitting diodes as surface plasmon emitters
*D.M. Koller, A. Hohenau, H. Ditlbacher, N. Galler, F.R. Aussenegg, A. Leitner, J.R. Krenn, E.J.W. List*

**Th.B1.5** 12:05 Bottom-up approach to hybrid metallodielectric materials
*A. Klos, M. Gajc, R. Diduszko, D.A. Pawlak*

## SESSION Th.B2
(10:40 – 11:55)
***Room: North Auditorium (A2)***

### ICTON XII
### Devices
*Chair: Otto Strobel*

**Th.B2.1** 10:40 Effect of bending in SMF fibers under high power
*A.M. Rocha, A. Martins, M. Facão, P.S. André*

**Th.B2.2** 10:55 On recent progress in all-fibered pulsed optical sources from 20 GHz to 2 THz based on multiple four wave mixing approach
*J. Fatome, S. Pitois, C. Fortier, B. Kibler, C. Finot, G. Millot, C. Courde, M. Lintz, E. Samain*

**Th.B2.3** 11:10 High repetition frequency, fundamentally mode-locked 111 fs all-fiber erbium laser
*M.P. Nikodem, K.M. Abramski*

**Th.B2.4** 11:25 Stable four-wavelength ring resonator with hybrid serial-tree configuration for sensing applications
*D. Passaro, S. Selleri, M. Fernandez-Vallejo, R.A. Perez-Herrera, C. Elosua-Aguado, C. Bariain, M. Lopez-Amo*

**Th.B2.5** 11:40 Fast method for Q factor estimation in delay line demodulated DPSK optical communications systems
*N.S. Avlonitis, I. Tomkos*

## SESSION Th.B3
(11:00 – 12:20)
***Room: South Auditorium (A3)***

### BONE-SARDANA V
### PON
*Chair: Mark S. Leeson*

**Th.B3.1** 11:00 Hybrid ring-tree WDM/TDM-PON optical distribution network (***Invited***)
*J. Prat, J. Lazaro, P. Chanclou, R. Soila, P. Velanas, A. Teixeira, G.M. Tosi Beleffi, I. Tomkos, D. Klonidis*

**Th.B3.2** 11:20 A novel ring architecture of multiple optical private networks over EPON using OCDMA technique
*M. Gharaei, S. Cordette, I. Fsaifes, C. Lepers, P. Gallion*

**Th.B3.3** 11:35 Ultra-dense, transparent and resilient ring-tree access network using coupler-based remote nodes and homodyne transceivers
*J.M. Fàbrega, J. Prat*

**Th.B3.4** 11:50 Employing feed-forward downstream cancellation in optical network units for 2.5G/1.25G RSOA-based and 10G/10G REAM-based passive optical networks for efficient wavelength reuse
*B. Schrenk, J.A. Lazaro, J. Prat*

**Th.B3.5** 12:05 Interleaved polling algorithm with inserted cycles to support service level agreement in long-reach EPONs
*T. Jiménez, N. Merayo, R.J. Durán, P. Fernández, R.M. Lorenzo, I. de Miguel, N. Fernández, E.J. Abril*

## SESSION Th.B4
(10:50 – 12:10)
***Room: 8 (A5)***

### SWP WG2 IV
*Chair: Ariel Guerreiro*

**Th.B4.1** 10:50 Sub-wavelength nanostructures for engineering the effective index of silicon-on-insulator waveguides (***Invited***)
*P. Cheben, J. Schmid, P. Bock, D-X. Xu, S. Janz, A. Delâge, J. Lapointe, B. Lamontagne, A. Densmore, T. Hall*

**Th.B4.2** 11:10 III-V photonic crystal lasers heterogeneously bonded to silicon-on-insulator waveguides (***Invited***)
*T.J. Karle, Y. Halioua, F. Raineri, I. Sagnes, R. Raj, G. Roelkens, F. van Laere, D. Van Thourhout*

**Th.B4.3** 11:30 Heterogeneous integration of III-V on silicon based microlaser sources for photonic integrated circuit applications (***Invited***)
*P. Rojo Romeo, L. Ferrier, F. Mandorlo, X. Letartre, P. Viktorovitch, J-M. Fedeli*

**Th.B4.4** 11:50 Enhancing light-matter interaction via Bloch surface waves for biosensing applications (***Invited***)
*M. Liscidini, M. Galli, M. Patrini, G. Dacarro, L.C. Andreani, D. Bajoni, C. Ricciardi, F. Giorgis, R.W. Loo, M.C. Goh, M. Shi, J.E. Sipe*

**Closing Ceremony & Announcement of ICTON 2009 (12:20)**

**Meeting of COST Action MP0702**
**Towards Functional Sub-Wavelength Photonic Structures**

**(14:00 – 16: 00)**
***Room: Main Auditorium (A1)***
Working Group Meeting

**(16:00 – 18: 00)**
***Rooms: North Auditorium (A2)/ 12 (A5)/* 8** (A4)
Management Committee meeting (MC Members exclusively)

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| **19:00 – 24:00** | **Sunset Dinner (North Coast – AlaBote)** | ***Cultural Program: Live music*** |

## POSTER SESSIONS

### Tuesday, June 30 - (Session I - Tu.P)

**Tu.P.1** **Modeling of nano- and micro-spheres for sensing applications**
*F. Prudenzano, L. Mescia, L. Allegretti, M. De Sario, A. Di Tommaso, T. Palmisano, P. Féron, A. Chiappini, M. Ferrari, S. Soria, G.C. Righini*

**Tu.P.2** **Third order non linear optical properties of ZnO:Al thin films prepared by spray pyrolysis**
*K. Bahedi, M. Addou, M. El Jouad, Z. Sofiani, S. Bayoud, M. Bouaouda, B. Sahraoui, Z. Essaïdi*

**Tu.P.3** **Picosecond characteristics on transient absorption spectra of silver nanoparticles**
*A. Gaál, I. Bugár, I. Capek, J. Polovková, V. Szőcs, T. Pálszegi, A. Šatka, M. Michalka, F. Uherek*

**Tu.P.4** **Lasing modes of infinite periodic chain of quantum wires**
*V.O. Byelobrov, T.M. Benson, P. Sewell, A. Altintas, A.I. Nosich*

**Tu.P.5** **Nyström-method analysis of active spiral subwavelength 2-D microresonators**
*E.I. Smotrova, T.M. Benson, P. Sewell, J. Ctyroky, A.I. Nosich*

**Tu.P.6** **Single frequency, widely tuneable green microchip laser**
*J.Z. Sotor, A.J. Antończak, K.M. Abramski*

**Tu.P.7** **Micro demultiplexer fabricated by self-assembly of microspheres on a patterned substrate**
*T. Mitsui, Y. Wakayama, T. Onodera, Y. Takaya, H. Oikawa*

**Tu.P.8** **Responsivity analysis of a resonant cavity QDIP at 10 μm wavelength**
*A. Mir-Derikvandi, V. Ahmadi*

**Tu.P.9** **Accurately calculating high Q factor of whispering-gallery modes with boundary element method**
*C-L. Zou, Y. Yang, C-H. Dong, Y-F. Xiao, Z-F. Han, G-C. Guo*

**Tu.P.10** **Interference of guiding polariton modes in "traffic" circle waveguides**
*M. Gozman, I. Polishchuk, T. Lomonosova*

**Tu.P.11** **Analysis of optical reflector based on circular coupled microring resonators**
*Z. Gao, X. Wang*

**Tu.P.12** **Splitting of whispering gallery modes by nanoparticles embedded in high Q microcavities**
*K.R. Hiremath, V.N. Astratov*

**Tu.P.13** **Analysis of excitation of higher-order transverse modes in large-size oxide-confined VCSELs**
*M. Kuc, R.P. Sarzała, W. Nakwaski*

**Tu.P.14** **Comparative analysis of various methods to reach the 1.3 μm emission in GaInNAs/GaAs QW VCSELs**
*K. Marszałek, R.P. Sarzała, W. Nakwaski*

**Tu.P.15** **Modelling of inline optical reflectors based on microring resonators**
*J. Petráček , J. Luksch, A. Sterkhova*

**Tu.P.16** **Evolution of emission mechanism in deformed microcavities**
*S-B. Lee, J. Yang, S-Y. Lee, S. Moon, J.-B. Shim, S.W. Kim, J-H. Lee, K. An*

**Tu.P.17** **Free-space resonant coupling in a highly deformed microcavity**
*J. Yang, S-B. Lee, S. Moon, S-Y. Lee, J-B. Shim, S.W. Kim, J-H. Lee, K. An*

**Tu.P.18** **Observation of scar modes in a deformed ultrasonic cavity**
*H. Kwak, Y. Shin, S-B. Lee, J. Yang, S. Moon, S-Y. Lee, S.W. Kim, J-H. Lee, K. An*

**Tu.P.19** **New cyclopropano[70] fullerene derivatives for the photovoltaic application**
*H. Derbal, C. Bergeret, J. Cousseau, J-M. Nunzi*

**Tu.P.20** **Second harmonic generation in planar two-dimensional photonic crystals without out-of-plane losses**
*C. Nistor, C. Cojocaru, Y. Loiko, J. Trull, K. Staliunas*

**Tu.P.21** **Alignment and FLIM imaging of Ag nanowires with CdTe quantum dots**
*C.A. Smyth, Y.P. Rakovich, E.M. McCabe*

**Tu.P.22** **Modelling the response of whispering-gallery-mode optical resonators for biosensing applications**
*W. Langbein, L. Chantada, N.I. Nikolaev, A. Ivanov, P. Borri*

**Tu.P.23** **Fabrication and characterization of Er-doped silicon-rich oxide toroidal microcavities on chip**
*J.B. Jager, P. Noé, E. Picard, E. Delamadeleine, V. Calvo*

## Wednesday, July 1 – (Session II – We.P)

**We.P.1** **A novel bidirectional RSOA based WDM-PON with downstream DPSK and upstream re-modulated OOK data**
*J. Zhang, X. Yuan, Y. Gu, Y. Huang, M. Zhang, Y. Zhang*

**We.P.2** **Scaling guidelines of a soliton-based power limiter for 2R-optical regeneration applications**
*J. Fatome, C. Finot*

**We.P.3** **Low-coherence interferometry for measuring polarization mode dispersion**
*L.M.N. Amaral, D.A. Pereira, O. Frazão, M.B. Marques, M.J.N. Lima, A.L.J. Teixeira*

**We.P.4** **Optimization of WDM communication system using a binomial power distribution**
*M. Lazoul, L.M. Simohamed*

**We.P.5** **Comparative evaluation of fibre-optic architectures for next-generation distributed antenna systems**
*S. Pato, J. Pedro, P. Monteiro*

**We.P.6** **An ant-based algorithm for distributed RWA in optical burst switching**
*J. Triay, C. Cervelló-Pastor*

**We.P.7** **Gaussian approximation analysis of ZCC code for multimedia optical CDMA applications**
*I. Bala, V. Rana*

**We.P.8** **Entanglement dynamics in a spin star system**
*E. Ferraro, A. Napoli, A. Messina*

**We.P.9** **InGaAs quantum dot 1050 nm saturable absorber mirror: Investigation under high excitation condition**
*E. Jelmakas, R. Tomasiunas, K. Wilcox, E. Rafailov, I. Krestnikov*

**We.P.10** **Feature based recognition of photonic devices in images obtained by confocal scanning laser microscopy**
*S.G. Stanciu, R. Hristu, R. Boriga, G. Stanciu*

**We.P.11** **Synthesis of sub-wavelength diffractive optical elements by 3D full-vectorial beam propagation method**
*R. Petruskevicius, D. Kezys, M. Mikolajunas, V. Grigaliunas, J. Baltrusaitis, D. Virzonis*

**We.P.12** **Diagnostic and characterization of the VCSEL diodes based on GaSb**
*J. Cihelka, I. Matulková, J. Vyskočil, Z. Zelinger, S. Civiš*

**We.P.13** **Repetition rate multiplication in eight microstructured optical fiber laser**
*T. Ennejah, F. Bahloul, R. Attia*

**We.P.14** **Supercontinuum generation in dual core photonic crystal fibre**
*M. Koyš, I. Bugár, R. Buczynski, D. Pysz, M. Michalka, F. Uherek*

**We.P.15** **Waveguiding properties of photonic crystal fiber**
*Y.A. Mazhirina, L.A. Melnikov*

**We.P.16** **Femtosecond soliton supercontinuum generation in anisotropic microstructure fiber**
*Y. Mazhirina, L. Melnikov, A. Konukhov*

**We.P.17** **Stability analysis of Raman propagation equations**
*B. Neto, M.M. Rodrigues, E.A. Rocha, P.S. André*

**We.P.18** **Narrow asymmetric waveguide semiconductor lasers with improved temperature wavelength stability for pumping and nonlinear applications**
*B. Ryvkin, E. Avrutin*

**We.P.19** **Modelling of frequency stabilization of diode laser based on 3rd, 5th and 7th harmonic method**
*A. Grobelny, A. Wąż*

**We.P.20** **Interference aspects of terahertz transmission**
*P. Jarzab, J.S. Witkowski, K. Nowak, G. Beziuk, A. Grobelny, R. Wilk, M. Mikulics, E.F. Plinski*

**We.P.21** **Design of a wavelength control for coherent detection of high order modulation formats**
*J.M. Fabrega, J. Prat, L. Molle, R. Freund*