

2015 European Conference on Optical Communication (ECOC 2015)

**Valencia, Spain
27 September – 1 October 2015**

Pages 1-588



**IEEE Catalog Number: CFP15425-POD
ISBN: 978-1-4673-7950-2**

TABLE OF CONTENTS

MO.3.1.1 - RECENT SCIENTIFIC APPLICATIONS OF PHOTONIC CRYSTAL FIBRES (TUTORIAL)	1
<i>Russell, P.St.J.</i>	
MO.3.1.2 - SINGLE MODE, POLARIZATION MAINTAINING HOLLOW CORE FIBRE WITH SIGNIFICANTLY IMPROVED HIGHER ORDER MODE REDUCTION	4
<i>Mangan, B.J. ; Nicholson, J.W. ; Fini, J.M. ; Windeler, R.S. ; Meng, L. ; Puc, G. ; Mukasa, K.</i>	
MO.3.1.3 - PROGRAMMABLE GENERATION AND STORAGE OF SOLITON SEQUENCES IN FIBRE LASER CAVITY LOCKED TO GIGAHERTZ CORE RESONANCE IN PCF	7
<i>Pang, Meng ; He, Wenbin ; Russell, Philip St.J.</i>	
MO.3.1.4 - HIGH DYNAMIC RANGE TECHNIQUE FOR DISCRETE AND DISTRIBUTED SCATTERING LOSS MEASUREMENT IN MICROSTRUCTURED OPTICAL FIBRES	10
<i>Sandoghchi, S.R. ; Gray, D.R. ; Chen, Y. ; Wheeler, N.V. ; Bradley, T. ; Hayes, J. ; Fokoua, E.Numkam ; Jasion, G.T. ; Mousavi, S.M. ; Petrovich, M. ; Poletti, F. ; Richardson, D.J.</i>	
MO.3.2.1 - ETCHED-FACET SEMICONDUCTOR OPTICAL AMPLIFIERS FOR GAIN-INTEGRATED PHOTONIC SWITCH FABRICS	13
<i>Schares, L. ; Budd, R. ; Kuchta, D. ; Doany, F. ; Schow, C. ; Mohrle, M. ; Sigmund, A. ; Rehbein, W.</i>	
MO.3.2.2 - MONOLITHICALLY INTEGRATED WDM CROSS-CONNECT SWITCH FOR NANOSECONDS WAVELENGTH, SPACE, AND TIME SWITCHING	16
<i>Calabretta, Nicola ; Williams, Kevin ; Dorren, Harm</i>	
MO.3.2.3 - GRADED-INDEX POLYMER MULTIMODE WAVEGUIDES FOR 100 GB/S BOARD-LEVEL DATA TRANSMISSION	19
<i>Chen, Jian ; Bamiedakis, Nikos ; Vasil'ev, Peter ; Edwards, Tom J. ; Brown, Christian T.A. ; Penty, Richard V. ; White, Ian H.</i>	
MO.3.2.4 - TOWARD TRANSPARENT OPTICAL NETWORKING IN EXASCALE COMPUTERS	22
<i>Rumley, Sebastien ; Calhoun, David M. ; Rodrigues, Arun ; Hammond, Simon ; Bergman, Keren</i>	
MO.3.3.1 - DETECTION OF A 1 TB/S SUPERCHANNEL WITH A SINGLE COHERENT RECEIVER	25
<i>Millar, David S. ; Maher, Robert ; Lavery, Domanic ; Koike-Akino, Toshiaki ; Pajovic, Milutin ; Alvarado, Alex ; Paskov, Milen ; Kojima, Keisuke ; Parsons, Kieran ; Thomsen, Benn C. ; Savory, Seb J. ; Bayvel, Polina</i>	
MO.3.3.2 - 256-GB/S SINGLE-CARRIER PM-256QAM IMPLEMENTATION USING COORDINATED DD-LMS AND CMA EQUALIZATION	28
<i>Chien, Hung-Chang ; Jia, Zhensheng ; Yu, Jianjun</i>	
MO.3.3.3 - MODIFIED RADIUS DIRECTED EQUALISER FOR HIGH ORDER QAM	31
<i>Lavery, Domanic ; Paskov, Milen ; Maher, Robert ; Savory, Seb J. ; Bayvel, Polina</i>	
MO.3.3.4 - MODULATION ORDER AND CODE RATE OPTIMISATION FOR DIGITAL COHERENT TRANSCEIVERS USING GENERALISED MUTUAL INFORMATION	34
<i>Maher, Robert ; Alvarado, Alex ; Lavery, Domanic ; Bayvel, Polina</i>	
MO.3.3.5 - LOW LATENCY DIGITAL REGENERATOR FOR DUAL POLARIZATION QAM SIGNALS	37
<i>Buchali, Fred ; Schmalen, Laurent ; Hu, Qian ; Che, Di</i>	
MO.3.3.6 - EXPERIMENTAL STUDY ON POLYBINARY-PULSE-SHAPED QAM SIGNALS FOR HIGHLY-SPECTRAL-EFFICIENT SUPER-NYQUIST-WDM SYSTEMS	40
<i>Igarashi, Koji ; Tsuritani, Takehiro ; Morita, Itsuro</i>	
MO.3.4.1 - DEMONSTRATION OF SYMMETRICAL 25 GBPS QUATERNARY PAM/DUOBINARY TDM-PON WITH MULTILEVEL INTERLEAVING OF USERS	43
<i>van Veen, Douthie ; Houtsmma, Vincent ; Chow, Hungkei</i>	
MO.3.4.2 - SUB-THZ PHOTONIC FREQUENCY CONVERSION USING GRAPHENE AND INP-BASED TRANSISTORS FOR FUTURE FULLY COHERENT ACCESS NETWORK	46
<i>Sugawara, Kenta ; Kawasaki, Tetsuya ; Tamamushi, Gen ; Hussin, Mastura B. ; Dobroiu, Adrian ; Yoshida, Tomohiro ; Suemitsu, Tetsuya ; Fukidome, Hirokazu ; Suemitsu, Maki ; Victor, Ryzhii ; Iwatsuki, Katsumi ; Kuwano, Shigeru ; Kani, Jun-ichi ; Terada, Jun ; Otsuji, Taiichi</i>	
MO.3.4.3 - DEMONSTRATION OF UPSTREAM WDM+FDMA PON AND REAL TIME IMPLEMENTATION ON AN FPGA PLATFORM	49
<i>Straullu, S. ; Savio, P. ; Nespola, A. ; Chang, J. ; Ferrero, V. ; Gaudino, R. ; Abrate, S.</i>	

MO.3.4.4 - DEMONSTRATION OF HIGH-PERFORMANCE COST-EFFECTIVE 100-GB/S TWDM-PON USING 4×25-GB/S OPTICAL DUOBINARY CHANNELS WITH 16-GHZ APD AND RECEIVER-SIDE POST-EQUALIZATION	52
<i>Ye, Zhicheng ; Li, Shengping ; Cheng, Ning ; Liu, Xiang</i>	
MO.3.4.5 - EXPERIMENTAL DEMONSTRATION OF REAL TIME RECEIVER FOR FREQUENCY DIVISION MULTIPLE ACCESS PON	55
<i>Bardoux, R. ; Carer, A. ; Lebreton, A. ; Bramerie, L. ; Scalart, P. ; Charbonnier, B.</i>	
MO.3.4.6 - DISPERSION UNCOMPENSATED IM/DD TRANSMISSIONS OF 12GHZ-WIDE MULTI-BAND OFDM OVER 100KM WITH A D-EML	58
<i>Chaibi, Mohamed E. ; Neto, Luiz Anet ; Kazmierski, Christophe ; Grillot, Frederic ; Erasme, Didier</i>	
MO.3.5.1 - IMPACT OF FORWARD ERROR CORRECTION ON ENERGY CONSUMPTION OF VCSEL-BASED TRANSMITTERS	61
<i>Szczerba, Krzysztof ; Fougstedt, Christoffer ; Larsson-Edefors, Per ; Westbergh, Petter ; Graell i Amat, Alexandre ; Svensson, Lars ; Karlsson, Magnus ; Larsson, Anders ; Andrekson, Peter A.</i>	
MO.3.5.2 - TRANSMISSION OF MULTI-DIMENSIONAL SIGNALS USING SILICON PHOTONIC MODULATORS AND MIMO BASED DIRECT DETECTION RECEIVERS	64
<i>Plant, David V.</i>	
MO.3.5.3 - 100 GBPS COHERENT DIGITAL CFP INTERFACE FOR SHORT REACH, REGIONAL, AND ULTRA LONG-HAUL OPTICAL COMMUNICATIONS	66
<i>Loussouarn, Y. ; Song, M. ; Pincemin, E. ; Miller, G. ; Gibbemeyer, A. ; Mikkelsen, B.</i>	
MO.3.5.4 - HIGH-SPECTRAL-EFFICIENCY OPTICAL DIRECT DETECTION USING THE STOKES VECTOR RECEIVER	69
<i>Che, Di ; Hu, Qian ; Shieh, William</i>	
MO.3.5.5 - BLIND POLARIZATION DE-MULTIPLEXING FOR STOKES VECTOR DIRECT DETECTION	72
<i>Che, Di ; Li, An ; Shieh, William</i>	
MO.3.6.1 - THE EFFECT OF INTRA-LINK POWER PERTURBATIONS ON CHANNEL PERFORMANCE	75
<i>Chin, Hou-Man ; Thomsen, Benn C. ; Savory, Seb J.</i>	
MO.3.6.2 - DOUBLED TRANSMISSION REACH FOR DP-64QAM SIGNAL OVER FIELD-DEPLOYED LEGACY FIBER SYSTEMS ENABLED BY MSS	78
<i>Solis-Trapala, Karen ; Pelusi, Mark ; Tan, Hung Nguyen ; Inoue, Takashi ; Suda, Satoshi ; Namiki, Shu</i>	
MO.3.6.3 - EXPERIMENTAL DEMONSTRATION OF FIBER NONLINEARITY MITIGATION IN A WDM MULTI-SUBCARRIER COHERENT OPTICAL SYSTEM	81
<i>Nespola, A. ; Bertignono, L. ; Bosco, G. ; Carena, A. ; Jiang, Y. ; Bilal, S.M. ; Poggiolini, P. ; Abrate, S. ; Forghieri, F.</i>	
MO.3.6.4 - EXPERIMENTAL INVESTIGATION ON NONLINEAR TOLERANCE OF SUBCARRIER MULTIPLEXED SIGNALS WITH SPECTRUM OPTIMIZATION	84
<i>Nakashima, Hisao ; Tanimura, Takahito ; Oyama, Tomofumi ; Akiyama, Yuichi ; Hoshida, Takeshi ; Rasmussen, Jens C.</i>	
MO.3.6.5 - OPTIMIZED BICM-8QAM FORMATS BASED ON GENERALIZED MUTUAL INFORMATION	87
<i>Zhang, Shaoliang ; Nakamura, Kohei ; Yaman, Fatih ; Mateo, Eduardo ; Inoue, Takanori ; Inada, Yoshihisa</i>	
MO.3.6.6 - INFORMATION RATES FOR THE SP 128-QAM AND DP 16-QAM MODULATION FORMATS	90
<i>Kashi, A.S. ; Cartledge, J.C. ; Bakhshali, A. ; Rezanian, A. ; El-Rahman, A.I.Abd ; O'Sullivan, M. ; Laperle, C. ; Borowiec, A. ; Roberts, K.</i>	
MO.4.1.1 - PHOTONIC BANDGAP FIBRES FOR LOW-LATENCY DATA TRANSMISSION	93
<i>Richardson, D.J. ; Chen, Y. ; Wheeler, N.V. ; Hayes, J.R. ; Bradley, T. ; Liu, Z. ; Sandoghchi, S.R. ; Jasion, G.T. ; Bradley, T. ; Fokoua, E.Numkam ; Gray, D.R. ; Slavik, R. ; Jung, Y. ; Wong, N.H.L. ; Poletti, F. ; Petrovich, M.N.</i>	
MO.4.1.2 - 50µM MULTIMODE FIBERS FOR MODE DIVISION MULTIPLEXING	96
<i>Sillard, P. ; Molin, D. ; Bigot-Astruc, M. ; Amezcua-Correa, A. ; de Jongh, K. ; Achten, F.</i>	
MO.4.1.3 - EXPERIMENTAL EVALUATION OF NONLINEAR TOLERANCE OF TWO LP MODE FIBRE IN OPTICAL MIMO TRANSMISSION	99
<i>Mori, Takayoshi ; Sakamoto, Taiji ; Wada, Masaki ; Urushibara, Azusa ; Yamamoto, Takashi ; Yamamoto, Fumihiko</i>	
MO.4.1.4 - COMPACT HIGHER-ORDER MODE CONVERTER BASED ON ALL-FIBER PHASE PLATE SEGMENT	102
<i>Jung, Y. ; Alam, S.U. ; Richardson, D.J.</i>	
MO.4.1.5 - ANALYSIS AND COMPARISON OF INTERMODAL COUPLING COEFFICIENT OF STANDARD AND HOLLOW CORE FEW MODED FIBRES	105
<i>Fokoua, Eric Numkam ; Wong, Nicholas ; Richardson, David J. ; Poletti, Francesco</i>	

MO.4.1.6 - ACCURATE AND BROADBAND CHARACTERIZATION OF FEW-MODE OPTICAL FIBERS USING ACOUSTO-OPTIC COUPLING.....	108
<i>Alcusa-Saez, E. ; Diez, A. ; Andres, M.V.</i>	
MO.4.2.1 - COMPACT AND LOW-LOSS ZRO2-SIO2 PLC-BASED 8×8 MULTICAST SWITCH FOR CDC-ROADM APPLICATION.....	111
<i>Takahashi, Masanori ; Yamasaki, Shintaro ; Uchida, Yasuyoshi ; Hasegawa, Junichi</i>	
MO.4.2.2 - LOW LOSS 1×93 WAVELENGTH SELECTIVE SWITCH USING PLC-BASED SPOT SIZE CONVERTER.....	114
<i>Iwama, Masaki ; Takahashi, Masanori ; Uchida, Yasuyoshi ; Kimura, Masayoshi ; Kawahara, Ryo ; Matsushita, Shun-ichi ; Mukaiharu, Toshikazu</i>	
MO.4.2.3 - OPTICAL INTEGRATION AND DSP IN NEXT GENERATION NETWORKS.....	117
<i>Srivastava, Atul ; Onaka, Hiroshi</i>	
MO.4.2.4 - NOVEL SPOT-SIZE CONVERTER FOR OPTICAL FIBER TO SUB-μM SILICON WAVEGUIDE COUPLING WITH LOW LOSS, LOW WAVELENGTH DEPENDENCE AND HIGH TOLERANCE TO ALIGNMENT.....	120
<i>Picard, M.-J. ; Painchaud, Y. ; Latrasse, C. ; Larouche, C. ; Pelletier, F. ; Poulin, M.</i>	
MO.4.2.5 - 15-SPATIAL-MODE PHOTONIC LANTERNS BASED ON ULTRAFast LASER INSCRIPTION.....	123
<i>Guan, Binbin ; Ercan, Burcu ; Fontaine, Nicolas K. ; Ryf, Roland ; Chen, Haoshuo ; Scott, Ryan P. ; Zhang, Yumeng ; Yoo, S.J.B.</i>	
MO.4.2.6 - MULTI-MODE ARRAYED WAVEGUIDE GRATING DEMULTIPLEXER WITH SINGLE-MODE PERFORMANCE AND FEW-MODE-FIBER INTERFACES	126
<i>Chen, Haoshuo ; Fontaine, Nicolas K. ; Guan, Binbin ; Ercan, Burcu ; Zhang, Yumeng ; Ryf, Roland ; Cappuzzo, Mark ; Keller, Bob ; Gao, Yongkang ; Ferrari, Carlo ; Scott, Ryan P. ; Ben Yoo, S.J.</i>	
MO.4.3.1 - CLOCK AND CARRIER RECOVERY FOR COHERENT RECEIVERS	129
<i>Sun, Han</i>	
MO.4.3.2 - PERFORMANCE ANALYSIS OF NONLINEAR AND GARDNER TIMING ERROR DETECTORS WITH FREQUENCY SELECTIVE PULSE SHAPING	132
<i>Dorize, Christian ; Ghazisaeidi, Amirhossein ; Renaudier, Jeremie ; Charlet, Gabriel</i>	
MO.4.3.3 - EXPERIMENTAL DEMONSTRATION OF MULTI-PILOT AIDED CARRIER PHASE ESTIMATION FOR DP-64QAM AND DP-256QAM	135
<i>Pajovic, Milutin ; Millar, David S. ; Koike-Akino, Toshiaki ; Maher, Robert ; Lavery, Domanic ; Alvarado, Alex ; Paskov, Milen ; Kojima, Keisuke ; Parsons, Kieran ; Thomsen, Benn C. ; Savory, Seb J. ; Bayvel, Polina</i>	
MO.4.3.4 - EXPERIMENTAL DEMONSTRATION OF CYCLE-SLIP-TOLERANT TURBO DIFFERENTIAL DECODING FOR 100-GB/S DP-DQPSK COHERENT TRANSMISSION.....	138
<i>Yu, Fan ; Xiao, Zhiyu ; Li, Mo ; Stojanovic, Nebojsa ; Xie, Changsong ; Shi, Xiaozhong</i>	
MO.4.3.5 - PHASE NOISE TOLERANT CARRIER RECOVERY SCHEME FOR 28 GBAUD CIRCULAR 16QAM	141
<i>Navarro, Jaime Rodrigo ; Olmedo, Miguel Iglesias ; Kakkar, Aditya ; Pang, Xiaodan ; Ozolins, Oskars ; Schatz, Richard ; Jacobsen, Gunnar ; Popov, Sergei ; Zibar, Darko</i>	
MO.4.3.6 - MULTIPLIER-FREE BLIND PHASE NOISE ESTIMATION FOR CO-OFDM TRANSMISSION	144
<i>Le, S.T. ; Suibhne, N.Mac ; McCarthy, M.E. ; Ellis, A.D. ; Turitsyn, S.K.</i>	
MO.4.4.1 - HIGH OUTPUT POWER OLT/ONU TRANSCEIVERS FOR 40 GBIT/S SYMMETRIC-RATE NG-PON2 SYSTEMS	147
<i>Asaka, Kota ; Taguchi, Katsuhisa ; Sakaue, Yuki ; Suzuki, Ken-Ichi ; Kimura, Shunji ; Otaka, Akihiro</i>	
MO.4.4.2 - OPTICAL LINE TERMINATION TRANSCEIVER WITH A BI-DIRECTIONAL SOA FOR APPLICATION IN TYPE-A NG-PON2 LINKS	150
<i>Bonk, R. ; Poehlmann, W. ; Schmuck, H. ; Heron, R. ; Pfeiffer, Th.</i>	
MO.4.4.3 - COMPACT BI-DIRECTIONAL EDFAS TO SUPPORT EXTENDED POWER BUDGET CLASS OF TWDM-PON	153
<i>Fujiwara, Masamichi ; Koma, Ryo ; Suzuki, Ken-Ichi ; Otaka, Akihiro</i>	
MO.4.4.4 - LONG-REACH 10G-EPON OVER OPTICAL PACKET/CIRCUIT INTEGRATED BACKBONE NETWORKS: TEST-BED DEMONSTRATION	156
<i>Shimizu, Satoshi ; Kado, Yasuyuki ; Kinoshita, Susumu ; Wada, Naoya ; Kitayama, Ken-Ichi</i>	
MO.4.4.5 - EXTENDING CAPACITY IN ACCESS BEYOND NG-PON2: WDM VS. TDM.....	159
<i>Iannone, Patrick ; van Veen, Dora ; Gnauck, Alan ; Houtsmma, Vincent</i>	
MO.4.5.1 - EXPERIMENTAL COMPARISON OF PAM VS. DMT USING AN O-BAND SILICON PHOTONIC MODULATOR AT DIFFERENT PROPAGATION DISTANCES	162
<i>Yekani, A. ; Chagnon, M. ; Park, C.S. ; Poulin, M. ; Plant, D.V. ; Rusch, L.A.</i>	

MO.4.5.2 - 100-GB/S DISCRETE-MULTITONE TRANSMISSION OVER 80-KM SSMF USING SINGLE-SIDEBAND MODULATION WITH NOVEL INTERFERENCE-CANCELLATION SCHEME	165
<i>Randel, Sebastian ; Pilori, Dario ; Chandrasekhar, S. ; Raybon, Greg ; Winzer, Peter</i>	
MO.4.5.3 - ENABLING COMPLEX MODULATION USING THE FREQUENCY CHIRP OF DIRECTLY MODULATED LASERS	168
<i>Che, Di ; Hu, Qian ; Yuan, Feng ; Shieh, William</i>	
MO.4.5.4 - DEMONSTRATION OF 112-GBIT/S OPTICAL TRANSMISSION USING 56GBAUD PAM-4 DRIVER AND CLOCK-AND-DATA RECOVERY ICS	171
<i>Lee, Jeffrey ; Shahramian, Shahriar ; Kaneda, Noriaki ; Baeyens, Yves ; Sinsky, Jeffrey ; Buhl, Lawrence ; Weiner, Joe ; Koc, Ut-Va ; Konczykowska, Agnieszka ; Dupuy, Jean-Yves ; Jorge, Filipe ; Aroca, Ricardo ; Pfau, Timo ; Chen, Young-Kai</i>	
MO.4.5.5 - REAL-TIME DIRECT-DETECTION OF QUAD-CARRIER 200GBPS 16QAM-DMT WITH DIRECTLY MODULATED LASER	174
<i>Li, Fan ; Xiao, Xin ; Yu, Jianjun ; Zhang, Junwen ; Li, Xinying</i>	
MO.4.6.1 - TOWARDS PLUG-AND-PLAY SOFTWARE-DEFINED EONS: FIELD TRIAL OF SELF-ADAPTATION CARRIER SPACING	177
<i>Cugini, F. ; Fresi, F. ; Paolucci, F. ; Meloni, G. ; Poti, L. ; Sambo, N. ; D'Errico, A. ; Castoldi, P.</i>	
MO.4.6.2 - SPECTRAL VS. SPATIAL SUPER-CHANNEL ALLOCATION IN SDM NETWORKS UNDER INDEPENDENT AND JOINT SWITCHING PARADIGMS	180
<i>Siracusa, D. ; Pedersolli, F. ; Khodashenas, P.S. ; Rivas-Moscoco, J.M. ; Klonidis, D. ; Salvadori, E. ; Tomkos, I.</i>	
MO.4.6.3 - EFFECTIVE ELASTICITY FOR DATA CENTERS INTERCONNECTION IN MULTI-DOMAIN WAN: INFORMATION MODELLING AND ROUTING	183
<i>Iovanna, Paola ; Ubaldi, Fabio ; Giurlanda, Francesco ; Noto, Sandro ; Priola, Alessandro ; Contreras, Luis M. ; Lopez, Victor ; Gimenez, Juan Pedro Fernandez-Palacios</i>	
MO.4.6.4 - HIERARCHICAL MONITORING ARCHITECTURE AND OAM HANDLER	186
<i>Sambo, N. ; Cugini, F. ; Sgambelluri, A. ; Castoldi, P.</i>	
MO.4.6.5 - QUASI-HITLESS SOFTWARE-DEFINED DEFRAGMENTATION IN SPACE DIVISION MULTIPLEXING (SDM)	189
<i>Imran, M. ; Paolucci, F. ; Cugini, F. ; D'Errico, A. ; Giorgi, L. ; Sasaki, T. ; Castoldi, P. ; Poti, L.</i>	
MO.4.6.6 - UTILIZATION RATE OF MULTI CARRIER TRANSPONDERS DEPLOYED IN THE CONUS NETWORK WITH MCS-BASED CONTENTIONLESS OXCS	192
<i>Zami, Thierry</i>	
TU.1.1.1 - PRACTICAL IMPLEMENTATION OF NONLINEAR FOURIER TRANSFORM BASED OPTICAL NONLINEARITY MITIGATION	195
<i>Bulow, Henning ; Aref, Vahid ; Schuh, Karsten ; Idler, Wilfried</i>	
TU.1.1.2 - EXPERIMENTAL DEMONSTRATION OF NONLINEAR FREQUENCY DIVISION MULTIPLEXED TRANSMISSION	198
<i>Aref, Vahid ; Bulow, Henning ; Schuh, Karsten ; Idler, Wilfried</i>	
TU.1.1.3 - MODIFIED NONLINEAR INVERSE SYNTHESIS FOR OPTICAL LINKS WITH DISTRIBUTED RAMAN AMPLIFICATION	201
<i>Le, S.T. ; Prilepsky, J.E. ; Kamalian, M. ; Rosa, P. ; Tan, M. ; Ania-Castanon, J.D. ; Harper, P. ; Turitsyn, S.K.</i>	
TU.1.1.4 - EXPERIMENTAL DEMONSTRATION OF RAMAN-ASSISTED PHASE SENSITIVE AMPLIFIER WITH NEGLIGIBLE GAIN/POWER FLUCTUATION	204
<i>Akasaka, Y. ; Yang, J.-Y. ; Sekiya, M. ; Ikeuchi, T. ; Cao, Y. ; Almain, A. ; Ziyadi, M. ; Mohajerin-Ariaei, A. ; Liao, P. ; Willner, A.E. ; Takasaka, S. ; Sugizaki, R.</i>	
TU.1.2.1 - 64×64 LOW-LOSS AND BROADBAND DIGITAL SILICON PHOTONIC MEMS SWITCHES	207
<i>Seok, Tae Joon ; Quack, Niels ; Han, Sangyoon ; Zhang, Wencong ; Muller, Richard S. ; Wu, Ming C.</i>	
TU.1.2.2 - EXPERIMENTAL DEMONSTRATION OF MULTIDIMENSIONAL SWITCHING NODES FOR ALL-OPTICAL DATA CENTRE NETWORKS	210
<i>Kamchevska, Valerija ; Medhin, Ashenafi K. ; Da Ros, Francesco ; Ye, Feihong ; Asif, Rameez ; Fagertun, Anna M. ; Ruepp, Sarah ; Berger, Michael ; Dittmann, Lars ; Morioka, Toshio ; Oxenlowe, Leif K. ; Galili, Michael</i>	
TU.1.2.3 - COHERENT OPTICAL ORTHOGONAL FREQUENCY-DIVISION MULTIPLEXING FOR OPTICAL SLOT SWITCHED INTRA-DATACENTERS NETWORKS	213
<i>Estaran, Jose ; Mestre, Miquel A. ; Jenneve, Philippe ; Mardoyan, Haik ; Monroy, Idelfonso Tafur ; Zibar, Darko ; Bigo, Sebastien</i>	
TU.1.2.4 - NEXT GENERATION DATA CENTRES: HOW WILL OPTICS BE EMPLOYED?	216
<i>Schow, Clint L.</i>	
TU.1.3.1 - COMPACT 100-GB/S DP-QPSK INTRADYNE COHERENT RECEIVER MODULE EMPLOYING SI WAVEGUIDE	219
<i>Takahashi, Morio ; Matsumoto, Takashi ; Watanabe, Shinya ; Shiba, Kazuhiro ; Kaneko, Taro ; Oguro, Mamoru ; Chikuma, Tadayuki ; Kitamura, Naoki ; Yamazaki, Hiroyuki</i>	

TU.1.3.2 - COMPACT 8-WAVELENGTH RECEIVER OPTICAL SUB-ASSEMBLY WITH A LOW-LOSS AWG DEMULTIPLEXER FOR 400-GIGABIT DATACOM	222
<i>Doi, Yoshiyuki ; Nakanishi, Yasuhiko ; Yoshimatsu, Toshihide ; Ohno, Tetsuichiro ; Sanjo, Hiroaki</i>	
TU.1.3.3 - WAVEGUIDE INTEGRATED INP-BASED PHOTODETECTOR FOR 100GBAUD APPLICATIONS OPERATING AT WAVELENGTHS OF 1310NM AND 1550NM	225
<i>Runge, P. ; Zhou, G. ; Ganzer, F. ; Mutschall, S. ; Seeger, A.</i>	
TU.1.3.4 - LOW-VOLTAGE WAVEGUIDE GE APD BASED HIGH SENSITIVITY 10GB/S SI PHOTONIC RECEIVER.....	228
<i>Chen, H.T. ; Verbist, J. ; Verheyen, P. ; De Heyn, P. ; Lepage, G. ; De Coster, J. ; Absil, P. ; Yin, X. ; Bauwelinck, J. ; Van Campenhout, J. ; Roelkens, G.</i>	
TU.1.3.5 - A 20 GB/S SIGE PHOTORECEIVER BASED ON OPTICAL TIME SAMPLING	231
<i>Hai, Mohammed Shafiqul ; Menard, Michael ; Liboiron-Ladouceur, Odile</i>	
TU.1.3.6 - A MODE-ENGINEERED HYBRID III-V-ON-SILICON PHOTODETECTOR	234
<i>Hofrichter, J. ; Czornomaz, L. ; Horst, F. ; Seifried, M. ; Caimi, D. ; Meier, N. ; Fompeyrine, J. ; Offrein, B.J.</i>	
TU.1.4.1 - HIGH-SPEED NETWORKS IN FIELD OPERATION: AN OPERATOR'S VIEW	237
<i>Ehrhardt, A. ; Weiershausen, W. ; Gunkel, M. ; Mattheus, A.</i>	
TU.1.4.2 - FLEXIBLE GRID NETWORK OPTIMIZATION FOR MAXIMUM SPECTRAL EFFICIENCY AND REACH	240
<i>Vassilieva, Olga ; Yamauchi, Tomohiro ; Oda, Shoichiro ; Kim, Inwoong ; Hoshida, Takeshi ; Aoki, Yasuhiko ; Rasmussen, Jens C. ; Sekiya, Motoyoshi</i>	
TU.1.4.3 - EXPERIMENTAL ANALYSIS OF NONLINEAR INTERFERENCE NOISE IN HETEROGENEOUS FLEX-GRID WDM TRANSMISSION.....	243
<i>Schmidt-Langhorst, Carsten ; Elschner, Robert ; Frey, Felix ; Emmerich, Robert ; Schubert, Colja</i>	
TU.1.4.4 - EXPERIMENTAL COMPARISON BETWEEN SUPER-CHANNEL AND SUB-BAND SINGLE-CARRIER FOR 400 GB/S AND 800 GB/S TRANSPORT	246
<i>Rios-Muller, R. ; Renaudier, J. ; Brindel, P. ; Jenneve, P. ; Mardoyan, H. ; Schmalen, L. ; Charlet, G.</i>	
TU.1.4.5 - 32 × 1TB/S C-BAND TRANSMISSION OVER 1000KM EMPLOYING THREE SUBCARRIERS PM-64QAM FOR REGIONAL APPLICATIONS.....	249
<i>Rahman, Talha ; Rafique, Danish ; Spinnler, Bernhard ; Napoli, Antonio ; de Waardt, Huug</i>	
TU.1.5.1 - EXPERIMENTAL DEMONSTRATION OF 6-MODE DIVISION MULTIPLEXED NG-PON2: COST EFFECTIVE 40 GBIT/S/SPATIAL-MODE ACCESS BASED ON 3D LASER INSCRIBED PHOTONIC LANTERNS	252
<i>Asif, Rameez ; Hu, Hao ; Mitchell, Paul ; Macdonald, John ; Da Ros, Francesco ; Psaila, Nicholas ; Ye, Feihong ; Oxenlowe, Leif Katsuo ; Morioka, Toshio</i>	
TU.1.5.2 - EXPERIMENTAL DEMONSTRATION OF 5-MODE PON ACHIEVING A NET GAIN OF 4 DB IN UPSTREAM TRANSMISSION LOSS BUDGET	255
<i>Xia, Cen ; Wen, He ; Velazquez-Benitez, A.M. ; Chand, Naresh ; Antonio-Lopez, Jose Enrique ; Huang, Bin ; Liu, Huiyuan ; Zheng, Hongjun ; Sillard, P. ; Liu, Xiang ; Effenberger, Frank ; Amezcua-Correa, Rodrigo ; Li, Guifang</i>	
TU.1.5.3 - HIGH-SPEED PLASTIC OPTICAL FIBERS AND THEIR SIMPLE INTERCONNECTS FOR 4K/8K VIDEO TRANSMISSION	258
<i>Koike, Y. ; Inoue, A.</i>	
TU.1.5.4 - REMOTELY POWERED INTELLIGENT SPLITTER MONITOR FOR FIBER ACCESS NETWORKS.....	261
<i>Hehmann, J. ; Straub, M. ; Jentsch, L. ; Earnshaw, M. ; Anthapadmanabhan, P. ; Pfeiffer, Th.</i>	
TU.1.5.5 - BRILLOUIN-BASED PON MONITORING USING FREQUENCY-SWEPT PUMP PULSE FOR GAIN PROFILE DISTRIBUTION COMPENSATION ALONG CABLES.....	264
<i>Takahashi, Hiroshi ; Toge, Kunihiro ; Kito, Chihiro ; Manabe, Tetsuya</i>	
TU.1.5.6 - REMOTELY PUMPED AND HIGH SPLITTING RATIO (1:512) INTRA-PON FLOW TRANSMISSION VIA A DISTANTLY POWERED QUASI-PASSIVE RECONFIGURABLE (QPAR) NODE.....	267
<i>Yin, Shuang ; Bi, Yingying ; Shen, Thomas Shunrong ; Oyama, Tomofumi ; Kazovsky, Leonid G.</i>	
TU.1.6.1 - SDN AND NFV FOR BROADCASTERS AND MEDIA.....	270
<i>Butler, David</i>	
TU.1.6.2 - DYNAMIC AND VIRTUALIZED STACKABLE ACTIVE STATEFUL PCES WITH BGP-LS FOR OPTICAL NETWORK VIRTUALIZATION AND MULTI TENANCY.....	273
<i>Casellas, R. ; Vilalta, R. ; Munoz, R. ; Martinez, R.</i>	
TU.1.6.3 - USE-CASE BASED COST AND ENERGY EFFICIENCY ANALYSIS OF VIRTUALIZATION CONCEPTS IN OPERATOR NETWORKS	276
<i>Lange, Christoph ; Kosiankowski, Dirk ; Gladisch, Andreas</i>	
TU.1.6.4 - DYNAMIC CUSTOMER VIRTUAL NETWORK RECONFIGURATION WITH QOS CONSTRAINTS AND BANDWIDTH GUARANTEES	279
<i>Asensio, A. ; Ruiz, M. ; Contreras, L.M. ; Velasco, L. ; Junyent, G.</i>	

TU.1.6.5 - MULTI-TENANT TRANSPORT NETWORKS WITH SDN/NFV	282
<i>Vilalta, R. ; Mayoral, A. ; Munoz, R. ; Casellas, R. ; Martinez, R.</i>	
TU.3.1.1 - NG-PON2 TRANSMISSION CONVERGENCE LAYER: A TUTORIAL	285
<i>Khotimsky, Denis A.</i>	
TU.3.1.2 - REAL-TIME AND FAIR THROUGHPUT CONTROL IN DIFFERENT OSU TRAFFIC BIAS WITH DLB ALGORITHM FOR λ -TUNABLE WDM/TDM-PON	288
<i>Yumiko, Senoo ; Kaneko, Shin ; Yoshida, Tomoaki ; Sugawa, Jun ; Wakayama, Koji ; Suzuki, Ken-Ichi ; Otaka, Akihiro</i>	
TU.3.1.3 - IN-SERVICE WAVELENGTH TUNING TECHNOLOGY IN WDM/TDM-PONS FOR MULTIPLE-SERVICE CONVERGENCE	292
<i>Kaneko, Shin ; Yoshida, Tomoaki ; Asaka, Kota</i>	
TU.3.2.1 - TRANSMISSION SYSTEMS WITH LOW NOISE PHASE SENSITIVE PARAMETRIC AMPLIFIERS	295
<i>Karlsson, Magnus</i>	
TU.3.2.2 - 72-TB/S TRANSMISSION OVER 179-KM ALL-FIBER 6-MODE SPAN WITH TWO CLADDING PUMPED IN-LINE AMPLIFIERS	298
<i>Ryf, R. ; Fontaine, N.K. ; Chen, H. ; Gnauck, A.H. ; Jung, Y. ; Kang, Q. ; Sahu, J.K. ; Alam, S.U. ; Richardson, D.J. ; Sun, Y. ; Jiang, X. ; Gruner-Nielsen, L. ; Jensen, R.V. ; Lingle, R.</i>	
TU.3.2.3 - DISTRIBUTED RAMAN AMPLIFICATION BASED TRANSMISSION OVER 1050-KM FEW-MODE FIBER	301
<i>Ryf, R. ; Esmaelpour, M. ; Fontaine, N.K. ; Chen, H. ; Gnauck, A.H. ; Essiambre, R.-J. ; Toulouse, J. ; Sun, Y. ; Lingle, R.</i>	
TU.3.3.1 - MULTIMODE PHOTONICS: HARNESSING OPTICAL TRANSITION DEVICES	304
<i>Leon-Saval, Sergio G.</i>	
TU.3.3.2 - SCALING THE FABRICATION OF HIGHER ORDER PHOTONIC LANTERNS USING MICROSTRUCTURED PREFORMS	307
<i>Velazquez-Benitez, A.M. ; Antonio-Lopez, J.E. ; Alvarado-Zacarias, J.C. ; Lopez-Galmiche, G. ; Sillard, P. ; Van Ras, D. ; Okonkwo, C. ; Chen, H. ; Ryf, R. ; Fontaine, N.K. ; Amezcua-Correa, R.</i>	
TU.3.3.3 - SIX-MODE PHOTONIC LANTERN MULTIPLEXER MADE FROM REDUCED- CLADDING FIBRES	310
<i>Yerolatsitis, S. ; Birks, T.A.</i>	
TU.3.3.4 - ORBITAL-ANGULAR-MOMENTUM POLARIZATION MODE DISPERSION IN OPTICAL FIBERS AND ITS MEASUREMENT TECHNIQUE	313
<i>Wang, Lixian ; Vaity, Pravin ; Messaddeq, Younes ; Rusch, Leslie ; LaRoche, Sophie</i>	
TU.3.3.5 - RETHINKING OPTICAL FIBER	316
<i>Ballato, J. ; Hawkins, T. ; Dragic, P.</i>	
TU.3.4.1 - EXPERIMENTAL DEMONSTRATION OF 8 STATE TURBO TRELLIS CODED MODULATION EMPLOYING 8 PHASE SHIFT KEYING	319
<i>Sillekens, E. ; van Uden, R.G.H. ; van Weerdenburg, J.J.A. ; Kuschnerov, M. ; de Waardt, H. ; Koonen, A.M.J. ; Okonkwo, C.M.</i>	
TU.3.4.2 - A STUDY ON POWER-SCALING OF TRIPLE-CONCATENATED FEC FOR OPTICAL TRANSPORT NETWORKS	322
<i>Ishii, Kenji ; Dohi, Keisuke ; Kubo, Kazuo ; Sugihara, Kenya ; Miyata, Yoshikuni ; Sugihara, Takashi</i>	
TU.3.4.3 - SUB-BAND PAIRWISE CODING FOR INTER-CHANNEL-INTERFERENCE MITIGATION IN SUPERCHANNEL TRANSMISSION SYSTEMS	325
<i>Zhu, Chen ; Song, Binhuang ; Zhuang, Leimeng ; Corcoran, Bill ; Lowery, Arthur J.</i>	
TU.3.4.4 - FPGA PROTOTYPING OF SINGLE-POLARIZATION 112-GBIT/S OPTICAL TRANSCEIVER FOR OPTICAL MULTILEVEL SIGNALING WITH DELAY DETECTION	328
<i>Kikuchi, Nobuhiko ; Yano, Takashi ; Hirai, Riu</i>	
TU.3.4.5 - PERFORMANCE AND DSP COMPLEXITY EVALUATION OF A 112-GBIT/S PAM-4 TRANSCEIVER EMPLOYING A 25-GHZ TOSA AND ROSA	331
<i>Stojanovic, Nebojsa ; Qiang, Zhang ; Prodaniuc, Cristian ; Karinou, Fotini</i>	
TU.3.4.6 - A PATH TO USE LARGE LINEWIDTH LO IN 28 GBD 16-QAM METRO LINKS	334
<i>Kakkar, Aditya ; Pang, Xiaodan ; Ozolins, Oskars ; Schatz, Richard ; Navarro, Jaime Rodrigo ; Louchet, Hadrien ; Jacobsen, Gunnar ; Popov, Sergei</i>	
TU.3.4.7 - EXPERIMENTAL DEMONSTRATION OF A POLARIZATION-INSENSITIVE SELF- HOMODYNE DETECTION RECEIVER FOR OPTICAL ACCESS	337
<i>Luis, Ruben S. ; Puttnam, Benjamin J. ; Mendinueta, Jose M.D. ; Awaji, Yoshinari ; Wada, Naoya</i>	
TU.3.5.1 - 8 $\times$ 8 WAVELENGTH CROSS CONNECT WITH ADD/DROP PORTS INTEGRATED IN SPATIAL AND PLANAR OPTICAL CIRCUIT	340
<i>Nemoto, Naru ; Ikuma, Yuichiro ; Suzuki, Kenya ; Moriwaki, Osamu ; Watanabe, Toshio ; Itoh, Mikitaka ; Takahashi, Tetsuo</i>	

TU.3.5.2 - A WAVELENGTH SELECTIVE SWITCH FOR OPTICAL ADD/DROP MULTIPLEXING OF SUB-BANDS WITHIN NYQUIST WDM SUPER-CHANNELS	343
<i>Corcoran, Bill ; Zhu, Chen ; Schroder, Jochen ; Zhuang, Leimeng ; Foo, Benjamin ; Burla, Marizio ; Beeker, Willem P. ; Leinse, Arne ; Roeloffzen, Chris G.H. ; Lowery, Arthur J.</i>	
TU.3.5.3 - FULLY-PASSIVE ROADM FOR FLEXIBLE IN METRO-ACCESS NETWORKS.....	346
<i>Schrenk, B. ; Laudenbach, F. ; Lieger, R. ; Lorunser, T. ; Bakopoulos, P. ; Poppe, A. ; Stierle, M. ; Avramopoulos, H. ; Leopold, H.</i>	
TU.3.5.4 - MONOLITHIC INTEGRATED REFLECTIVE POLARIZATION DIVERSITY SOI-BASED SLOT-BLOCKER FOR FAST RECONFIGURABLE 128 GB/S AND 256 GB/S OPTICAL NETWORKS.....	349
<i>de Valicourt, G. ; Chandrasekhar, S. ; Sinsky, J.H. ; Chang, C-M. ; Chen, Y.K. ; Mestre, M.A. ; Pointurier, Y. ; Bigo, S. ; Fedeli, J.-M. ; Bramerie, L. ; Simon, J.-C. ; Vivien, L. ; Shen, A. ; Le Liepvre, A. ; Duan, G.H.</i>	
TU.3.5.5 - 100-GBPS OPTICAL PACKET SWITCHING WITH ULTRALOW-POWER LABEL PROCESSOR AND OPTICAL SWITCH	352
<i>Segawa, T. ; Ibrahim, S. ; Nakahara, T. ; Takahashi, R.</i>	
TU.3.5.6 - DEMONSTRATION OF REAL-TIME FSK LIGHT LABELING USING DAC-BASED TRANSMITTER FOR 400G SUPERCHANNEL	355
<i>Nakagawa, Goji ; Oda, Shoichiro ; Yoshida, Setsuo ; Huang, Guoxiu ; Aoki, Yasuhiko ; Hoshida, Takeshi ; Saito, Taku ; Endo, Taketo ; Komaki, Kousuke ; Takeuchi, Osamu ; Onaka, Hiroshi ; Rasmussen, Jens C.</i>	
TU.3.6.1 - PROGRAMMABLE HARDWARE FOR SOFTWARE DEFINED NETWORKS	358
<i>Brebner, Gordon</i>	
TU.3.6.2 - FPGA-BASED OPTICAL PROGRAMMABLE SWITCH AND INTERFACE CARD FOR DISAGGREGATED OPS/OCS DATA CENTRE NETWORKS	361
<i>Yan, Yan ; Shu, Yi ; Saridis, George M. ; Rofoee, Bijan R. ; Zervas, Georgios ; Simeonidou, Dimitra</i>	
TU.3.6.3 - PETABIT/S DATA CENTER NETWORK ARCHITECTURE WITH SUB-MICROSECONDS LATENCY BASED ON FAST OPTICAL SWITCHES.....	364
<i>Miao, Wang ; Yan, Fulong ; Dorren, Harm ; Calabretta, Nicola</i>	
TU.3.6.4 - GREEN OPTICAL SLOT SWITCHING TORUS FOR MEGA-DATACENTERS.....	367
<i>Pointurier, Y. ; Uscumlic, B. ; Mestre, M.A. ; Jenneve, P. ; Mardoyan, H. ; Dupas, A. ; Bigo, S.</i>	
TU.3.6.5 - EVROS: ALL-OPTICAL PROGRAMMABLE DISAGGREGATED DATA CENTRE INTERCONNECT UTILIZING HOLLOW-CORE BANDGAP FIBRE.....	370
<i>Saridis, G.M. ; Yan, Y. ; Shu, Y. ; Yan, S. ; Arslan, M. ; Bradley, T. ; Wheeler, N.V. ; Wong, N.H.L. ; Poletti, F. ; Petrovich, M.N. ; Richardson, D.J. ; Poole, S. ; Zervas, G. ; Simeonidou, D.</i>	
TU.3.6.6 - LOW-POWER/COST INTRA-DATACENTRE ARCHITECTURE EXPLOITING TRANSMISSION AND MULTIPLEXING IN THE INTERCONNECTION FABRIC	373
<i>Matrakidis, C. ; Orphanoudakis, T. ; Stavdas, A. ; Brenot, R. ; Bach, H.-G. ; Runge, P. ; Yin, X.</i>	
WE.1.4.1 - COUPLED-CORE MULTI-CORE FIBERS: HIGH-SPATIAL-DENSITY OPTICAL TRANSMISSION FIBERS WITH LOW DIFFERENTIAL MODAL PROPERTIES	376
<i>Hayashi, Tetsuya ; Ryf, Roland ; Fontaine, Nicolas K. ; Xia, Cen ; Randel, Sebastian ; Essiambre, Rene-Jean ; Winzer, Peter J. ; Sasaki, Takashi</i>	
WE.1.4.2 - TRANSMISSION OVER COUPLED SIX-CORE FIBER WITH TWO IN-LINE CLADDING-PUMPED SIX-CORE EDFAS.....	379
<i>Chen, Haoshuo ; Fontaine, Nicolas K. ; Ryf, Roland ; Essiambre, Rene-Jean ; Wang, Lixian ; Messaddeq, Younes ; LaRochelle, Sophie ; Hayashi, Tetsuya ; Nagashima, Takuji ; Sasaki, Takashi</i>	
WE.1.4.3 - FEW-MODE MULTI-CORE FIBRE WITH HIGHEST CORE MULTIPLICITY FACTOR	382
<i>Sakamoto, Taiji ; Matsui, Takashi ; Saitoh, Kunimasa ; Saitoh, Shota ; Takenaga, Katsuhiko ; Matsuo, Shoichiro ; Tobita, Yuki ; Hanzawa, Nobutomo ; Nakajima, Kazuhide ; Yamamoto, Fumihiko</i>	
WE.1.4.4 - QUASI-SINGLE-MODE HOMOGENEOUS 31-CORE FIBRE.....	385
<i>Sasaki, Y. ; Saitoh, S. ; Amma, Y. ; Takenaga, K. ; Matsuo, S. ; Saitoh, K. ; Morioka, T. ; Miyamoto, Y.</i>	
WE.1.4.5 - DESIGN OF 125 μM CLADDING MULTI-CORE FIBER WITH FULL-BAND COMPATIBILITY TO CONVENTIONAL SINGLE-MODE FIBER.....	388
<i>Matsui, Takashi ; Sakamoto, Taiji ; Goto, Yukihiko ; Saito, Kotaro ; Nakajima, Kazuhide ; Yamamoto, Fumihiko ; Kurashima, Toshio</i>	
WE.1.4.6 - A PRINCIPAL MODE ANALYSIS OF STRONGLY-COUPLED 3-CORE FIBRES	391
<i>Fujisawa, T. ; Saitoh, K.</i>	
WE.1.5.1 - HIGH PERFORMANCE NARROW LINEWIDTH THERMALLY TUNED SEMICONDUCTOR LASER.....	394
<i>Eriksson, Urban ; Weststrom, Jan-Olof ; Liu, Yitong ; Hammerfeldt, Stefan ; Hassler, Martin ; Stoltz, Bjorn ; Carlsson, Niclas ; Siraj, Salehe ; Goobar, Edgard ; Matsui, Yasuhiro</i>	

WE.1.5.2 - 40-GB/S TRANSMISSION OVER 100-M OM3 FIBER USING A NOVEL OPTICAL TRANSMITTER WITH NARROW-CORE POLYMER WAVEGUIDE.....	397
<i>Shiraishi, Takashi ; Sugawara, Mariko ; Yagisawa, Takatoshi ; Tsunoda, Yukito ; Oku, Hideki ; Ide, Satoshi ; Tanaka, Kazuhiro</i>	
WE.1.5.3 - UP TO 12-GBPS TRANSMISSION OVER 6.3-KM SMF USING A DIRECTLY MODULATED BULK MICROMACHINED MEMS TUNABLE VCSEL.....	400
<i>Zogal, Karolina ; Paul, Sujoy ; Gierl, Christian ; Meissner, Peter ; Kuppers, Franko</i>	
WE.1.5.4 - FACET-FREE SURFACE-EMITTING 1.3-μM DFB LASER.....	403
<i>Adachi, K. ; Suzuki, T. ; Ohtoshi, T. ; Nakahara, K. ; Sagawa, M. ; Nakanishi, A. ; Naoe, K. ; Tanaka, S.</i>	
WE.1.5.5 - UNCOOLED (25–50 ° C) OPERATION OF SELF-SEEDED RSOA FOR LOW-COST COLORLESS WDM-PON TRANSMITTER	406
<i>Zhan, Wenhui ; Tanemura, Takuo ; Yamauchi, Shunya ; Mukaikubo, Masaru ; Nakano, Yoshiaki</i>	
WE.1.5.6 - WAVELENGTH-TUNABLE DUAL-OUTPUT LASER MODULE WITH REAR-SIDE WAVELENGTH MONITOR FOR MICRO-ITLA.....	409
<i>Mochizuki, K. ; Ueno, Y. ; Hasegawa, K. ; Hirose, F. ; Kajiya, S. ; Nogami, M. ; Aruga, H.</i>	
WE.1.6.1 - PHOTONIC INTEGRATED DEVICES FOR EXPLOITING THE ORBITAL ANGULAR MOMENTUM (OAM) OF LIGHT IN OPTICAL COMMUNICATIONS	412
<i>Sorel, Marc ; Strain, Michael J. ; Yu, Siyuan ; Cai, Xinlun</i>	
WE.1.6.2 - BREAK EVEN POINT ANALYSIS OF PHOTONIC ANALOG-TO-DIGITAL CONVERSION ON POWER CONSUMPTION	415
<i>Konishi, T. ; Hasegawa, M. ; Nagashima, T. ; Murakawa, T.</i>	
WE.1.6.3 - INSTANTANEOUS FREQUENCY MEASUREMENT SYSTEM USING FOUR-WAVE MIXING IN AN ULTRA-COMPACT LONG SILICON WAVEGUIDE	418
<i>Pagani, Mattia ; Morrison, Blair ; Zhang, Yanbing ; Casas-Bedoya, Alvaro ; Aalto, Timo ; Harjanne, Mikko ; Kapulainen, Markku ; Eggleton, Benjamin J. ; Marpaung, David</i>	
WE.1.6.4 - OPTICAL GENERATION OF NYQUIST-SPACING SUPER-CHANNEL USING A RING RESONATOR-BASED FLAT-TOP INTERLEAVER	421
<i>Zhuang, Leimeng ; Zhu, Chen ; Burla, Maurizio ; Roeloffzen, Chris G.H. ; Leinse, Arne ; Foo, Benjamin ; Corcoran, Bill ; Lowery, Arthur</i>	
WE.1.6.5 - HIGH ORDER UWB PULSES GENERATION BASED ON A SCALABLE PHASE-TO-INTENSITY TECHNIQUE	424
<i>Moreno, Vanessa ; Mora, Jose ; Barrera, David ; Muriel, Miguel A. ; Capmany, Jose</i>	
WE.2.4.1 - LARGE-AREA LOW LOSS FIBRES AND ADVANCED AMPLIFIERS FOR HIGH CAPACITY LONG HAUL OPTICAL NETWORK.....	427
<i>Zhu, Benyuan</i>	
WE.2.4.2 - 5-MODE AMPLIFIER WITH LOW MODAL CROSSTALK FOR SPATIAL MODE MULTIPLEXING TRANSMISSION WITH LOW SIGNAL PROCESSING COMPLEXITY	430
<i>Simonneau, Christian ; Genevoux, Philippe ; Le Cocq, Guillaume ; Quiquempois, Yves ; Bigot, Laurent ; Boutin, Aurelien ; Bigot-Astruc, M. ; Sillard, P. ; Charlet, Gabriel</i>	
WE.2.4.3 - OPTICAL AMPLIFIER SHARING FOR SINGLE MODE FIBERS: AMPLIFICATION OF 5 NON-DEGENERATE MODES IN AN ELLIPTICAL-CORE FM-EDFA.....	433
<i>Trinel, Jean-Baptiste ; Quiquempois, Yves ; Le Rouge, Antoine ; Garcia, Lionel ; Morizur, Jean-Francois ; Labroille, Guillaume ; Bigot, Laurent</i>	
WE.2.4.4 - BISMUTH-DOPED FIBER LASERS AND OPTICAL AMPLIFIERS FOR EXTENDED TRANSMISSION BANDS: THE NATURE OF BI-RELATED LASER-ACTIVE CENTERS	436
<i>Firstov, S.V. ; Alyshev, S.V. ; Melkumov, M.A. ; Dianov, E.M.</i>	
WE.2.4.5 - MEASUREMENTS OF FREQUENCY INSTABILITIES AND SLOW RANDOM EVOLUTION OF INTER-MODAL FOUR-WAVE MIXING IN FEW-MODE FIBERS.....	439
<i>Esmaeelpour, Mina ; Essiambre, Rene-Jean ; Fontaine, Nicolas K. ; Ryf, Roland ; Toulouse, Jean</i>	
WE.2.4.6 - NON-RECIPROCAL GAIN DUE TO COUNTER-PROPAGATING PUMPS IN A POLARIZATION-INDEPENDENT FOPA WITH DIVERSITY LOOP	442
<i>Sackey, Isaac ; Jazayerifar, Mahmoud ; Elschner, Robert ; Richter, Thomas ; Meuer, Christian ; Petermann, Klaus ; Schubert, Colja</i>	
WE.2.5.1 - HETEROGENEOUS INTEGRATION: EXTENDING THE FUNCTIONALITY OF SILICON PHOTONICS WITH III-V MATERIALS.....	445
<i>Fish, Gregory ; Fang, Alexander</i>	
WE.2.5.2 - 28 GB/S DIRECT MODULATION HETEROGENEOUSLY INTEGRATED INP/SI DFB LASER.....	448
<i>Abbasi, A. ; Verbist, J. ; van Kerrebroeck, J. ; Lelarge, F. ; Duan, G.H. ; Bauwelinck, J. ; Roelkens, G. ; Morthier, G.</i>	

WE.2.5.3 - MEMBRANE DISTRIBUTED-REFLECTOR LASER INTEGRATED WITH SIO_x-BASED SPOT-SIZE CONVERTER ON SI PLATFORM.....	451
<i>Nishi, Hidetaka ; Fujii, Takuro ; Takeda, Koji ; Hasebe, Koichi ; Kakitsuka, Takaaki ; Tsuchizawa, Tai ; Yamamoto, Tsuyoshi ; Yamada, Koji ; Matsuo, Shinji</i>	
WE.2.5.4 - DEMONSTRATION OF SILICON PHOTONIC HYBRID RING-FILTER EXTERNAL CAVITY WAVELENGTH TUNABLE LASERS.....	454
<i>Sato, K. ; Kobayashi, N. ; Namiwaka, M. ; Yamamoto, K. ; Watanabe, S. ; Kita, T. ; Yamada, H. ; Yamazaki, H.</i>	
WE.2.5.5 - 3D INTEGRATED HYBRID SILICON LASER.....	457
<i>Song, Bowen ; Contu, Pietro ; Stagarescu, Cristian ; Pinna, Sergio ; Abolghasem, Payam ; Ristic, Sasa ; Bickel, Nathan ; Bowker, Jason ; Behfar, Alex ; Klamkin, Jonathan</i>	
WE.2.6.1 - HIGHLY CASCADABLE ALL-OPTICAL WAVELENGTH CONVERSIONS OF DP-QPSK, DP-16QAM, AND DP-64QAM SIGNALS.....	460
<i>Tan, Hung Nguyen ; Inoue, Takashi ; Namiki, Shu</i>	
WE.2.6.2 - SPECTRALLY EFFICIENT OPTICAL PHASE CONJUGATION BASED ON COMPLEMENTARY SPECTRAL INVERSION FOR NONLINEARITY MITIGATION.....	463
<i>Umeki, T. ; Kazama, T. ; Ono, H. ; Miyamoto, Y. ; Takenouchi, H.</i>	
WE.2.6.3 - NONLINEARITY MITIGATION THROUGH OPTICAL PHASE CONJUGATION IN A DEPLOYED FIBRE LINK WITH FULL BANDWIDTH UTILIZATION.....	466
<i>Yoshima, S. ; Sun, Y. ; Bottrill, K.R.H. ; Parmigiani, F. ; Petropoulos, P. ; Richardson, D.J.</i>	
WE.2.6.4 - ENHANCED SUPERCHANNEL TRANSMISSION USING PHASE CONJUGATION.....	469
<i>Ellis, A.D. ; Phillips, I.D. ; Tan, M. ; Stephens, M.F.C. ; McCarthy, M.E. ; Kahteeb, M.A.Z.Al ; Iqbal, M.A. ; Perentos, A. ; Fabbri, S. ; Gordienko, V. ; Lavery, D. ; Liga, G. ; Saavedra, M.G. ; Maher, R. ; Sygletos, S. ; Harper, P. ; Doran, N.J. ; Bayvel, P. ; Turitsyn, S.K.</i>	
WE.2.6.5 - MODIFIED PHASE-CONJUGATE TWIN WAVE SCHEMES FOR SPECTRAL EFFICIENCY ENHANCEMENT.....	472
<i>Yu, Yukui ; Wang, Wei ; Townsend, Paul D. ; Zhao, Jian</i>	
WE.2.6.6 - NONLINEAR PHASE-SHIFT CANCELLATION BY MAXIMUM-RATIO COMBINING WDM PHASE-CONJUGATE DIVERSITY LIGHTS TRANSMITTED THROUGH MULTI-CORE FIBER.....	475
<i>Koga, Masafumi ; Moroi, Mitsuki ; Takara, H.</i>	
WE.3.4.1 - OPTICAL WIRELESS COMMUNICATION FOR BACKHAUL AND ACCESS.....	478
<i>Jungnickel, V. ; Schulz, D. ; Hilt, J. ; Alexakis, C. ; Schlosser, M. ; Grobe, L. ; Paraskevopoulos, A. ; Freund, R. ; Siessegger, B. ; Kleinpeter, G.</i>	
WE.3.4.2 - EFFICIENT MOBILE FRONTHAUL FOR 24×20MHZ LTE SIGNALS USING SELF-SEEDED RSOA WITH ADAPTIVE CROSSTALK CANCELLATION.....	481
<i>Cheng, Ning ; Zhou, Lei</i>	
WE.3.4.3 - A 25-GB/S 20-KM WAVELENGTH REUSED WDM SYSTEM FOR MOBILE FRONTHAUL APPLICATIONS.....	484
<i>Zhou, Xu ; Deng, Ning</i>	
WE.3.4.4 - WDM PASSIVE OPTICAL NETWORK MANAGED WITH EMBEDDED PILOT TONE FOR MOBILE FRONTHAUL.....	487
<i>Honda, Kazuaki ; Kobayashi, Takayuki ; Shimada, Tatsuya ; Terada, Jun ; Otaka, Akihiro</i>	
WE.3.5.1 - CODE RATE OPTIMIZATION IN ELASTIC OPTICAL NETWORKS.....	490
<i>Zhao, Juzi ; Yan, Li ; Wymeersch, Henk ; Agrell, Erik</i>	
WE.3.5.2 - DESIGN OF ELASTIC OPTICAL NODES BASED ON SUBSYSTEM FLEXIBILITY MEASUREMENT AND OTHER FIGURES OF MERIT.....	493
<i>Peters, Adaranijo ; Hugues-Salas, Emilio ; Zervas, Georgios ; Simeonidou, Dimitra</i>	
WE.3.5.3 - ON THE ADD & DROP ARCHITECTURE FOR S-BVTS IN EONS.....	496
<i>Dallaglio, M. ; Sambo, N. ; Pagano, A. ; Riccardi, E. ; Giorgetti, A. ; Castoldi, P.</i>	
WE.3.5.4 - MODULATION FORMAT-AWARE RE-OPTIMIZATION IN FLEXGRID OPTICAL NETWORKS: CONCEPT AND EXPERIMENTAL ASSESSMENT.....	499
<i>Gifre, Ll. ; Martinez, R. ; Casellas, R. ; Vilalta, R. ; Munoz, R. ; Velasco, L.</i>	
WE.3.5.5 - ENABLING MEGA-DCS THROUGH SCALABLE MONITORING AND OPTIMISATION.....	502
<i>Anastasopoulos, Markos P. ; Tzanakaki, Anna ; Simeonidou, Dimitra</i>	
WE.3.5.6 - MULTI-BROKER BASED MARKET-DRIVEN SERVICE PROVISIONING IN MULTI-DOMAIN SD-EONS IN NUNCOOPERATIVE GAME SCENARIOS.....	505
<i>Chen, Xiaoliang ; Yin, Jie ; Chen, Cen ; Zhu, Zuqing ; Casales, Alberto ; Yoo, S.J.B.</i>	
WE.3.5.7 - EXPERIMENTAL DEMONSTRATION OF ONE-TO-MANY VIRTUAL MACHINE MIGRATION BY RELIABLE OPTICAL MULTICAST.....	508
<i>Samadi, Payman ; Xu, Junjie ; Bergman, Keren</i>	

WE.3.6.1 - FREQUENCY-REFERENCED NONLINEARITY COMPENSATION: THE ENABLER FOR REACH EXTENSION AND CAPACITY INCREASE	511
<i>Alic, Nikola</i>	
WE.3.6.2 - FREQUENCY-COMB REGENERATION FOR SELF-HOMODYNE SUPERCHANNELS	514
<i>Lorences-Riesgo, Abel ; Eriksson, Tobias A. ; Fulop, Attila ; Karlsson, Magnus ; Andrekson, Peter A.</i>	
WE.3.6.3 - PHASE AND AMPLITUDE REGENERATION THROUGH SEQUENTIAL PSA AND FWM SATURATION IN HNLF	517
<i>Bottrill, K.R.H. ; Parmigiani, F. ; Jones, L. ; Hesketh, G. ; Richardson, D.J. ; Petropoulos, P.</i>	
WE.3.6.4 - ALL-OPTICAL WDM REGENERATION OF DPSK SIGNALS USING OPTICAL FOURIER TRANSFORMATION AND PHASE SENSITIVE AMPLIFICATION.....	520
<i>Guan, P. ; Roge, K.M. ; Kjoller, N.K. ; Mulvad, H.C.H. ; Hu, H. ; Galili, M. ; Morioka, T. ; Oxenlowe, L.K.</i>	
WE.3.6.5 - PSA-BASED PHASE REGENERATION OF DPSK SIGNALS IN A SILICON GERMANIUM WAVEGUIDE.....	523
<i>Ettabib, M.A. ; Bottrill, K. ; Parmigiani, F. ; Kapsalis, A. ; Bogris, A. ; Brun, M. ; Labeye, P. ; Nicoletti, S. ; Hammani, K. ; Syvridis, D. ; Richardson, D.J. ; Petropoulos, P.</i>	
WE.3.6.6 - MULTI-TONE COUNTER DITHERING OF TERABIT/S POLARIZATION MULTIPLEXED SIGNALS FOR ENHANCED FWM WITH A SINGLE PUMP	526
<i>Pelusi, Mark ; Solis-Trapala, Karen ; Tan, Hung Nguyen ; Inoue, Takashi ; Namiki, Shu</i>	
WE.4.4.1 - DATA TRANSMISSION SCHEME FOR ENHANCING EFFECTIVE DOWNLINK BANDWIDTH IN 5G MOBILE FRONTHAUL WITH TDM-PON.....	529
<i>Uzawa, Hiroyuki ; Arikawa, Yuki ; Kawai, Kenji ; Shigematsu, Satoshi</i>	
WE.4.4.2 - A DSP-ASSISTED SYMBOL-CASCADE MOBILE FRONTHAUL SOLUTION WITH LARGE CAPACITY AND NEAT RRHS.....	532
<i>Ye, Chenhui ; Zhang, Kaibin ; Chang, Qingjiang ; Gao, Zhensen ; Hu, Xiaofeng ; Huang, Xiaohan ; Sun, Xiao</i>	
WE.4.4.3 - EXPERIMENTAL DEMONSTRATION OF HIGH-THROUGHPUT LOW-LATENCY MOBILE FRONTHAUL SUPPORTING 48 20-MHZ LTE SIGNALS WITH 59-GB/S CPRI-EQUIVALENT RATE AND 2-μS PROCESSING LATENCY	535
<i>Liu, Xiang ; Zeng, Huaiyu ; Chand, Naresh ; Effenberger, Frank</i>	
WE.4.4.4 - LINEARITY IMPROVEMENT OF DIRECTLY-MODULATED MULTI-IF-OVER-FIBRE LTE-A MOBILE FRONTHAUL LINK USING SHUNT DIODE PREDISTORTER	538
<i>Han, Changyao ; Cho, Seung-Hyun ; Chung, Hwan Seok ; Lee, Jong Hyun</i>	
WE.4.4.5 - CARRIER AGGREGATION FOR MMW INTER-RAT AND INTRA-RAT IN NEXT GENERATION HETEROGENEOUS MOBILE DATA NETWORK BASED ON OPTICAL DOMAIN BAND MAPPING	541
<i>Zhang, Junwen ; Xu, Mu ; Wang, Jing ; Lu, Feng ; Cheng, Lin ; Zhu, Ming ; Khalil, Ibrahim ; Yu, Jianjun ; Chang, Gee-Kung</i>	
WE.4.5.1 - DATA PLANE AND CONTROL ARCHITECTURES FOR 5G TRANSPORT NETWORKS.....	544
<i>Ohlen, Peter ; Skubic, Bjorn ; Rostami, Ahmad ; Ghebretensae, Zere ; Martensson, Jonas ; Wang, Kun ; Fiorani, Matteo ; Monti, Paolo ; Wosinska, Lena</i>	
WE.4.5.2 - EXPERIMENTAL VALIDATION OF A SDN ORCHESTRATOR FOR THE AUTOMATIC PROVISIONING OF FIXED AND MOBILE SERVICES.....	547
<i>Martinez, Ricardo ; Vilalta, Ricard ; Mayoral, Arturo ; Casellas, Ramon ; Munoz, Raul</i>	
WE.4.5.3 - MOBILITY SUPPORT IN OPTICAL SLOT SWITCHING-BASED NEXT-GENERATION MOBILE BACKHAUL NETWORKS.....	550
<i>Benzaoui, N. ; Pointurier, Y. ; Bonald, T. ; Uscumlic, B. ; Wei, Q. ; Bigo, S.</i>	
WE.4.5.4 - ALL-OPTICAL VS. ELECTRICAL AGGREGATIONS CAPEX COMPARISONS IN A FULLY-FLEXIBLE MULTI-LAYER TRANSPORT NETWORK	553
<i>Thouenon, G. ; Betoule, C. ; Pincemin, E. ; Khodashenas, P.S. ; Rivas-Moscoso, J.M. ; Tomkos, I.</i>	
WE.4.5.5 - NOVEL NETWORK CONTROL SCHEME THAT CAN SUBSTANTIALLY REDUCE LINK AND NODE COSTS SIMULTANEOUSLY	556
<i>Terada, Yuki ; Mori, Yojiro ; Hasegawa, Hiroshi ; Sato, Ken-ichi</i>	
WE.4.5.6 - BBU PLACEMENT OVER A WDM AGGREGATION NETWORK CONSIDERING OTN AND OVERLAY FRONTHAUL TRANSPORT	559
<i>Carapellese, Nicola ; Tornatore, Massimo ; Pattavina, Achille ; Gosselin, Stephane</i>	
WE.4.6.1 - THE NONLINEAR SIGNAL-NOISE INTERACTION IN COHERENT LINKS AND ITS IMPLICATIONS IN SYSTEM DESIGN	562
<i>Serena, P. ; Bononi, A.</i>	
WE.4.6.2 - ON THE ULTIMATE POTENTIAL OF SYMBOL-RATE OPTIMIZATION FOR INCREASING SYSTEM MAXIMUM REACH	565
<i>Poggiolini, P. ; Carena, A. ; Jiang, Y. ; Bosco, G. ; Forghieri, F.</i>	

WE.4.6.3 - OPTIMIZATION RULES AND PERFORMANCE ANALYSIS OF FILTERED DIGITAL BACKPROPAGATION	568
<i>de Jauregui Ruiz, Ivan Fernandez ; Ghazisaeidi, Amirhossein ; Charlet, Gabriel</i>	
WE.4.6.4 - TRANSMISSION OF 112-GB/S+ DMT OVER 80-KM SMF ENABLED BY TWIN-SSB TECHNIQUE AT 1550NM	571
<i>Zhang, Liang ; Zuo, Tianjian ; Zhang, Qiang ; Zhou, Enbo ; Liu, Gordon Ning ; Xu, Xiaogeng</i>	
WE.4.6.5 - FOUR-DIMENSIONAL ESTIMATES OF MUTUAL INFORMATION IN COHERENT OPTICAL COMMUNICATION EXPERIMENTS	574
<i>Eriksson, Tobias A. ; Fehenberger, Tobias ; Hanik, Norbert ; Andrekson, Peter A. ; Karlsson, Magnus ; Agrell, Erik</i>	
TH.1.1.1 - THE NEED FOR SDN IN ORCHESTRATION OF IP OVER OPTICAL MULTI-VENDOR NETWORKS	577
<i>Gerstel, Ori ; Lopez, nVictor</i>	
TH.1.1.2 - DYNAMIC VIRTUAL NETWORK RECONFIGURATION OVER SDN ORCHESTRATED MULTI-TECHNOLOGY OPTICAL TRANSPORT DOMAINS	580
<i>Aguado, A. ; Peng, S. ; Alvarez, M.V. ; Lopez, V. ; Szyrkowiec, T. ; Autenrieth, A. ; Vilalta, R. ; Munoz, R. ; Casellas, R. ; Martinez, R. ; Yoshikane, N. ; Tsuritani, T. ; Nejabati, R. ; Simeonidou, D.</i>	
TH.1.1.3 - HIERARCHICAL SDN ORCHESTRATION FOR MULTI-TECHNOLOGY MULTI-DOMAIN NETWORKS WITH HIERARCHICAL ABNO	583
<i>Vilalta, R. ; Mayoral, A. ; Munoz, R. ; Casellas, R. ; Martinez, R.</i>	
TH.1.1.4 - EXPERIMENTAL DEMONSTRATION OF MULTI-DOMAIN SEGMENT ROUTING	586
<i>Sgambelluri, A. ; Giorgetti, A. ; Paolucci, F. ; Cugini, F. ; Castoldi, P.</i>	
TH.1.2.1 - HIGH-SPATIAL-MULTIPLICITY MULTI-CORE FIBRES FOR FUTURE DENSE SPACE-DIVISION-MULTIPLEXING SYSTEM	589
<i>Matsuo, Shoichiro ; Takenaga, Katsuhiko ; Saitoh, Kunimasa ; Nakajima, Kazuhide ; Miyamoto, Yutaka ; Morioka, Toshio</i>	
TH.1.2.2 - DENSE SPACE DIVISION MULTIPLEXING LONG HAUL TRANSPORT SYSTEM USING MULTI-CORE/MULTI-MODE FIBRE	592
<i>Mizuno, Takayuki ; Takara, Hidehiko ; Sano, Akihiko ; Miyamoto, Yutaka</i>	
TH.1.2.3 - CROSSTALK REDUCTION USING BIDIRECTIONAL SIGNAL ASSIGNMENT OVER SQUARE LATTICE STRUCTURE 16-CORE FIBER FOR GRADUAL UPGRADE OF SSMF-BASED LINES	595
<i>Arikawa, Manabu ; Ito, Toshiharu ; de Gabory, Emmanuel Le Taillandier ; Fukuchi, Kiyoshi</i>	
TH.1.2.4 - DATA TRANSMISSION THROUGH UP TO 74.8 KM OF HOLLOW-CORE FIBER WITH COHERENT AND DIRECT-DETECT TRANSCEIVERS	598
<i>Kuschnerov, Maxim ; Sleiffer, Vincent A.J.M. ; Chen, Yingkan ; de Man, Erik ; Chen, Yong ; Liu, Zhixin ; Sandoghchi, Seyad Reza ; Jasion, Gregory T. ; Bradley, Tom ; Fokoua, Eric Numkam ; Hayes, John R. ; Wheeler, Natalie V. ; Gray, David R. ; Slavik, Radan ; Jung, Yongmin ; Wong, Nicholas L. ; Mangan, Brian J. ; Poletti, Francesco ; Petrovich, Marco N. ; Richardson, David J.</i>	
TH.1.2.5 - 10 SPATIAL MODE TRANSMISSION OVER LOW DIFFERENTIAL MODE GROUP DELAY FIBRE EMPLOYING ALL-FIBRE PHOTONIC LANTERNS	601
<i>van Weerdenburg, J.J.A. ; Velazquez-Benitez, A.M. ; van Uden, R.G.H. ; Sillard, P. ; Molin, D. ; Amezcua-Correa, A. ; Antonio-Lopez, J.E. ; Kuschnerov, M. ; Huijskens, F.M. ; de Waardt, H. ; Koonen, A.M.J. ; Amezcua-Correa, R. ; Okonkwo, C.M.</i>	
TH.1.3.1 - FIRST DEMONSTRATION OF MONOLITHICALLY INTEGRATED DUAL OUTPUT DEML FOR FULL-DUPLEX UDWDM-PON ONU	604
<i>Chu, Guang Yong ; Cano, Ivan N. ; Kazmierski, Christophe ; Brenot, Romain ; Prat, Josep</i>	
TH.1.3.2 - COHERENT PON SYSTEM WITH HIGH-SENSITIVITY POLARIZATION-INDEPENDENT RECEIVER AND NO ADC/DSP	607
<i>Bottoni, F. ; Rannello, M. ; Artiglia, M. ; Presi, M. ; Ciaramella, E.</i>	
TH.1.3.3 - POLARIZATION-INSENSITIVE SINGLE BALANCED PHOTODIODE COHERENT RECEIVER FOR PASSIVE OPTICAL NETWORKS	610
<i>Erkilinc, M.Sezer ; Lavery, Domanic ; Maher, Robert ; Paskov, Milen ; Thomsen, Benn C. ; Bayvel, Polina ; Killey, Robert I. ; Savory, Seb J.</i>	
TH.1.3.4 - DIRECTLY MODULATED DFB WITH PHASE DIVERSITY IN TIME POLARIZATION INDEPENDENT INTRADYNE RECEIVER FOR UDWDM-PON	613
<i>Cano, Ivan N. ; Lerin, Adolfo ; Polo, Victor ; Prat, Josep</i>	
TH.1.3.5 - EXPERIMENTAL DEMONSTRATION OF INTERCHANNEL FWM MITIGATION ON COHERENT BIDIRECTIONAL UDWDM NETWORKS	616
<i>Reis, Jacklyn D. ; Rossi, Sandro M. ; Chiuchiarelli, Andrea ; Ferreira, Ricardo M. ; Parahyba, Victor E. ; Shahpari, Ali ; Teixeira, Antonio L. ; Oliveira, Juliano R.F.</i>	

TH.1.3.6 - ANALOGUE NYQUIST-FILTERING IN DSP-LESS ONU FOR MITIGATION OF BIDIRECTIONAL CHANNEL CROSSTALK IN COHERENT PON	619
<i>Schrenk, B. ; Humer, G. ; Pacher, C. ; Stierle, M. ; Leopold, H.</i>	
TH.1.3.7 - FLEXIBLE D(Q)PSK 1.25–5 GB/S UDWDM-PON WITH DIRECTLY MODULATED DFBS AND POLARIZATION SCRAMBLING	622
<i>Cano, Ivan N. ; Lerin, Adolfo ; Polo, Victor ; Prat, Josep</i>	
TH.1.4.1 - HIGH SPEED WDM INTERCONNECT USING SILICON PHOTONICS RING MODULATORS AND MODE-LOCKED LASER.....	625
<i>Muller, J. ; Hauck, J. ; Moscoso-Martir, A. ; Chimot, N. ; Romero-Garcia, S. ; Shen, B. ; Merget, F. ; Lelarge, F. ; Witzens, J.</i>	
TH.1.4.2 - FOUR-CHANNEL VESTIGIAL SIDEBAND DISCRETE MULTI-TONE MODULATION USING SILICON PHOTONIC INTEGRATED CIRCUITS	628
<i>Dong, Po ; Lee, Jeffrey ; Chen, Young-Kai ; Buhl, Lawrence L. ; Sinsky, Jeffrey H. ; Kim, Kwangwoong</i>	
TH.1.4.3 - LOW POWER INP-BASED MONOLITHIC DFB-LASER IQ MODULATOR WITH SIGE DIFFERENTIAL DRIVER FOR 32 GBD QPSK MODULATION	631
<i>Lange, S. ; Yan, L. ; Wolf, N. ; Kaiser, R. ; Gruner, M. ; Velthaus, K.-O. ; Schell, M.</i>	
TH.1.4.4 - INP MZ MODULATOR WITH ENGINEERED TRANSFER FUNCTION FOR 1.5X BANDWIDTH ENHANCEMENT AND NYQUIST SHAPING.....	634
<i>Aimone, Alessandro ; Fiol, Gerrit ; Gruner, Marko ; Schell, Martin</i>	
TH.1.4.5 - 40 GBPS WDM TRANSMISSION OVER 1.15 KM HC-PBGF USING THE FIRST INP-BASED MACH ZEHNDER MODULATOR AT 2 μM.....	637
<i>Sadiq, M.U. ; Zhang, H. ; Gleeson, M. ; Ye, N. ; Roycroft, B. ; Kavanagh, N. ; Robert, C. ; Yang, H. ; Thomas, K. ; Gocalinska, A. ; Li, Z. ; Chen, Y. ; Wheeler, N.V. ; Hayes, J.R. ; Alam, S.U. ; Poletti, F. ; Petrovich, M.N. ; Richardson, D.J. ; Kelly, B. ; O'Carroll, J. ; Phelan, R. ; Pelucchi, E. ; O'Brien, P. ; Peters, F. ; Gunning, F. ; Corbett, B.</i>	
TH.1.4.6 - OPPOSITELY-BIASED DUAL-POLARIZATION IQ MODULATORS FOR NONLINEARITY-TOLERANT POLARIZATION-MULTIPLEXED PHASE-CONJUGATED TWIN-SIGNALS GENERATION	640
<i>Sakamoto, Takahide ; Lu, Guo-Wei ; Kawanishi, Tetsuya</i>	
TH.1.5.1 - POLARIZATION-INSENSITIVE ULTRA-SELECTIVE ADD AND DROP MULTIPLEXER USING RECTANGULAR BRILLOUIN-BASED FILTERS	643
<i>Wei, Wei ; Yi, Lilin ; Jaouen, Yves ; Morvan, Michel ; Hu, Weisheng</i>	
TH.1.5.2 - SPATIALLY DISTRIBUTED AGGREGATION OF A POLARIZATION-DIVISION MULTIPLEXED SUPERCHANNEL BY FREQUENCY CONVERSION IN FIBER	646
<i>Richter, Thomas ; Elschner, Robert ; Schmidt-Langhorst, Carsten ; Kato, Tomoyuki ; Tanimura, Takahito ; Watanabe, Shigeki ; Schubert, Colja</i>	
TH.1.5.3 - REALIZATION OF SUB-1 GHZ RESOLUTION PHOTONIC SPECTRAL PROCESSORS FOR FLEXIBLE OPTICAL NETWORKS.....	649
<i>Marom, Dan M. ; Rudnick, Roy ; Goldstein, Noam ; Golani, Ori ; Sinefeld, David</i>	
TH.1.5.4 - 100 GBIT/S REAL-TIME ALL-ANALOGUE FILTER BANK OFDM BASED ON A GAIN-SWITCHED OPTICAL COMB	652
<i>Gutierrez, F.A. ; Martin, E.P. ; Perry, P. ; Ellis, A.D. ; Anandarajah, P. ; Smyth, F. ; Barry, L.P.</i>	
TH.1.5.5 - FREQUENCY DOMAIN DSP BASED CHANNEL SPACING MONITOR IN DENSER NYQUIST-WDM SYSTEM.....	655
<i>Zhao, Ying ; Dou, Liang ; Tao, Zhenning ; Li, Huihui ; Saito, Taku ; Komaki, Kousuke ; Oda, Shoichiro ; Aoki, Yasuhiko ; Rasmussen, Jens C.</i>	
TH.1.5.6 - IN-BAND OSNR MONITOR BASED ON 3 $\times$ 3 SI-WIRE MMI COUPLER.....	658
<i>Tanizawa, Ken ; Sorimoto, Keisuke ; Suzuki, Keijiro ; Ikeda, Kazuhiro ; Namiki, Shu ; Kawashima, Hitoshi</i>	
TH.1.6.1 - FEW-MODE FIBRE GROUP-DELAYS WITH INTERMEDIATE COUPLING	661
<i>Ferreira, Filipe M. ; Suibhne, Naoise Mac ; Sygletos, Stylianos ; Ellis, Andrew D.</i>	
TH.1.6.2 - EXPERIMENTAL DEMONSTRATION OF ADAPTIVE RECURSIVE LEAST SQUARE FREQUENCY-DOMAIN EQUALIZATION FOR LONG-DISTANCE MODE-DIVISION MULTIPLEXED TRANSMISSION	664
<i>Yang, Zhiqun ; Zhao, Jian ; Bai, Neng ; Ip, Ezra ; Wang, Ting ; Li, Guifang</i>	
TH.1.6.3 - ADAPTIVE MIMO EQUALIZATION FOR FEW-MODE FIBER TRANSMISSION WITH VARIOUS DIFFERENTIAL MODE DELAYS	667
<i>Lee, D. ; Shibahara, K. ; Kobayashi, T. ; Mizuno, T. ; Takara, H. ; Sano, A. ; Kawakami, H. ; Nakagawa, T. ; Miyamoto, Y.</i>	
TH.1.6.4 - MULTI-STAGE SUCCESSIVE INTERFERENCE CANCELLATION FOR SPECTRALLY-EFFICIENT SUPER-NYQUIST TRANSMISSION	670
<i>Shibahara, Kohki ; Masuda, Akira ; Kawai, Shingo ; Fukutoku, Mitsunori</i>	

TH.1.6.5 - LASER FREQUENCY DRIFT COMPENSATION WITH HAN-KOBAYASHI CODING IN SUPERCHANNEL NONLINEAR OPTICAL COMMUNICATIONS	673
<i>Koike-Akino, Toshiaki ; Millar, David S. ; Kojima, Keisuke ; Parsons, Kieran</i>	
TH.1.6.6 - A FAST AND ROBUST BLIND CHROMATIC DISPERSION ESTIMATION BASED ON FRACTIONAL FOURIER TRANSFORMATION	676
<i>Zhou, Huibin ; Li, Borui ; Tang, Ming ; Feng, Zhenhua ; Fu, Songnian ; Shum, Perry Ping ; Liu, Deming</i>	
TH.2.1.1 - SDN-ENABLED SLICEABLE BVT BASED ON MULTICARRIER TECHNOLOGY FOR MULTI-FLOW RATE/DISTANCE AND GRID ADAPTATION	679
<i>Moreolo, M.Svaluto ; Fabrega, J.M. ; Nadal, L. ; Vilchez, F.J. ; Mayoral, A. ; Vilalta, R. ; Munoz, R. ; Casellas, R. ; Martinez, R. ; Nishihara, M. ; Tanaka, T. ; Takahara, T. ; Rasmussen, J.C. ; Kottke, C. ; Schlosser, M. ; Freund, R. ; Meng, F. ; Yan, S. ; Zervas, G. ; Simeonidou, D. ; Yoshida, Y. ; Kitayama, K.</i>	
TH.2.1.2 - DEMONSTRATION OF OPTICAL VIRTUALIZE-ABLE TRANSCEIVER USING EXTENDED OPENFLOW CONTROL	682
<i>Ou, Y. ; Yan, S. ; Guo, B. ; Peng, S. ; Zervas, G. ; Nejabati, R. ; Simeonidou, D.</i>	
TH.2.1.3 - SDN-ENABLED EDFA GAIN ADJUSTMENT COGNITIVE METHODOLOGY FOR DYNAMIC OPTICAL NETWORKS	685
<i>Moura, Uiana ; Garrich, Miquel ; Carvalho, Heitor ; Svolenski, Matheus ; Andrade, Alexandre ; Margarido, Fabio ; Cesar, Amilcar C. ; Conforti, Evandro ; Oliveira, Juliano</i>	
TH.2.1.4 - EXPERIMENTAL DEMONSTRATION OF SDN-ENABLED CENTRALIZED STRATEGIES FOR CASCADED WSS-BASED ROADMS	688
<i>Januario, Joao ; Garrich, Miquel ; Carvalho, Heitor ; Oliveira, Juliano</i>	
TH.2.1.5 - EVALUATION OF FUNCTION-TOPOLOGY PROGRAMMABLE (FTP) OPTICAL PACKET/CIRCUIT SWITCHED DATA CENTRE INTERCONNECTS	691
<i>Shu, Y. ; Peng, S. ; Yan, Y. ; Yan, S. ; Hugues-salas, E. ; Zervas, G. ; Simeonidou, D.</i>	
TH.2.1.6 - SOFTWARE-BASED BURST MODE RECEPTION IMPLEMENTATION FOR TIME-DOMAIN WAVELENGTH INTERLEAVED NETWORKS	694
<i>Sadeghioon, Lida ; Gavignet, Paulette ; Alaiwan, Vincent ; Bramerie, Laurent ; Le Rouzic, Esther ; Barbey, Jean-Luc ; Guillossou, Thierry ; Borgne, Eric ; Lobo, Sebastien</i>	
TH.2.2.1 - POWER-EFFICIENT 100 GB/S TRANSMISSION OVER TRANSOCEANIC DISTANCE USING 8-DIMENSIONAL CODED MODULATION	697
<i>Zhang, H. ; Turukhin, A. ; Sinkin, O.V. ; Patterson, W. ; Batshon, H.G. ; Sun, Y. ; Davidson, C.R. ; Mazurczyk, M. ; Mohs, G. ; Foursa, D.G. ; Pilipetskii, A.</i>	
TH.2.2.2 - LONG HAUL TRANSMISSION OF FOUR-DIMENSIONAL 64SP-12QAM SIGNAL BASED ON 16QAM CONSTELLATION FOR LONGER DISTANCE AT SAME SPECTRAL EFFICIENCY AS PM-8QAM	700
<i>Nakamura, Tatsuya ; de Gabory, Emmanuel Le Taillandier ; Noguchi, Hidemi ; Maeda, Wakako ; Abe, Jun'ichi ; Fukuchi, Kiyoshi</i>	
TH.2.2.3 - 54.2 TB/S TRANSOCEANIC TRANSMISSION USING ULTRA LOW LOSS FIBER, MULTI-RATE FEC AND DIGITAL NONLINEAR MITIGATION	703
<i>Ghazisaeidi, Amirhossein ; Schmalen, Laurent ; Tran, Patrice ; Simonneau, Christian ; Awwad, Elie ; Uscumlic, Bogdan ; Brindel, Patrick ; Charlet, Gabriel</i>	
TH.2.2.4 - ULTRA-LONG-HAUL 400G SUPERCHANNEL TRANSMISSION WITH MULTI-CARRIER NONLINEAR EQUALIZATION	706
<i>Guiomar, Fernando P. ; Amado, Sofia B. ; Reis, Jacklyn D. ; Rossi, Sandro M. ; Chiuchiarelli, Andrea ; Oliveira, Juliano R.F. ; Teixeira, Antonio L. ; Pinto, Armando N.</i>	
TH.2.2.5 - ULTRA-LONG 610 KM UNREPEATERED TRANSMISSION OF 100 GB/S USING SINGLE FIBRE CONFIGURATION	709
<i>Etienne, S. ; Bissessur, H. ; Bastide, C. ; Mongardien, D.</i>	
TH.2.2.6 - HIGH-SPEED AND TRANSOCEANIC DISTANCE TRANSMISSION WITH HYBRID RAMAN-EDFA AND CODED MODULATION	712
<i>Cai, Jin-Xing ; Sun, Yu ; Zhang, Hongbin ; Batshon, Hussam ; Mazurczyk, Matt ; Sinkin, Oleg ; Foursa, Dimitri ; Pilipetskii, Alexei</i>	
TH.2.3.1 - WHAT IS LIFI?	715
<i>Haas, Harald ; Chen, Cheng</i>	
TH.2.3.2 - 2 GB/S μLED-APD BASED VISIBLE LIGHT COMMUNICATIONS USING FEED-FORWARD PRE-EQUALIZATION AND PAM-4 MODULATION	718
<i>Li, X. ; Bamiedakis, N. ; Guo, X. ; McKendry, J.J.D. ; Xie, E. ; Ferreira, R. ; Gu, E. ; Dawson, M.D. ; Pentty, R.V. ; White, I.H.</i>	
TH.2.3.3 - IMPROVED PERFORMANCE OF A HIGH SPEED 2$\times$2 MIMO VLC NETWORK BASED ON EGC-STBC	721
<i>Shi, Jianyang ; Huang, Xingxing ; Wang, Yiguang ; Tao, Li ; Chi, Nan</i>	

TH.2.3.4 - EXPERIMENTAL DEMONSTRATION OF INDOOR OPTICAL WIRELESS BASED 3-D LOCALIZATION SYSTEM.....	724
<i>Wang, Ke ; Nirmalathas, Ampalavanapillai ; Lim, Christina ; Skafidas, Efstratios</i>	
TH.2.3.5 - EXPLOITING THE UNIQUE INTENSITY GRADIENT OF AN ORBITAL-ANGULAR-MOMENTUM BEAM FOR ACCURATE RECEIVER ALIGNMENT MONITORING IN A FREE-SPACE COMMUNICATION LINK	727
<i>Xie, Guodong ; Li, Long ; Ren, Yongxiong ; Yan, Yan ; Ahmed, Nisar ; Zhao, Zhe ; Wang, Zhe ; Ashrafi, Nima ; Ashrafi, Solyman ; Linquist, Roger D. ; Willner, Alan E.</i>	
TH.2.3.6 - A “POWER-ON-DEMAND” OPTICAL TRANSCEIVER DESIGN FOR GREEN ACCESS AND IN-HOME NETWORK APPLICATIONS.....	730
<i>Li, Jie ; Lee, Ka-Lun ; Chow, Hungkei Keith</i>	
TH.2.4.1 - BARIUM-TITANATE INTEGRATED WITH SILICON PHOTONICS FOR ULTRA-EFFICIENT ELECTRO-OPTICAL PERFORMANCE.....	733
<i>Abel, Stefan ; Stoferle, Thilo ; Marchiori, Chiara ; Caimi, Daniele ; Czornomaz, Lukas ; Rossell, Marta D. ; Erni, Rolf ; Sousa, Marilyne ; Siegwart, Heinz ; Offrein, Bert J. ; Fompeyrine, Jean</i>	
TH.2.4.2 - DEMONSTRATION OF AN ATHERMAL WAVEGUIDE OPTICAL ISOLATOR ON SILICON PLATFORM.....	736
<i>Furuya, K. ; Kato, K. ; Shoji, Y. ; Mizumoto, T.</i>	
TH.2.4.3 - HYBRID GRAPHENE-SILICON PHOTONICS DEVICES.....	739
<i>Van Thourhout, Dries ; Hu, Yingtao ; Pantouvaki, Marianna ; Alexander, K. ; Kuyken, Bart ; Brems, Steven ; Asselberghs, Inge ; Huyghebaert, Cedric ; Alessandri, Chiara ; Absil, Philippe ; Van Campenhout, Joris</i>	
TH.2.4.4 - 56GB/S RING MODULATOR ON A 300MM SILICON PHOTONICS PLATFORM	742
<i>Pantouvaki, M. ; Verheyen, P. ; De Coster, J. ; Lepage, G. ; Absil, P. ; Van Campenhout, J.</i>	
TH.2.4.5 - WIDE-TEMPERATURE-RANGE, 25-GBPS ERROR-FREE OPERATION OF INTEGRATED SILICON PHOTONIC TRANSMITTER USING WAVELENGTH-CONTROLLED MICRO RING MODULATOR.....	745
<i>Tanaka, S. ; Hayakawa, A. ; Akiyama, T. ; Imai, M. ; Sekiguchi, S. ; Tanaka, Y. ; Morito, K.</i>	
TH.2.4.6 - EXPERIMENTAL DEMONSTRATION OF QUADRATURE PHASE-SHIFT KEYING SILICON RING MODULATOR BASED ON INTENSITY MODULATION.....	748
<i>Gui, Chengcheng ; Dong, Po ; de Valicourt, Guilhem ; Chen, Haoshuo ; Fontaine, Nicolas K. ; Kim, Kwangwoong ; Chen, Young-Kai</i>	
TH.2.5.1 - QAM QUANTUM NOISE STREAM CIPHER TRANSMISSION WITH EXTREMELY HIGH SECURITY.....	751
<i>Nakazawa, Masataka</i>	
TH.2.5.2 - ENHANCED PHYSICAL LAYER SECURITY OF MIMO-SDM SYSTEMS THROUGH INFORMATION SCRAMBLING	754
<i>Guan, Kyle ; Cho, Junho ; Winzer, Peter J. ; Tulino, Antonia M. ; Soljanin, Emina</i>	
TH.2.5.3 - COMPATIBILITY BETWEEN NONLINEAR COMPENSATION AND CROSSTALK COMPENSATION USING MIMO PROCESSING IN SUPER-HIGH-DENSITY MULTI-CARRIER TRANSMISSION SYSTEM	757
<i>Yamamoto, Shuto ; Saito, Kohei ; Naka, Akira ; Maeda, Hideki</i>	
TH.2.5.4 - ULTRA-HIGH 435-BIT/S/HZ SPECTRAL EFFICIENCY USING N-DIMENTIONAL MULTIPLEXING AND MODULATION LINK WITH POL-MUXED 52 ORBITAL ANGULAR MOMENTUM (OAM) MODES CARRYING NYQUIST 32-QAM SIGNALS	760
<i>Wang, Jian ; Liu, Jun ; Lv, Xin ; Zhu, Long ; Wang, Dan ; Li, Shuhui ; Wang, Andong ; Zhao, Yifan ; Long, Yun ; Du, Jing ; Hu, Xiao ; Zhou, Nan ; Chen, Shi ; Fang, Liang ; Zhang, Fan</i>	
TH.2.5.5 - OPTICAL ROUTING FOR SDM NETWORKS.....	763
<i>Feuer, Mark D.</i>	
TH.2.6.1 - MACHINE LEARNING TECHNIQUES IN OPTICAL COMMUNICATION	766
<i>Zibar, D. ; Piels, M. ; Jones, R. ; Schaeffer, C.G.</i>	
TH.2.6.2 - EXPERIMENTAL DEMONSTRATION OF THE PARALLEL SPLIT-STEP METHOD IN ULTRA-LONG-HAUL 400G TRANSMISSION.....	769
<i>Amado, Sofia B. ; Guioimar, Fernando P. ; Muga, Nelson J. ; Reis, Jacklyn D. ; Rossi, Sandro M. ; Chiuchiarelli, Andrea ; Oliveira, Juliano R.F. ; Teixeira, Antonio L. ; Pinto, Armando N.</i>	
TH.2.6.3 - NONLINEAR DIGITAL PRE-DISTORTION OF TRANSMITTER COMPONENTS	772
<i>Berenguer, Pablo Wilke ; Rahman, Talha ; Napoli, Antonio ; Nolle, Markus ; Schubert, Colja ; Fischer, Johannes Karl</i>	
TH.2.6.4 - VOLTERRA-BASED NONLINEARITY COMPENSATION STRUCTURES WITH IMPROVED PERFORMANCE-COMPLEXITY TRADE-OFFS	775
<i>Bakhshali, A. ; Chan, W.-Y. ; Cartledge, J.C. ; O'Sullivan, M. ; Laperle, C. ; Borowiec, A. ; Roberts, K.</i>	

TH.2.6.5 - TRANSMISSION REACH DOUBLING ENABLED BY TRANSMITTER-SIDE DIGITAL BACK PROPAGATION AND FREQUENCY REFERENCED CARRIERS.....	778
<i>Temprana, E. ; Myslivets, E. ; Liu, L. ; Pejkcic, A. ; Ataie, V. ; Kuo, B.P.-P. ; Esman, D. ; Wiberg, A. ; Alic, N. ; Radic, S.</i>	
TH.2.6.6 - EXPERIMENTAL ANALYSIS OF NON LINEAR TOLERANCE DEPENDENCY OF MULTICARRIER MODULATIONS VERSUS BANDWIDTH EFFICIENCY	781
<i>Carbo, A. ; Renaudier, J. ; Rios-Muller, R. ; Tran, P. ; Charlet, G.</i>	
P.1.01 - CHANNEL SCRAMBLING AND AMPLIFICATION TECHNIQUE WITH MULTI-MODE EDFA FOR MULTI-CORE TRANSMISSION SYSTEM	784
<i>Wada, Masaki ; Sakamoto, Taiji ; Mori, Takayoshi ; Aozasa, Shinichi ; Yamamoto, Takashi ; Yamamoto, Fumihiko</i>	
P.1.02 - FIBRE TWISTING AND BENDING INDUCED MODE CONVERSION CHARACTERISTICS IN COUPLED MULTI-CORE FIBRE.....	787
<i>Sakamoto, Taiji ; Mori, Takayoshi ; Wada, Masaki ; Yamamoto, Takashi ; Yamamoto, Fumihiko</i>	
P.1.03 - MULTI-PEAK-SPECTRA GENERATION WITH MULTIPLE DISPERSIVE WAVES AND SOLITONS IN A BIREFRINGENCE TELLURITE MICROSTRUCTURED OPTICAL FIBER.....	790
<i>Cheng, Tonglei ; Tuan, Tong Hoang ; Xue, Xiaojie ; Deng, Dinghuan ; Suzuki, Takenobu ; Ohishi, Yasutake</i>	
P.1.04 - TELLURITE MICROSTRUCTURED FIBER BASED OPTICAL PARAMETRIC AMPLIFIER	793
<i>Zhang, Lei ; Tuan, Tong Hoang ; Deng, Dinghuan ; Kawamura, Harutaka ; Suzuki, Takenobu ; Ohishi, Yasutake</i>	
P.1.05 - SIMULTANEOUS MEASUREMENTS OF CORES IN MULTI-CORE FIBRE USING OTDR AND FAN-IN/OUT DEVICES	796
<i>Ohashi, M. ; Uemura, H. ; Takenaga, K. ; Matsuo, S. ; Kubota, H. ; Miyoshi, Y.</i>	
P.1.06 - MEASUREMENT OF INTER-CORE CROSSTALK IN FEW-MODE MULTICORE FIBRE.....	799
<i>Saitoh, S. ; Sasaki, Y. ; Takenaga, K. ; Ohashi, M. ; Saitoh, K. ; Nakajima, K. ; Matsuo, S.</i>	
P.1.07 - HIGH-SPEED DISTRIBUTED STRAIN MEASUREMENT USING BRILLOUIN OPTICAL TIME-DOMAIN REFLECTOMETRY BASED-ON SELF-DELAYED HETERODYNE DETECTION	802
<i>Koizumi, Kengo ; Kanda, Yoshihiro ; Fujii, Akihiro ; Murai, Hitoshi</i>	
P.1.08 - COHERENT OPTICAL EN/DECODING EMPLOYING DISCRETE PROLATE SPHEROIDAL SEQUENCES BASED SUPER STRUCTURED FBGS	805
<i>Pastor, Daniel ; Triana, Cristian ; Banos, Rocio</i>	
P.1.09 - LINEARLY POLARIZED CASCADED RANDOM FIBER LASER WITH ULTIMATE EFFICIENCY	808
<i>Zlobina, E.A. ; Kablukov, S.I. ; Babin, S.A.</i>	
P.1.10 - CHARACTERIZATION OF RECONFIGURABLE ULTRA-NARROWBAND OPTICAL FILTERS REALIZED BY LOCALIZED DYNAMIC BRILLOUIN GRATINGS	811
<i>Chiarello, Fabrizio ; Sengupta, Dipankar ; Palmieri, Luca ; Santagiustina, Marco</i>	
P.1.11 - COMBINED STRUCTURAL AND OPTICAL MODELLING TOOL TO OPTIMISE DESIGN AND FABRICATION OF HOLLOW CORE PHOTONIC BAND GAP FIBRES.....	814
<i>Jasion, G.T. ; Fokoua, E.R.Numkam ; Shrimpton, J.S. ; Richardson, D.J. ; Poletti, F.</i>	
P.1.12 - MEASURING THE GROUP VELOCITY DISPERSION OF HIGHER ORDER MODES IN HOLLOW CORE PHOTONIC BANDGAP FIBRE.....	817
<i>Bradley, T D ; Wang, X ; Fokoua, E Numkam ; Wheeler, N V ; Poletti, F ; Petrovich, M N ; Richardson, D J</i>	
P.1.13 - FEW-MODE FIBERS WITH IMPROVED MODE SPACING	820
<i>May, Alexander R. ; Zervas, Michalis N.</i>	
P.1.14 - CHARACTERIZATION OF LASER INSCRIBED ON-CHIP PHOTONIC LANTERNS WITH DIFFERENT CORE DISTANCES.....	823
<i>Bohn, Justus ; Carpenter, Joel ; Gross, Simon ; Withford, Michael ; Schroder, Jochen</i>	
P.1.15 - FIRST DESIGN OF HIGH BIREFRINGENCE AND POLARISING HOLLOW CORE ANTI-RESONANT FIBRE.....	826
<i>Mousavi, S.A. ; Richardson, D.J. ; Sandoghchi, S.R. ; Poletti, F.</i>	
P.1.16 - BRILLOUIN RANDOM LASING IN ARTIFICE RAYLEIGH FIBER	829
<i>Popov, S.M. ; Chamorovsky, Yu.K. ; Megret, P. ; Zolotovskii, I.O. ; Fotiadi, A.A.</i>	
P.1.17 - PROGRAMMABLE FIBRE-OPTICS PULSE REPETITION RATE MULTIPLIER FOR HIGH-SPEED OPTICAL COMMUNICATION SYSTEMS	832
<i>Maram, Reza ; Cortes, Luis Romero ; Azana, Jose</i>	
P.1.18 - DEMONSTRATION OF CONTROLLABLE ORBITAL ANGULAR MOMENTUM (OAM) BEAM GENERATION USING AN ALL-FIBER SYSTEM	835
<i>Li, Shuhui ; Mo, Qi ; Hu, Xiao ; Liu, Jun ; Zhu, Long ; Zhao, Yifan ; Du, Jing ; Fang, Liang ; Du, Cheng ; Wang, Jian</i>	

P.1.19 - DMD MEASUREMENT OF 114-SDM TRANSMISSION FIBRE USING LOW-COHERENCE INTERFEROMETRY WITH DIGITAL HOLOGRAPHIC PROCESSING.....	838
<i>Wakayama, Yuta ; Taga, Hidenori ; Lgarashi, Koji ; Tsuritani, Takehiro</i>	
P.2.01 - TWO-PORT MULTIMODE INTERFERENCE REFLECTORS WITH ALUMINIUM MIRRORS IN A MICRON-SCALE SOI PLATFORM.....	841
<i>Fandino, Javier S. ; Domenech, Jose D. ; Munoz, Pascual</i>	
P.2.02 - HIGH PERFORMANCE ION-EXCHANGED INTEGRATED WAVEGUIDES IN THIN GLASS FOR BOARD-LEVEL MULTIMODE OPTICAL INTERCONNECTS.....	844
<i>Brusberg, Lars ; Schroder, Henning ; Herbst, Christian ; Frey, Christopher ; Fiebig, Christian ; Zakharian, Aramais ; Kuchinsky, Sergey ; Liu, Xue ; Fortusini, Davide ; Evans, Alan</i>	
P.2.03 - BIAS FREE OPERATIONAL 107-GBAUD ULTRA-FAST PHOTODETECTOR.....	847
<i>Umezawa, T. ; Akahane, K. ; Yamamoto, N. ; Kanno, A. ; Kawanishi, T.</i>	
P.2.04 - DUAL MODE INJECTION LOCKING OF A FABRY-PÉROT LASER FOR TUNABLE BROADBAND GAIN SWITCHED COMB GENERATION	850
<i>Deseada Gutierrez Pascual, M. ; Zhou, Rui ; Smyth, Frank ; Shao, Tong ; Anandarajah, Prince M. ; Barry, Liam</i>	
P.2.05 - DEMONSTRATION OF PLC-BASED SIX-MODE MULTIPLEXER FOR MODE DIVISION MULTIPLEXING TRANSMISSION.....	853
<i>Hanzawa, Nobutomo ; Saitoh, Kunimasa ; Sakamoto, Taiji ; Matsui, Takashi ; Tsujikawa, Kyoza ; Fujisawa, Takeshi ; Ishizaka, Yuhei ; Yamamoto, Fumihiko</i>	
P.2.06 - PHOTONIC INTEGRATED SPOT COUPLERS BASED ON VERTICAL MIRRORS FOR MODE DIVISION MULTIPLEXING.....	856
<i>Chen, Hao shuo ; Campo, Beatriz Barcones ; Fontaine, Nicolas K. ; Ryf, Roland ; Williams, Kevin ; Koonen, Ton</i>	
P.2.07 - ON-CHIP OPTICAL PULSE SHAPING BASED ON DISCRETE SPACE-TO-TIME MAPPING IN CONCATENATED CO-DIRECTIONAL COUPLERS.....	859
<i>Bazargani, Hamed Pishvai ; Burla, Maurizio ; Azana, Jose</i>	
P.2.08 - 16-CHANNEL DIGITALLY WAVELENGTH-TUNABLE HYBRID III-V/SILICON LASER.....	862
<i>de Valicourt, G. ; Dong, P. ; Kim, K.W. ; Chang, C-M. ; Sinsky, J.H. ; Buhl, L.L. ; Chen, Y.K.</i>	
P.2.09 - STRICTLY NON-BLOCKING 8×8 SILICON PHOTONIC SWITCH BASED ON OPTICAL PHASED ARRAY.....	865
<i>Tanemura, Takuo ; Langouche, Lennart ; Nakano, Yoshiaki</i>	
P.2.10 - FIRST DEMONSTRATION OF GE WAVEGUIDE PLATFORM ON GE-ON-INSULATOR FOR MID-INFRARED INTEGRATED PHOTONICS.....	868
<i>Kang, J. ; Takenaka, M. ; Takagi, S.</i>	
P.2.11 - PHOTONIC CHIP BROADBAND FREQUENCY COMB FOR COHERENT TELECOMMUNICATION.....	871
<i>Brasch, Victor ; Geiselmann, Michael ; Herr, Tobias ; Lihachev, Grigoriy ; Pfeiffer, Martin H.P. ; Gorodetsky, Michael L. ; Kippenberg, Tobias J.</i>	
P.2.12 - 4×4 SILICON NON-BLOCKING ELECTRO-OPTIC SWITCHES BASED ON DOUBLE-RING ASSISTED MACH-ZEHNDER INTERFEROMETERS.....	874
<i>Lu, Liangjun ; Zhou, Linjie ; Li, Zuxiang ; Li, Dong ; Zhao, Shuoyi ; Li, Xinwan ; Chen, Jianping</i>	
P.2.13 - IMPACT OF PROCESS VARIABILITY OF ACTIVE RING RESONATORS IN A 300MM SILICON PHOTONIC PLATFORM.....	877
<i>Le Maître, Patrick ; Carpentier, Jean-Francois ; Baudot, Charles ; Vulliet, Nathalie ; Souhaite, Aurelie ; Quelene, Jean-Baptiste ; Ferrotti, Thomas ; Bouf, Frederic</i>	
P.2.14 - FLIP-CHIP BONDING OF VCSELS TO SILICON GRATING COUPLERS VIA SU8 PRISMS FABRICATED USING LASER ABLATION	880
<i>Kaur, K.S. ; Subramanian, A.Z. ; Verplancke, R. ; Cardile, P. ; Van Kerrebrouck, J. ; Spiga, S. ; Meyer, R. ; Bauwelinck, J. ; Baets, R. ; Van Steenberge, G.</i>	
P.2.15 - MODE-EVOLUTIONAL SERIAL BRANCHING 4-MODE MULTI/DEMULTIPLEXER FOR HOMOGENEOUS COUPLED MULTI-CORE FIBER.....	883
<i>Watanabe, Tatsuhiko ; Kojima, Kyohei ; Kokubun, Yasuo</i>	
P.2.16 - A PERFORMANCE COMPARISON OF SINGLE-ENDED- AND DIFFERENTIAL DRIVING SCHEME AT 64 GBIT/S QPSK MODULATION FOR INP-BASED IQ-MACH-ZEHNDER MODULATORS IN SERIAL-PUSH-PULL CONFIGURATION	886
<i>Rausch, M. ; Wolf, N. ; Yan, L. ; Velthaus, K.-O. ; Hoffmann, D. ; Gruner, M. ; Schell, M.</i>	
P.2.17 - SILICON 2×2 OPTICAL SWITCH BASED ON OPTIMIZED MULTIMODE INTERFERENCE COUPLER TO MINIMIZE POWER CONSUMPTION	889
<i>Rosa, Alvaro ; Griol, Amadeu ; Gutierrez, Ana Maria ; Brimont, Antoine ; Sanchis, Pablo</i>	
P.2.18 - DEMONSTRATION OF FEW MODE FIBER TRANSMISSION LINK SEEDED BY A SILICON PHOTONIC INTEGRATED OPTICAL VORTEX EMITTER.....	892
<i>Liu, Jun ; Li, Shima ; Zhu, Long ; Klitis, Charalambos ; Chen, Yueyang ; Wang, Andong ; Li, Shuhui ; Long, Yun ; Zheng, Shuang ; Chen, Shi ; Sorel, Marc ; Du, Cheng ; Mo, Qi ; Yu, Siyuan ; Cai, Xinlun ; Wang, Jian</i>	

P.2.19 - DIFFERENTIAL OPTICAL RING MODULATOR: BREAKING THE BANDWIDTH/QUALITY-FACTOR TRADE-OFF	895
<i>Saeedi, Saman ; Abiri, Behrooz ; Hajimiri, Ali ; Emami, Azita</i>	
P.2.20 - HIGH-EFFICIENCY FOLDED SHALLOW-GRATING COUPLER WITH MINIMAL BACK REFLECTION TOWARD ISOLATOR-FREE OPTICAL INTEGRATION	898
<i>Tokushima, Masatoshi ; Ushida, Jun ; Uemura, Toshinori ; Kurata, Kazuhiko</i>	
P.2.21 - SILICON-PHOTONIC PTAT TEMPERATURE SENSOR FOR MICRO-RING RESONATOR THERMAL STABILIZATION	901
<i>Saeedi, Saman ; Emami, Azita</i>	
P.2.22 - 25-GBPS ERROR-FREE TRANSMISSION OVER SMF AND OM3 MMF USING SILICON PHOTONICS TRANSMITTER AND CMOS RECEIVER	904
<i>Wakayama, Y. ; Okumura, T. ; Sagawa, M. ; Matsuoka, Y. ; Arimoto, H. ; Sunaga, Y.</i>	
P.2.23 - OVER 30 GHZ MODULATION OF 850 NM TRANSVERSE COUPLED CAVITY VERTICAL-CAVITY SURFACE-EMITTING LASER	907
<i>Gu, Xiaodong ; Nakahama, Masanori ; Matsutani, Akihiro ; Koyama, Fumio</i>	
P.2.24 - SILICON PHOTONICS INTERCONNECT BASED ON ULTRA-SMALL SCALABLE COMPONENTS FOR MULTI-CHANNEL OPTICAL TRANSCEIVERS	910
<i>Rhee, Hanjo ; Al-Saadi, Aws ; Kupijai, Sebastian ; Theiss, Christoph ; Otte, Sven ; Eichler, Hans J. ; Woggon, Ulrike ; Tillack, Bernd ; Zimmermann, Lars ; Richter, Harald H. ; Lischke, Stefan ; Mai, Christian ; Stolarek, David ; Meister, Stefan</i>	
P.2.25 - PASSIVE Ψ -TYPE OPTICAL POLARIZATION SPLITTER FOR INTEGRATED PHOTONIC POLARIZATION DIVERSITY RECEIVERS	913
<i>Rymanov, V. ; Khani, B. ; Dulme, S. ; Enkisch, K. ; Krause, A. ; Stohr, A.</i>	
P.3.01 - FAST DECODING AND LLR-COMPUTATION ALGORITHMS FOR HIGH-ORDER SET-PARTITIONED 4D-QAM CONSTELLATIONS	916
<i>Ishimura, Shota ; Kikuchi, Kazuro</i>	
P.3.02 - CLOCK-RECOVERY AND ADAPTIVE-EQUALIZATION CHARACTERISTICS OF DIGITAL COHERENT RECEIVERS WITH SYMBOL-RATE ANALOG-TO-DIGITAL CONVERSION	919
<i>Kikuchi, Kazuro</i>	
P.3.03 - DIGITAL FREQUENCY OFFSET COMPENSATION IN HIGH-SPEED OPTICAL INTERSATELLITE DATA TRANSMISSION SYSTEMS	922
<i>Schaefer, Semjon ; Gregory, Mark ; Rosenkranz, Werner</i>	
P.3.04 - MITIGATION OF EQUALIZATION ENHANCED PHASE NOISE IN WEAKLY COUPLED FMF TRANSMISSION BY RECEIVER SIDE DUO-BINARY SHAPING AND MLSD	925
<i>Liang, Junpeng ; Fu, Songnian ; Tang, Ming ; Shum, P. ; Liu, Deming</i>	
P.3.05 - SPECTRAL COMPRESSION OF COMPLEX-MODULATED SIGNALS WITHOUT LOSS OF INFORMATION BY JOINT TEMPORAL-SPECTRAL SELF-IMAGING	928
<i>Cortes, Luis Romero ; Maram, Reza ; Azana, Jose</i>	
P.3.06 - SOFTWARE-DEFINED RF-PHOTONICS PROCESSOR: CONCEPT AND DESIGN EQUATIONS	931
<i>Perez, Daniel ; Gasulla, Ivana ; Capmany, Jose</i>	
P.3.07 - MULTIFLOW REGENERATION USING NETWORK CODING FOR BIDIRECTIONAL LINKS	934
<i>Layec, Patricia ; Dorize, Christian ; Bigo, Sebastien</i>	
P.3.08 - A SIMPLE ALL-OPTICAL FORMAT TRANSPARENT TIME AND WAVELENGTH DEMULTIPLEXING TECHNIQUE FOR WDM & ORTHOGONAL-TDM NYQUIST CHANNELS	937
<i>Shoaie, Mohammad Amin ; Vedadi, Armand ; Bres, Camille-Sophie</i>	
P.3.09 - EXPERIMENTAL DEMONSTRATION OF INDEPENDENT COMPONENT ANALYSIS BASED CHANNEL EQUALIZATION IN MULTIBAND COHERENT OPTICAL PDM-OFDM	940
<i>Li, Xiang ; Zhong, Wen-De ; Alphones, Arokiaswami ; Yu, Changyuan ; Luo, Ming ; Hu, Rong ; Yang, Qi</i>	
P.3.10 - ENERGY-EFFICIENT SOFT-DECISION LDPC FEC FOR LONG-HAUL OPTICAL COMMUNICATION	943
<i>Cushon, Kevin ; Larsson-Edefors, Per ; Andrekson, Peter</i>	
P.3.11 - COMPACT AND TUNABLE AWG-BASED TRUE-TIME DELAYS FOR MULTI-GBPS RADIO BEAMFORMER	946
<i>Tessema, N. ; Yan, F. ; Cao, Z. ; Tangdiongga, E. ; Koonen, A.M.J.</i>	
P.3.12 - TRANSMISSION OF INTENSITY MODULATION-DIRECT DETECTION SIGNALS FAR BEYOND THE DISPERSION LIMIT ENABLED BY PHASE-RETRIEVAL	949
<i>Goeger, G. ; Prodaniuc, C. ; Ye, Y. ; Zhang, Q.</i>	
P.3.13 - PSA-BASED ALL-OPTICAL MULTI-CHANNEL PHASE REGENERATOR	952
<i>Parmigiani, F. ; Bottrill, K.R.H. ; Slavik, R. ; Richardson, D.J. ; Petropoulos, P.</i>	

P.3.14 - EFFICIENT FREQUENCY-DOMAIN FRACTIONALLY-SPACED EQUALIZER FOR FLEXIBLE DIGITAL COHERENT OPTICAL RECEIVERS	955
<i>Pittala, Fabio ; Nossek, Josef A.</i>	
P.3.15 - DIVIDING AND MULTIPLYING THE MODE ORDER FOR ORBITAL-ANGULAR-MOMENTUM BEAMS.....	958
<i>Zhao, Zhe ; Ren, Yongxiong ; Xie, Guodong ; Li, Long ; Yan, Yan ; Ahmed, Nisar ; Wang, Zhe ; Ashrafi, Nima ; Ashrafi, Solyman ; Linquist, Roger D. ; Willner, Alan E.</i>	
P.3.16 - NONLINEAR DECISION BOUNDARY CREATED BY A MACHINE LEARNING-BASED CLASSIFIER TO MITIGATE NONLINEAR PHASE NOISE	961
<i>Wang, Danshi ; Zhang, Min ; Li, Ze ; Cui, Yue ; Liu, Jingdan ; Yang, Yang ; Wang, Hongxiang</i>	
P.3.17 - RECONFIGURABLE OPTICAL INTER-CHANNEL INTERFERENCE COMPENSATION OF 20/25-GBAUD QPSK SIGNALS USING NONLINEAR WAVE MIXING	964
<i>Cao, Y. ; Ziyadi, M. ; Mohajerin-Ariaei, A. ; Almainan, A. ; Liao, P. ; Bao, C. ; Shamee, B. ; Yang, J. ; Akasaka, Y. ; Sekiya, M. ; Tur, M. ; Langrock, C. ; Fejer, M. ; Touch, J. ; Willner, A.</i>	
P.3.18 - DIGITAL SIGNAL PROCESSING FOR SPECTRALLY-SLICED COHERENT OPTICAL RECEIVERS.....	967
<i>Diniz, Julio C.M. ; Simoes, Fabio D. ; Rozental, Valery N. ; Rossi, Sandro M. ; Chiuchiarelli, Andrea ; Oliveira, Juliano R.F. ; Bordonalli, Aldario C. ; Reis, Jacklyn D.</i>	
P.3.19 - AUTONOMOUS RECEIVER ARCHITECTURE FOR MULTI-GIGABIT PHOTONIC ASSISTED RF SIGNALS	970
<i>Isautier, Pierre ; Pan, Jie ; Ralph, Stephen E.</i>	
P.4.01 - EVALUATION OF MAXIMUM RATIO COMBINING IN ROUTE DIVERSITY TRANSMISSION AND APPLICATION TO HITLESS OPTICAL PATH SWITCHING IN FIELD INSTALLED FIBRE	973
<i>Saito, Kohei ; Yokota, Masahiro ; Hamaoka, Fukutaro ; Yamamoto, Shuto ; Kotanigawa, Takashi ; Maeda, Hideki ; Naka, Akira</i>	
P.4.02 - OPTICAL SPECTRUM ANALYSIS WITH KHZ RESOLUTION BASED ON POLARIZATION PULLING AND LOCAL OSCILLATOR ASSISTED BRILLOUIN SCATTERING.....	976
<i>Preussler, Stefan ; Al-Taiy, Hassanain ; Schneider, Thomas</i>	
P.4.03 - DEMONSTRATION OF OPTICAL CORRELATION DOMAIN REFLECTOMETRY BASED ON COHERENCE SYNCHRONIZATION FOR LONG-RANGE MEASUREMENT	979
<i>Okamoto, Tatsuya ; Iida, Daisuke ; Toge, Kunihiro ; Manabe, Tetsuya</i>	
P.4.04 - PREDICTING INSERTION LOSS IN MULTI-FIBER MULTIMODE CONNECTORS	982
<i>Zakharian, Aramais R. ; Marin, Esteban B. ; Fiebig, Christian ; Tran, Hieu V. ; Hepburn, Lisa ; Kobayakov, Andrey</i>	
P.4.05 - ROBUST RZ TO NRZ FORMAT CONVERTER BASED ON LINEAR JOINT TEMPORAL-SPECTRAL SELF-IMAGING AND BAND-PASS FILTERING	985
<i>Cortes, Luis Romero ; Maram, Reza ; Lei, Lei ; Azana, Jose</i>	
P.4.06 - EXPERIMENTAL STUDY OF M-QAM CONSTELLATION OPTIONS FOR SHORT-REACH DUAL-POLARIZATION OPTICAL OFDM WITH DIRECT DETECTION	988
<i>Amiralizadeh, Siamak ; Park, Chul Soo ; Rusch, Leslie A.</i>	
P.4.07 - OPTICAL I/O CORE TRANSMITTER WITH HIGH TOLERANCE TO OPTICAL FEEDBACK USING QUANTUM DOT LASER.....	991
<i>Mizutani, Kenji ; Yashiki, Kenichiro ; Kurihara, Mitsuru ; Suzuki, Yasuyuki ; Hagihara, Yasuhiko ; Hatori, Nobuaki ; Shimizu, Takanori ; Urino, Yutaka ; Nakamura, Takahiro ; Kurata, Kazuhiko ; Arakawa, Yasuhiko</i>	
P.4.08 - LOW-POWER CURRENT-EQUALISED OPTICAL TRANSMITTER FOR BELOW-THRESHOLD-BIASING VCSEL OPERATION.....	994
<i>Li, Jie ; Lee, Ka-Lun ; Chow, Hungkei Keith ; Hinton, Kerry</i>	
P.4.09 - TRANSMISSION OF 112GBIT/S SINGLE POLARIZATION HALF-CYCLE 16QAM NYQUIST-SCM WITH 25GBPS EML AND DIRECT DETECTION	997
<i>Zhong, Kangping ; Zhou, Xian ; Gao, Yuliang ; Yang, Yanfu ; Chen, Wei ; Man, Jiangwei ; Zeng, Li ; Lau, Alan Pak Tao ; Lu, Chao</i>	
P.4.10 - EXPERIMENTAL PERFORMANCE EVALUATION OF EQUALIZATION TECHNIQUES FOR 56 GB/S PAM-4 VCSEL-BASED OPTICAL INTERCONNECTS	1000
<i>Karinou, Fotini ; Prodaniuc, Cristian ; Stojanovic, Nebojsa ; Ortsiefer, Markus ; Daly, Aidan ; Hohenleitner, Robert ; Kogel, Benjamin ; Neumeyr, Christian</i>	
P.4.11 - IMPACT OF DIFFERENTIAL MODAL DELAY ON INTRA-SYMBOL FREQUENCY DOMAIN AVERAGING BASED CO-OFDM CHANNEL ESTIMATION.....	1003
<i>Chen, Xi</i>	
P.4.12 - SENSITIVITY IMPROVEMENTS IN AN 850 NM VCSEL TRANSMITTER USING A ONE-TAP PRE-EMPHASIS ELECTRONIC FILTER.....	1006
<i>Lengyel, Tamas ; Szczerba, Krzysztof ; Westbergh, Petter ; Karlsson, Magnus ; Larsson, Anders ; Andrekson, Peter</i>	

P.4.13 - OPTIMUM DETECTION IN PRESENCE OF NONLINEAR DISTORTIONS WITH MEMORY	1009
<i>Liga, Gabriele ; Alvarado, Alex ; Agrell, Erik ; Secondini, Marco ; Killey, Robert I. ; Bayvel, Polina</i>	
P.4.14 - DEMONSTRATION OF A FINE AND COARSE TUNABLE BUFFER FOR MULTIPLE DISCRETE AND SIMULTANEOUS SIGNAL ACCESS USING A FREQUENCY COMB, WAVELENGTH CONVERSION AND CHROMATIC DISPERSION	1012
<i>Almaiman, A. ; Mohajerin-Ariaei, A. ; Ziyadi, M. ; Cao, Y. ; Bao, C. ; Liao, P. ; Shamee, B. ; Akasaka, Y. ; Yang, J.-Y. ; Sekiya, M. ; Langrock, C. ; Fejer, M.M. ; Paraschis, L. ; Tur, M. ; Willner, A.E.</i>	
P.4.15 - 112 GBIT/S SINGLE-POLARIZATION SILICON COHERENT RECEIVER WITH HYBRID-INTEGRATED BICMOS LINEAR TIA	1015
<i>Verbist, Jochem ; Zhang, Jing ; Moeneclaey, Bart ; van Weerdenburg, John ; van Uden, Roy ; Okonkwo, Chigo ; Yin, Xin ; Bauwelinck, Johan ; Roelkens, Gunther</i>	
P.4.16 - 100 GBPS MULTI-FORMAT OPTICAL PACKET AND CIRCUIT SWITCHING NODE WITH TRANSPARENT OPTICAL SWITCH AND BURST-MODE AMPLIFIER	1018
<i>Furukawa, Hideaki ; Delgado Mendinueta, Jose Manuel ; Segawa, Toru ; Takahashi, Ryo ; Harai, Hiroaki ; Shinada, Satoshi ; Wada, Naoya</i>	
P.4.17 - COMPACT ORBITAL ANGULAR MOMENTUM MODE MULTIPLEXER/DEMULTIPLEXER BASED ON A MICHELSON INTERFEROMETER WITH PORRO PRISMS	1021
<i>Martelli, Paolo ; Boffi, Pierpaolo ; Fasiello, Annalaura ; Martinelli, Mario</i>	
P.4.18 - PARALLEL MULTI-WAVELENGTH INTRADYNE RECEPTION USING AN OPTICAL FREQUENCY COMB AS A LOCAL OSCILLATOR	1024
<i>Kemal, J.N. ; Pfeifle, J. ; Marin, P. ; Deseada Gutierrez Pascual, M. ; Wolf, S. ; Smyth, F. ; Freude, W. ; Koos, C.</i>	
P.5.01 - SPECTRALLY-EFFICIENT SINGLE SIDEBAND 16-QAM NYQUIST-SUBCARRIER MODULATION-BASED WDM TRANSMISSION USING AN INP DUAL-DRIVE MACH-ZEHNDER MODULATOR AND DIRECT-DETECTION	1027
<i>Erkilinc, M.S. ; Pachnicke, S. ; Griesser, H. ; Thomsen, B.C. ; Bayvel, P. ; Killey, R.I.</i>	
P.5.02 - NONLINEAR MITIGATION TECHNIQUE USING SUBCARRIER POWER PRE-EMPHASIS AND DIGITAL NONLINEAR COMPENSATION IN SUPERCHANNEL TRANSMISSION	1030
<i>Yamauchi, Tomohiro ; Vassilieva, Olga ; Oda, Shoichiro ; Kim, Inwoong ; Ohshima, Chihiro ; Nakashima, Hisao ; Hoshida, Takeshi ; Aoki, Yasuhiko ; Sekiya, Motoyoshi ; Akiyama, Yuichi ; Rasmussen, Jens C.</i>	
P.5.03 - EFFECTIVE SIGNAL TO NOISE RATIO PERFORMANCE METRIC FOR DISPERSION-UNCOMPENSATED LINKS	1033
<i>Sinkin, O.V. ; Davidson, C.R. ; Wang, H. ; Richardson, L. ; Cai, J.-X. ; Kovsh, D. ; Foursa, D.G. ; Bakhshi, B. ; Mohs, G. ; Pilipetskii, A.N.</i>	
P.5.04 - 100G SWDM4 TRANSMISSION OVER 300M WIDEBAND MMF	1036
<i>Lyubomirsky, I. ; Motaghian, R. ; Daghighian, H. ; McMahon, D. ; Nelson, S. ; Kocot, C. ; Tatum, J.A. ; Achten, F. ; Sillard, P. ; Molin, D. ; Amezcua-Correa, A.</i>	
P.5.05 - TRANSMISSION OF 8×128.8GBAUD SINGLE-CARRIER PDM-QPSK SIGNAL OVER 2800-KM EDFA-ONLY SMF-28 LINK.....	1039
<i>Yu, Jianjun ; Zhang, Junwen ; Jia, Zhensheng ; Li, Xinying ; Chien, Hung Chang ; Cai, Yi ; Li, Fan ; Wang, Yuanquan ; Xiao, Xin</i>	
P.5.06 - LINEAR BLOCK-CODING ACROSS >5 TB/S PDM-64QAM SPATIAL-SUPER-CHANNELS IN A 19-CORE FIBER	1042
<i>Puttnam, B.J. ; Luis, R.S. ; Delgado Mendinueta, J.-M. ; Awaji, Y. ; Wada, N. ; Agrell, E.</i>	
P.5.07 - SIMPLIFIED PERTURBATION-BASED APPROACH FOR PREDICTING THE TOLERANCE TO INTRA-CHANNEL NONLINEAR EFFECTS	1045
<i>El-Rahman, A.I.Abd ; Kashi, A. ; Cartledge, J.C. ; O'Sullivan, M. ; Laperle, C. ; Borowiec, A. ; Roberts, K.</i>	
P.5.08 - COMPENSATION OF XPM INTERFERENCE BY BLIND TRACKING OF THE NONLINEAR PHASE IN WDM SYSTEMS WITH QAM INPUT	1048
<i>Fehenberger, Tobias ; Yankov, Metodi P. ; Barletta, Luca ; Hanik, Norbert</i>	
P.5.09 - MODE DEPENDENT LOSS EQUALISER AND IMPACT OF MDL ON PDM-16QAM FEW-MODE FIBRE TRANSMISSION	1051
<i>Mizuno, T. ; Takara, H. ; Shibahara, K. ; Miyamoto, Y. ; Oguma, M. ; Ono, H. ; Abe, Y. ; Matsui, T. ; Matsuo, S. ; Saitoh, K. ; Kimura, Y.</i>	
P.5.10 - EXPERIMENTAL INVESTIGATION OF A 16-DIMENSIONAL MODULATION FORMAT FOR LONG-HAUL MULTI-CORE FIBER TRANSMISSION	1054
<i>Rademacher, G. ; Puttnam, B.J. ; Luis, R.S. ; Awaji, Y. ; Wada, N. ; Agrell, E. ; Petermann, K.</i>	
P.5.11 - PAPR MANAGEMENT OF ALL-OPTICAL OFDM SIGNAL USING FRACTIONAL FOURIER TRANSFORM FOR FIBRE NONLINEARITY MITIGATION	1057
<i>Nagashima, T. ; Cincotti, G. ; Murakawa, T. ; Shimizu, S. ; Hasegawa, M. ; Hattori, K. ; Okuno, M. ; Mino, S. ; Himeno, A. ; Wada, N. ; Uenohara, H. ; Konishi, T.</i>	

P.5.12 - 30 GBIT/S TRANSMISSION OVER 1 KM OF CONVENTIONAL MULTI-MODE FIBER USING MODE GROUP MULTIPLEXING WITH OOK MODULATION AND DIRECT DETECTION	1060
<i>Labroille, Guillaume ; Jian, Pu ; Garcia, Lionel ; Trinel, Jean-Baptiste ; Kassi, Redha ; Bigot, Laurent ; Morizur, Jean-Francois</i>	
P.5.13 - REAL-TIME ADAPTIVE 4–64 QAM, 20–60 GBIT/S QUANTUM NOISE STREAM CIPHER TRANSMISSION OVER 320 KM WITH FPGA-BASED TRANSMITTER AND RECEIVER	1063
<i>Yoshida, Masato ; Hirooka, Toshihiko ; Kasai, Keisuke ; Nakazawa, Masataka</i>	
P.5.14 - BIT RATE-DISTANCE PRODUCT LIMITS FOR UNCOMPENSATED COHERENT MULTI-CORE FIBER LINKS UNDER TOTAL POWER CONSTRAINT	1066
<i>Balemarthy, Kasyapa ; Lingle, Robert</i>	
P.5.15 - POWER CONSUMPTION OF HYBRID EDFA/RAMAN AMPLIFIED SYSTEMS	1069
<i>Lundberg, Lars ; Johannisson, Pontus ; Agrell, Erik ; Karlsson, Magnus ; Andrekson, Peter A.</i>	
P.5.16 - NONLINEAR PHASE AND POLARIZATION ROTATION NOISE IN FULLY LOADED WDM SYSTEMS	1072
<i>Dar, Ronen ; Feder, Meir ; Mecozzi, Antonio ; Shtaif, Mark ; Winzer, Peter J.</i>	
P.5.17 - IMPACT OF INTRA- AND INTER-SUBCARRIER NONLINEARITIES ON THE INFORMATION RATE OF A 1.206 TBIT/S DP 16-QAM SUPERCHANNEL	1075
<i>Rezania, A. ; Kashi, A.S. ; Cartledge, J.C.</i>	
P.5.18 - UNREPEATED 100 KM SMF TRANSMISSION OF 110.3 GBPS/LAMBDA DMT SIGNAL	1078
<i>Okabe, R. ; Liu, B. ; Nishihara, M. ; Tanaka, T. ; Takahara, T. ; Li, L. ; Tao, Z. ; Rasmussen, J.C.</i>	
P.5.19 - 112-GB/S DUOBINARY 4-PAM TRANSMISSION OVER 200-M MULTI-MODE FIBRE	1081
<i>Zuo, Tianjian ; Zhang, Liang ; Zhou, Enbo ; Liu, Gordon Ning ; Xu, Xiaogeng</i>	
P.5.20 - UPPER LIMITS ON NUMBER OF CORES FOR MULTI-CORE SMFS OVER TRANS-OCEANIC DISTANCES AT 100GBPS	1084
<i>Balemarthy, Kasyapa ; Lingle, Robert</i>	
P.5.21 - UNREPEATED 447GB/S NYQUIST PDM-64QAM TRANSMISSION OVER 160KM SSMF WITH BACKWARD RAMAN AMPLIFICATION	1087
<i>Lv, Xin ; Wang, Dan ; Zhu, Yixiao ; Zou, Kaiheng ; Zheng, Zhennan ; Zhang, Fan ; Zhu, Lixin ; Chen, Zhangyuan</i>	
P.6.01 - OPTICAL TDM FAST REROUTE METHOD FOR BUFFERLESS METRO RING NETWORKS WITH ARBITRARY FIBER LENGTH	1090
<i>Hattori, Kyota ; Nakagawa, Masahiro ; Matsuda, Toshiya ; Katayama, Masaru ; Koda, Katsutoshi</i>	
P.6.02 - ON THE WORTHINESS OF FLEXIBLE GRID IN ELASTIC OPTICAL NETWORKS	1093
<i>Comellas, Jaume ; Junyent, Gabriel</i>	
P.6.03 - ZERO-DISPERSION DWDM TRANSMISSION AND MULTI-CARRIER AGGREGATION FOR BEYOND 10G METRO NETWORK	1096
<i>Matsuda, Toshiya ; Homemoto, Toru ; Katayama, Masaru ; Koda, Katsutoshi</i>	
P.6.04 - MANYCAST AND ANYCAST ROUTING FOR REPLICA PLACEMENT IN DATACENTER NETWORKS	1099
<i>Muhammad, Ajmal ; Skorin-Kapov, Nina ; Wosinska, Lena</i>	
P.6.05 - IMPACT OF FIBER TYPES AND RAMAN PUMPING IN RECONFIGURABLE DWDM TRANSPARENT OPTICAL NETWORKS	1102
<i>Ahmad, Arsalan ; Bianco, Andrea ; Chouman, Hussein ; DeTommaso, Daniele ; Marchetto, Guido ; Tahir, Sarosh ; Curri, Vittorio</i>	
P.6.06 - ENABLING TRAFFIC OPTIMIZED TOPOLOGY RECONSTRUCTION WITH THE OPTICAL SWITCHING BASED SMALL WORLD DATA CENTER NETWORK	1105
<i>Zhang, Dongxu ; Yang, Tingting ; Guo, Hongxiang ; Wu, Jian</i>	
P.6.07 - ENHANCED INHERENT SURVIVABILITY TO LINK FAILURES AT LOW LINK MARGIN IN A FLEXGRID OPTICAL NETWORK	1108
<i>Mitra, Abhijit ; Lord, Andrew ; Kar, Subrat ; Wright, Paul</i>	
P.6.08 - DYNAMIC BANDWIDTH PROTECTION IN OPTICAL SUBWAVELENGTH SWITCHED RING NETWORK	1111
<i>Nakagawa, Masahiro ; Hattori, Kyota ; Matsuda, Toshiya ; Katayama, Masaru ; Koda, Katsutoshi</i>	
P.6.09 - RING-BASED ALL-OPTICAL DATACENTER NETWORKS	1114
<i>Fagertun, Anna M. ; Berger, Michael ; Ruepp, Sarah ; Kamchevska, Valerija ; Galili, Michael ; Oxenlowe, Leif K. ; Dittmann, Lars</i>	
P.6.10 - SUB-WAVELENGTH GRANULARITY ADD/DROP EXPERIMENT IN AN INTEGRATED PACKET/CIRCUIT HYBRID OPTICAL NETWORK	1117
<i>Veislari, R. ; Bjornstad, S. ; Braute, J.P. ; Bozorgebrahimi, K. ; Bryhni, H.</i>	
P.6.11 - POWER OPTIMIZATION IN NONLINEAR FLEXIBLE-GRID OPTICAL NETWORKS	1120
<i>Yan, Li ; Zhao, Juzi ; Agrell, Erik ; Wymeersch, Henk</i>	

P.6.12 - PERFORMANCE IMPROVEMENTS OF HYBRID OPTO-ELECTRONIC PACKET SWITCH USING SDM IN ADDITION TO WDM.....	1123
<i>Samoud, Wiem ; Lourdiane, Mounia ; Ware, Cedric</i>	
P.6.13 - IMPAIRMENT-AWARE RESOURCE ALLOCATION OVER FLEXI-GRID NETWORK WITH ALL-OPTICAL ADD/DROP CAPABILITY	1126
<i>Khodashenas, P.S. ; Rivas-Moscato, J.M. ; Klonidis, D. ; Thouenon, G. ; Betoule, C. ; Tomkos, I.</i>	
P.6.14 - MAXIMIZING IP FAST REROUTING COVERAGE IN SURVIVABLE IP-OVER-WDM NETWORKS.....	1129
<i>Izquierdo-Zaragoza, Jose-Luis ; Pedreno-Manresa, Jose-Juan ; Pavon-Marino, Pablo</i>	
P.6.15 - TRAFFIC ENGINEERING ENFORCEMENT IN MULTI-DOMAIN SDN ORCHESTRATION OF MULTI-LAYER (PACKET/OPTICAL) NETWORKS	1132
<i>Mayoral, A. ; Vilalta, R. ; Casellas, R. ; Munoz, R. ; Martinez, R.</i>	
P.6.16 - ENGINEERING THE FIRST OPEN SOURCE IMPLEMENTATION OF THE MULTI-LAYER NETWORK TOPOLOGY DATABASES.....	1135
<i>Chamania, Mohit ; Carpio, Fran ; Jukan, Admela</i>	
P.6.17 - COMPARING NETWORKS WITH CAPACITY-FIXED AND SPECTRALLY-FIXED LINE MODULES IMPLEMENTING MULTIPLE COHERENT MODULATIONS	1138
<i>Turkcu, Onur ; Roy, Soumya ; Gopalan, Abishek ; Mitchell, Matt ; Lu, Biao</i>	
P.6.18 - EXPERIMENTAL DEMONSTRATION OF BROKERED ORCHESTRATION FOR END-TO-END SERVICE PROVISIONING AND INTEROPERABILITY ACROSS HETEROGENEOUS MULTI-OPERATOR (MULTI-AS) OPTICAL NETWORKS	1141
<i>Castro, A. ; Gifre, Ll. ; Chen, C. ; Yin, J. ; Zhu, Z. ; Velasco, L. ; Yoo, S.J.B.</i>	
P.6.19 - OPTICAL RESOURCE ALLOCATION FOR DYNAMIC TRAFFIC IN MOBILE CORE NETWORKS BASED ON SOFTWARE DEFINED OPTICAL NETWORKS.....	1144
<i>Chen, Zhendong ; Zhao, Yongli ; Yang, Hui ; Zhang, Guoying ; Zhang, Jie</i>	
P.7.01 - ADAPTIVE FEC CONTROL IN DOWNSTREAM COLLABORATING WITH TRAFFIC CONTROL IN OLT FOR WDM/TDM-PON	1147
<i>Sugawa, Jun ; Wakayama, Koji ; Toyoda, Hidehiro</i>	
P.7.02 - DEMONSTRATION OF MULTICAST VIDEO STREAMING WITH N:1 PROTECTION OF A 10G-EPON SYSTEM	1150
<i>Nishitani, Takashi ; Hirano, Yukio ; Mukai, Hiroaki</i>	
P.7.03 - OPTICAL PATH PROTECTION WITH FEC SWITCHING IN WDM/TDM-PON FOR RING ACCESS NETWORKS.....	1153
<i>Sakaue, Yuki ; Asaka, Kota ; Senoo, Yumiko ; Kaneko, Shin ; Yoshida, Tomoaki ; Sugawa, Jun ; Wakayama, Koji ; Suzuki, Ken-Ichi ; Otaka, Akihiro</i>	
P.7.04 - TIME-SHARING RESOURCES FOR LOW COST AND HIGH PERFORMANCE INDOOR OPTICAL WIRELESS NETWORKS	1156
<i>Oh, C.W. ; Tangdionga, E. ; Koonen, A.M.J.</i>	
P.7.05 - LEVERAGING GIGABIT BROADBAND HYBRID FTTH ACCESS VIA THE INTEGRATION OF GPON AND G.FAST TECHNOLOGIES.....	1159
<i>Galan, J.V. ; Masgrau, E. ; Cortes, A. ; Benedi, O. ; Fraile, D. ; Gaston, J. ; Beamonte, D. ; Pellon, M.A. ; Rozen, I. ; Mansour, O. ; Verbin, R.</i>	
P.7.06 - UP TO 20-GB/S MULTILEVEL WDM PON TRANSMITTER BASED ON SELF-SEEDED RSOAS.....	1162
<i>Parolari, P. ; Brunero, M. ; Brenot, R. ; Martinelli, M.</i>	
P.7.07 - ANALOG FIBER-OPTIC LINKS USING HIGH-ORDER FIBER MODES	1165
<i>Wen, He ; Zheng, Hongjun ; Mo, Qi ; Velazquez-Benitez, A.M. ; Xia, Cen ; Huang, Bing ; Liu, Huiyuan ; Yu, Huang ; Lopez, Jose Enrique Antonio ; Correa, Rodrigo Amezcua ; Li, Guifang</i>	
P.7.08 - HIGH-SPECTRAL EFFICIENCY MILLIMETER WAVE-OVER-FIBER SYSTEM FOR FUTURE MOBILE FRONTHAUL	1168
<i>Dat, Pham Tien ; Kanno, Atsushi ; Inagaki, Keizo ; Yamamoto, Naokatsu ; Kawanishi, Tetsuya</i>	
P.7.09 - ACCURATE WAVELENGTH DRIFT MEASUREMENTS OF NGPON2 TUNABLE LASERS CANDIDATES	1171
<i>Simon, G. ; Saliou, F. ; Chancelou, P. ; Le Guyader, B. ; Guillo, L. ; Erasme, D.</i>	
P.7.10 - CHIP INTEGRATED DFB-EAM FOR DIRECTLY PHASE MODULATION PERFORMANCE IMPROVEMENT IN UDWDM-PON.....	1174
<i>Lerin, Adolfo ; Chu, GuangYong ; Polo, Victor ; Cano, Ivan N. ; Prat, Josep</i>	
P.7.11 - NEW CONCEPT FOR ONU AMPLIFIED ODN AND DEMONSTRATION OF 80 GBIT/S TWDM-PON WITH 44 KM REACH AND 512 SPLIT	1177
<i>Poehlmann, W. ; Bonk, R. ; Schmuck, H. ; Pfeiffer, Th.</i>	

P.7.12 - UTILIZING UNUSED POWER BUDGET TO INCREASE NETWORK CAPACITY IN PRACTICAL PON DEPLOYMENTS BY INTRODUCING FLEXIBLE MODULATION	1180
<i>van der Linden, R. ; Tran, N.C. ; Tangdionga, E. ; Koonen, A.M.J.</i>	
P.7.13 - PHOTON RANGING TECHNIQUES FOR UPSTREAM SIGNALLING IN TWDM-PON DURING ONU ACTIVATION	1183
<i>Bertignono, Luca ; Capriata, Stefano ; Ferrero, Valter ; Greborio, Laura ; Mercinelli, Roberto ; Valvo, Maurizio ; Gaudino, Roberto</i>	
P.7.14 - MULTICORE OPTICAL-WIRELESS EXTENDED-RANGE FRONTHAUL BY POLARIZATION-MULTIPLEXING IN PASSIVE OPTICAL NETWORKS	1186
<i>Morant, Maria ; Macho, Andres ; Prat, Josep ; Llorente, Roberto</i>	
P.7.15 - 100³ (100GB/S×100M×100GHZ) OPTICAL WIRELESS SYSTEM.....	1189
<i>Li, Xinying ; Yu, Jianjun ; Xiao, Jiangnan</i>	
P.7.16 - COST ANALYSIS OF COHERENT-BASED TRX PON NETWORK	1192
<i>Rafel, Albert ; Parkin, Neil</i>	
P.7.17 - HIGH SPECTRAL EFFICIENT AND FLEXIBLE MULTICARRIER D-ROF MODEM USING UP TO 1024-QAM MODULATION FORMAT	1195
<i>Juliao, Sergio ; Nunes, Reginaldo B. ; Viana, Diogo ; Jesus, Paulo ; Silva, Nelson ; Oliveira, Arnaldo S.R. ; Monteiro, Paulo</i>	
P.7.18 - MULTIPLE SYSTEM CONFIGURATION FOR NEXT GENERATION OPTICAL ACCESS NETWORKS WITH REAL-TIME NYQUIST UDWDM-PON	1198
<i>Shahpari, Ali ; Ferreira, Ricardo M. ; Ziaie, Somayeh ; Vujicic, Zoran ; Reis, Jacklyn D. ; Oliveira, Juliano R.F. ; Teixeira, Antonio L.</i>	
PDP1.1 - ELEPHANT COUPLER: VERTICALLY CURVED SI WAVEGUIDE WITH WIDE AND FLAT WAVELENGTH WINDOW INSENSITIVE TO COUPLING ANGLE.....	1201
<i>Yoshida, T. ; Omoda, E. ; Atsumi, Y. ; Mori, M. ; Sakakibara, Y.</i>	
PDP1.2 - ULTRA-COMPACT PLASMONIC IQ-MODULATOR.....	1204
<i>Haffner, C. ; Heni, W. ; Fedoryshyn, Y. ; Baeuerle, B. ; Josten, A. ; Salamin, Y. ; Bonjour, R. ; Hoessbacher, C. ; Emboras, A. ; Elder, D.L. ; Leuchtmann, P. ; Hillerkuss, D. ; Dalton, L.R. ; Hafner, C. ; Leuthold, J.</i>	
PDP1.3 - ERROR-FREE 56 GB/S NRZ MODULATION OF A 1530 NM VCSEL LINK.....	1207
<i>Kuchta, Daniel M. ; Doany, Fuad E. ; Schares, Laurent ; Neumeyr, Christian ; Daly, Aidan ; Kogel, Benjamin ; Rosskopf, Jurgen ; Ortsiefer, Markus</i>	
PDP1.4 - 100 GBIT/S OOK USING A SILICON-ORGANIC HYBRID (SOH) MODULATOR.....	1210
<i>Hartmann, W. ; Lauermann, M. ; Wolf, S. ; Zwickel, H. ; Kutuvantavida, Y. ; Luo, J. ; Jen, A.K.-Y. ; Freude, W. ; Koos, C.</i>	
PDP1.5 - LOW COST 112 GB/S INP DFB-EAM FOR PAM-4 2 KM TRANSMISSION.....	1213
<i>Caillaud, C. ; Adrover, M.A.Mestre ; Blache, F. ; Pommereau, F. ; Decobert, J. ; Jorge, F. ; Charbonnier, P. ; Konczykowska, A. ; Dupuy, J.-Y. ; Mardoyan, H. ; Mekhazni, K. ; Paret, J.-F. ; Faugeron, M. ; Mallecot, F. ; Achouche, M.</i>	
PDP2.1 - EFFICIENT ANNULAR CLADDING AMPLIFIER WITH SIX, THREE-MODE CORES.....	1216
<i>Jin, Cang ; Huang, Bin ; Shang, Kuanping ; Chen, Haoshuo ; Ryf, Roland ; Essiambre, R.J. ; Fontaine, Nicolas K. ; Li, Guifang ; Wang, L. ; Messaddeq, Y. ; LaRochelle, S.</i>	
PDP2.2 - 160-GBPS NYQUIST PAM4 TRANSMITTER USING A DIGITAL-PREPROCESSED ANALOG-MULTIPLEXED DAC	1219
<i>Yamazaki, Hiroshi ; Nagatani, Munehiko ; Kanazawa, Shiaeru ; Nosaka, Hideyuki ; Hashimoto, Toshikazu ; Sano, Akihide ; Miyamoto, Yutaka</i>	
PDP2.3 - POLARIZATION DIVISION MULTIPLEXED INTENSITY, INTER POLARIZATION PHASE AND INTER POLARIZATION DIFFERENTIAL PHASE MODULATION WITH STOKES SPACE DIRECT DETECTION FOR 1 λ ×320 GB/S 10 KM TRANSMISSION AT 8 BITS/SYMBOL.....	1222
<i>Morsy-Osman, M. ; Chagnon, M. ; Plant, D.V.</i>	
PDP2.4 - DIRECT DETECTION TRANSCEIVER AT 150-GBIT/S NET DATA RATE USING PAM 8 FOR OPTICAL INTERCONNECTS	1225
<i>Mestre, M.A. ; Mardoyan, H. ; Konczykowska, A. ; Rios-Muller, R. ; Renaudier, J. ; Jorge, F. ; Duval, B. ; Dupuy, J.-Y. ; Ghazisaeidi, A. ; Jenneve, P. ; Bigo, S.</i>	
PDP2.5 - DISTRIBUTED 1-TB/S ALL-OPTICAL AGGREGATION CAPACITY IN 125-GHZ OPTICAL BANDWIDTH BY FREQUENCY CONVERSION IN FIBER	1228
<i>Richter, Thomas ; Schmidt-Langhorst, Carsten ; Elschner, Robert ; Molle, Lutz ; Alreesh, Saleem ; Kato, Tomoyuki ; Tanimura, Takahito ; Watanabe, Shigeki ; Fischer, Johannes Karl ; Schubert, Colja</i>	
PDP3.1 - 2.15 PB/S TRANSMISSION USING A 22 CORE HOMOGENEOUS SINGLE-MODE MULTI-CORE FIBER AND WIDEBAND OPTICAL COMB.....	1231
<i>Puttnam, B.J. ; Luis, R.S. ; Klaus, W. ; Sakaguchi, J. ; Delgado Mendinueta, J.-M. ; Awaji, Y. ; Wada, N. ; Tamura, Yoshiaki ; Hayashi, Tetsuya ; Hirano, Masaaki ; Marcianite, J.</i>	

PDP3.2 - 2.05 PETA-BIT/S SUPER-NYQUIST-WDM SDM TRANSMISSION USING 9.8-KM 6-MODE 19-CORE FIBER IN FULL C BAND.....	1234
<i>Soma, D. ; Igarashi, K. ; Wakayama, Y. ; Takeshima, K. ; Kawaguchi, Y. ; Yoshikane, N. ; Tsuritani, T. ; Morita, I. ; Suzuki, M.</i>	
PDP3.3 - 10-MODE MODE-MULTIPLEXED TRANSMISSION OVER 125-KM SINGLE-SPAN MULTIMODE FIBER	1237
<i>Ryf, R. ; Chen, H. ; Fontaine, N.K. ; Velazquez-Benitez, A.M. ; Antonio-Lopez, Jose ; Jin, C. ; Huang, B. ; Bigot-Astruc, M. ; Molin, D. ; Achten, F. ; Sillard, P. ; Amezcua-Correa, R.</i>	
PDP3.4 - EXPERIMENTAL DEMONSTRATION OF CAPACITY INCREASE AND RATE-ADAPTATION BY PROBABILISTICALLY SHAPED 64-QAM.....	1240
<i>Buchali, F. ; Bocherer, G. ; Idler, W. ; Schmalen, L. ; Schulte, P. ; Steiner, F.</i>	
PDP4.1 - FIRST DEMONSTRATION OF MULTI-VENDOR AND MULTI-DOMAIN EON WITH S-BVT AND CONTROL INTEROPERABILITY OVER PAN-EUROPEAN TESTBED	1243
<i>de Dios, O.Gonzalez ; Casellas, R. ; Paolucci, F. ; Napoli, A. ; Gifre, Ll. ; Annoni, S. ; Belotti, S. ; Feiste, U. ; Rafique, D. ; Bohn, M. ; Bigo, S. ; Dupas, A. ; Dutisseuil, E. ; Fresi, F. ; Guo, B. ; Hugues, E. ; Layec, P. ; Lopez, V. ; Meloni, G. ; Misto, S. ; Morro, R. ; Rahman, T. ; Khanna, G. ; Martinez, R. ; Vilalta, R. ; Cugini, F. ; Poti, L. ; D'Errico, A. ; Munoz, R. ; Shu, Y. ; Yan, S. ; Yan, Y. ; Zervas, G. ; Nejabati, R. ; Simeonidou, D. ; Velasco, L. ; Fernandez-Palacios, J.</i>	
PDP4.2 - LIGHTNESS: A DEEPLY-PROGRAMMABLE SDN-ENABLED DATA CENTRE NETWORK WITH OCS/OPS MULTICAST/UNICAST SWITCH-OVER.....	1246
<i>Saridis, G.M. ; Peng, S. ; Yan, Y. ; Aguado, A. ; Guo, B. ; Arslan, M. ; Jackson, C. ; Miao, W. ; Calabretta, N. ; Agraz, F. ; Spadaro, S. ; Bernini, G. ; Ciulli, N. ; Zervas, G. ; Nejabati, R. ; Simeonidou, D.</i>	
PDP4.3 - DEMONSTRATION OF SYMMETRICAL 25 GBPS TDM-PON WITH 31.5 DB OPTICAL POWER BUDGET USING ONLY 10 GBPS OPTICAL COMPONENTS.....	1249
<i>Houtsma, Vincent ; van Veen, Doutje</i>	
PDP4.4 - FIRST DEMONSTRATION OF REAL-TIME END-TO-END 40 GB/S PAM-4 SYSTEM USING 10-G TRANSMITTER FOR NEXT GENERATION ACCESS APPLICATIONS	1252
<i>Wei, Jinlong ; Eiselt, Nicklas ; Griesser, Helmut ; Grobe, Klaus ; Eiselt, Michael ; Vegas-Olmos, Juan Jose ; Monroy, Idelfonso Tafur ; Elbers, Jorg-Peter</i>	
PDP4.5 - FIELD-TRIAL OF A REAL-TIME BIDIRECTIONAL UDWDM-PON COEXISTING WITH GPON, RF VIDEO OVERLAY AND NG-PON2 SYSTEMS.....	1255
<i>Ferreira, Ricardo M. ; Shahpari, Ali ; Guimar, Fernando P. ; Amado, Sofia B. ; Rodrigues, Claudio ; Reis, Jacklyn D. ; Pinto, Armando N. ; Teixeira, Antonio L.</i>	
Author Index	