

2016 18th International Conference on Transparent Optical Networks (ICTON 2016)

**Trento, Italy
10-14 July 2016**

Pages 1-577



**IEEE Catalog Number: CFP16485-POD
ISBN: 978-1-5090-1468-2**

**Copyright © 2016 by the Institute of Electrical and Electronics Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP16485-POD
ISBN (Print-On-Demand):	978-1-5090-1468-2
ISBN (Online):	978-1-5090-1467-5
ISSN:	2162-7339

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

MOA1 - PERFORMANCE AND HEALTH MONITORING OF CIVIL STRUCTURES AND INFRASTRUCTURE USING LONG-GAUGE AND DISTRIBUTED FIBER OPTIC SENSORS	1
<i>Branko Glišić</i>	
MOA2 - THE INFLUENCE OF RADIATION TRAPPING ON SPECTRA AND MEASURED LIFETIMES OF $^4F_9/2$ - $^4I_{15/2}$, $^4I_9/2$ - $^4I_{15/2}$, $^4I_{11/2}$ - $^4I_{15/2}$ AND $^4I_{13/2}$ - $^4I_{15/2}$ EMISSION BANDS IN GEGAS GLASSES DOPED WITH ERBIUM	5
<i>Safa Kasap ; Cyril Koughia</i>	
MOA3 - INTEGRATED NANOPHOTONICS FOR OPTICAL COMPUTATION IN A CHIP	10
<i>Masaya Notomi</i>	
MOB11 - PUSHING OPTICAL FIBER COMMUNICATIONS TO THE SHANNON LIMIT: ADVANCED MODULATION FORMATS AND DIGITAL SIGNAL PROCESSING	12
<i>Dan Sadot</i>	
MOB12 - MULTI-CARRIER HIGH-SPEED OPTICAL COMMUNICATION SYSTEMS SUPPORTED BY DIGITAL SIGNAL PROCESSING	15
<i>Armando N. Pinto ; Sofia B. Amado ; Celestino S. Martins ; Somayeh Ziaie ; Nelson J. Muga ; Fernando P. Guiomar</i>	
MOB13 - EQUALIZATION-ENHANCED PHASE NOISE IN COHERENT OPTICAL COMMUNICATIONS SYSTEMS	19
<i>S. Popov ; A. Kakkar ; J. R. Navarro ; Xiaodan Pang ; O. Ozolins ; R. Schatz ; H. Louchet ; G. Jacobsen</i>	
MOB14 - OVERCOMING PERFORMANCE LIMITATIONS OF DIGITAL BACK PROPAGATION DUE TO POLARIZATION MODE DISPERSION	20
<i>Ksenia Goroshko ; Hadrien Louchet ; Andre Richter</i>	
MOB15 - DIGITAL-ANALOG HYBRID SCM FOR FINE-GRANULARITY CIRCUIT-SWITCHED OPTICAL NETWORKS	24
<i>Rongqing Hui ; Kishanram Kaje ; Andrea Fumagalli</i>	
MOB16 - PILOT TONES BASED POLARIZATION ROTATION, FREQUENCY OFFSET AND PHASE ESTIMATION FOR POLARIZATION MULTIPLEXED OFFSET-QAM MULTI-SUBCARRIER COHERENT OPTICAL SYSTEMS	31
<i>Syed M. Bilal ; Gabriella Bosco</i>	
MOB21 - MULTILEVEL DIRECT DFB PHASE MODULATION IN 6.25 GHZ SPECTRALLY SPACED UDWM PONs	35
<i>Iván N. Cano ; J. Camilo Velásquez ; Victor Polo ; Josep Prat</i>	
MOB22 - EVALUATING THE ENERGY EFFICIENCY OF DWA ALGORITHMS IN UDWM-PONs	39
<i>Josep Segarra ; Vicent Sales ; Victor Polo ; Josep Prat</i>	
MOB23 - USING THE STOKES SPACE FOR EQUALIZATION OF POLARIZATION IMPAIRMENTS IN DIGITAL COHERENT OPTICAL RECEIVERS	44
<i>Nelson J. Muga ; Somayeh Ziaie ; Ali Shahpari ; Armando N. Pinto</i>	
MOB24 - HITLESS WAVELENGTH ASSIGNMENT IN FILTERLESS OPTICAL ACCESS NETWORKS	49
<i>M. Presi ; M. Rannello ; M. Artiglia ; I. Tomkos ; I. Cano ; J. Prat ; E. Ciaramella</i>	
MOB25 - 4x10 GB/S COHERENT WDM-PON SYSTEM OVER 110 KM OF SINGLE MODE FIBRE AND WITH 55 DB ODN POWER BUDGET	53
<i>E. Ciaramella ; M. Rannello ; F. Bottoni ; M. Valvo ; M. Artiglia ; R. Corsini ; M. Presi</i>	
MOB31 - PROMISE OF HYBRID PLASMONICS FOR OPTICAL INTERCONNECTS	57
<i>Lech Wosinski ; Xu Sun ; Lars Thylén</i>	
MOB32 - COUNTER DIRECTION JAMMING METHOD FOR EAVESDROPPING PREVENTION IN DATA CENTER INTERCONNECTS	58
<i>David Dahan ; Uri Mahlab</i>	
MOB33 - OPTICAL INTERCONNECT AND MEMORY TECHNOLOGIES FOR NEXT GENERATION COMPUTING	62
<i>Nikos Pleros ; Stelios Pitris ; Christos Vagionas ; Pavlos Maniotis ; Theoni Alexoudi ; Amalia Miliou ; George T. Kanellos</i>	
MOB34 - OPTICAL MODE DEMULTIPLEXING FOR DATA COMMUNICATION NETWORKS	66
<i>Paolo Martelli ; Pierpaolo Boffi ; Annalaura Fasiello ; Mario Martinelli</i>	
MOB41 - PHOTOVOLTAICS FROM FIRST PRINCIPLES	70
<i>Alexander Quandt ; Robert Warmbier</i>	

MOB43 - PHOTOVOLTAIC CELLS BASED ON ORGANIC COMPOSITES	74
<i>Monika Pokladko-Kowar ; Andrzej Danel</i>	
MOB44 - OPTICAL OPTIMIZATION OF ORGANIC SOLAR CELLS BASED ON AZAHETEROCYCLIC GROUP	78
<i>Ewa Gondek</i>	
MOB45 - CONDUCTIVE POLYMER NANOCOMPOSITES FOR TRANSPARENT CIRCUITS AND THIN FILMS	82
<i>Charles Tematio ; Narcis Fosso ; Jane Krähenbühl ; Silvia Schintke</i>	
MOB51 - MICROWAVE PHOTONIC PROCESSING OF HIGH-SPEED MICROWAVE SIGNALS	87
<i>R. A. Minasian ; X. Yi ; L. Li</i>	
MOB52 - MULTI-CAVITY MICROWAVE PHOTONICS DEVICES BUILT UPON MULTICORE FIBRES	91
<i>Ivana Gasulla ; David Barrera ; Javier Hervás ; Sergi García ; Salvador Sales</i>	
MOB53 - HOW ELECTRICAL MODELLING OF SEMICONDUCTOR LASERS CAN HELP TO ANALYSE COMPLEX PHOTONIC SYSTEMS	95
<i>Anne-Laure Billabert ; Salim Faci ; Wosen Eshetu Kassa ; Ali Kabalan ; Yannick Paugam ; Catherine Algani</i>	
MOB54 - OPTOELECTRONIC OSCILLATOR BASED ON CLASS AB PHOTONIC LINK	99
<i>G. Charalambous ; G. K. M. Hasanuzzaman ; A. Perentos ; S. Iezekiel</i>	
MOB55 - REAL-TIME MICROWAVE PHOTONIC TECHNIQUE FOR LOW-COHERENCE INTERFEROMETRY APPLICATIONS	102
<i>J. Benítez ; M. Bolea ; J. Mora ; J. Capmany</i>	
MOB61 - RECENT ADVANCES IN THE DEVELOPMENT OF HIGH PERFORMANCE HOLLOW-CORE PHOTONIC BANDGAP FIBRES	106
<i>Yong Chen</i>	
MOB62 - EXPLORING A NEW TRANSMISSION WINDOW FOR TELECOMMUNICATIONS IN THE 2 μM WAVEBAND	107
<i>N. Kavanagh ; M. Sadiq ; K. Shortiss ; H. Zhang ; K. Thomas ; A. Gocalinska ; Y. Zhao ; E. Pelucchi ; P. O'Brien ; F. H. Peters ; B. Corbett ; F. C. Garcia Gunning</i>	
MOB64 - UNDERSTANDING THE INFLUENCE OF THE STRUCTURED CLADDING ON THE REFLECTIVITY OF FEMTOSECOND LASER WRITTEN GRATINGS IN PHOTONIC CRYSTAL FIBERS	111
<i>Tigran Baghdasaryan ; Thomas Geernaert ; Hugo Thienpont ; Francis Berghmans</i>	
MOB65 - COUPLING BETWEEN FANO AND BRAGG BANDS IN PHOTONIC BAND STRUCTURE OF TWO-DIMENSIONAL METALLIC PHOTONIC STRUCTURES	116
<i>Peter Markoš ; Vladimir Kuzmiak</i>	
MOC11 - SPACE DIVISION MULTIPLEXING (SDM) TRANSMISSION AND RELATED TECHNOLOGIES	120
<i>Naoya Wada ; Benjamin J. Puttnam ; Ruben. S. Luis ; Jun Sakaguchi ; Werner Klaus ; José Manuel D. Mendinueta ; Yoshinari Awaji</i>	
MOC12 - ULTRA-DENSE SPACE DIVISION MULTIPLEXING TECHNOLOGIES TOWARDS MULTI-PETA BIT/S OPTICAL TRANSMISSION	124
<i>Masatoshi Suzuki ; Daiki Soma ; Koji Igarashi ; Yuta Wakayama ; Koki Takeshima ; Yu Kawaguchi ; Noboru Yoshikane ; Takehiro Tsuritani ; Itsuro Morita</i>	
MOC13 - SPATIAL MODES-BASED PHYSICAL-LAYER SECURITY	128
<i>Ivan B. Djordjevic ; Xiaole Sun</i>	
MOC14 - TOWARDS MULTIDIMENSIONAL MULTIPLEXING IN MULTICORE FIBER OPTICAL DATA LINKS	133
<i>Roberto Llorente ; Andrés Macho ; David Garcia-Rodriguez ; Airat Zainullin ; Maria Morant ; Juan Luis Corral</i>	
MOC21 - HIGH-AGGREGATE-CAPACITY GUIDED-WAVE VISIBLE LIGHT COMMUNICATION LINKS	137
<i>N. Bamiedakis ; X. Li ; R. V. Pentty ; I. H. White</i>	
MOC22 - NEW TYPE OF VLC COMMUNICATION TRANSMITTER BASED ON OPTICAL FIBRES	141
<i>Jan Latal ; Jan Vitasek ; Lukas Hajek ; Ales Vanderka ; Ondrej Zboril ; Dusan Pudis ; Petr Koudelka ; Vladimir Vasinek</i>	
MOC23 - NON-HERMITIAN SYMMETRY OFDM FOR INDOOR SPACE DIVISION MULTIPLEXING VISIBLE LIGHT COMMUNICATIONS	145
<i>Wen-De Zhong ; Chen Chen ; Dehao Wu</i>	
MOC24 - ADAPTIVE RECEIVER FOR VISIBLE LIGHT COMMUNICATION SYSTEM	149
<i>Aubida A. Al-Hameed ; Ahmed Taha Hussein ; Mohammed T. Alresheedi ; Jaafar M. H. Elmirghani</i>	
MOC25 - HYBRID DIFFUSE IR TRANSMITTER SUPPORTING VLC SYSTEMS WITH IMAGING RECEIVERS	155
<i>Mohammed T. Alresheedi ; Ahmed Taha Hussein ; Jaafar M. H. Elmirghani</i>	

MOC31 - SINGLE MODE OPTICAL INTERCONNECTS FOR FUTURE DATA CENTERS	161
<i>Konstantinos Vyrsokinos ; M. Moralis-Pegios ; C. Vagionas ; A. Brimont ; A. Zanzi ; P. Sanchis ; J. Marti ; J. Kraft ; K. Rohrer ; S. Dorrestein ; M. Bogdan ; N. Pleros</i>	
MOC32 - SILICON PHOTONICS FOR SWITCHING IN NEXT GENERATION DATA CENTERS	165
<i>Lorenzo Pavesi</i>	
MOC33 - LOW POWER CONSUMPTION RECEIVER ON SILICON	166
<i>L. Virot ; D. Marris-Morini ; D. Benedikovic ; C. Alonso-Ramos ; J-M. Hartmann ; E. Cassan ; P. Crozat ; X. Le Roux ; C. Baudot ; F. Boeuf ; J-M. Fédéli ; L. Vivien</i>	
MOC34 - MACHINE LEARNING BASED ADAPTIVE FLOW CLASSIFICATION FOR OPTICALLY INTERCONNECTED DATA CENTERS	167
<i>Nicolaas Viljoen ; Houman Rastegarfar ; Mingwei Yang ; John Wissinger ; Madeleine Glick</i>	
MOC41 - DILUTE III-PBI AND III-SBBI FOR IR APPLICATIONS	171
<i>Shumin Wang</i>	
MOC42 - ELECTROCHEMICAL OPTICAL ACTUATORS: CONTROLLING THE LIGHT THROUGH IONS	174
<i>F. Morichetti ; S. Zannotto ; A. Blancato ; F. Berkemeier ; M. Muñoz Castro ; A. Buchheit ; H-D. Wiemhöfer ; G. Schmitz ; C. Klitis ; M. Sorel ; A. Melloni</i>	
MOC43 - METHODS OF CREATION AND OPTIMIZATION OF ANISOTROPIC LIQUID-CRYSTAL PHOTONIC STRUCTURES	178
<i>I. A. Goncharenko ; O. S. Kabanova ; E. A. Melnikova ; O. G. Romanov ; I. I. Rushnova ; A. L. Tolstik</i>	
MOC44 - OPTIMIZING THE LINEAR RANGE OF FET-BASED THZ DETECTORS	183
<i>F. Bigourdan ; M. R. Razafindrakoto ; D. Felbacq</i>	
MOC45 - CHARGE-CARRIER/EXCITON TRANSFER BETWEEN TWO QUASI-ZERO-DIMENSIONAL NANOSTRUCTURES	187
<i>Karel Král ; Miroslav Menšík</i>	
MOC51 - TIMING JITTER AND REPETITION RATE CONTROL OF A PASSIVELY MODE-LOCKED SEMICONDUCTOR LASER BY DUAL OPTICAL FEEDBACK	191
<i>Oleg Nikiforov ; Lina Jaurigue ; Lukas Drzewietzki ; Kathy Lüdge ; Stefan Breuer</i>	
MOC52 - EVOLUTION OF VERY SMALL LASERS	195
<i>Yong-Hee Lee ; Hoon Jang</i>	
MOC53 - HIGH SPEED MODULATION OF INP MEMBRANE DFB LASER DIODES	197
<i>G. Morthier ; A. Abbasi ; M. Shahin ; J. Verbist ; X. Yin ; J. Bauwelinck ; G. Roelkens</i>	
MOC54 - DILUTE BISMIDE ALLOYS GROWN ON GAAS AND INP SUBSTRATES FOR IMPROVED NEAR- AND MID-INFRARED SEMICONDUCTOR LASERS	201
<i>Christopher A. Broderick ; Wanshu Xiong ; Stephen J. Sweeney ; Eoin P. O'Reilly ; Judy M. Rorison</i>	
MOC55 - OPTICAL INJECTION IN SEMICONDUCTOR LASERS: PHYSICS AND APPLICATIONS	205
<i>A. Bogris ; D. Syvridis ; A. Fragkos ; T. Nikas ; H. Simos ; W. Elsässer</i>	
MOC61 - POLARISATION SINGULARITIES IN PHOTONIC CRYSTAL WAVEGUIDES: HOW PHOTONIC WHEELS STOP TURNING WHEN LIGHT SLOWS DOWN	209
<i>D. M. Beggs ; B. Lang ; A. B. Young ; R. Oulton</i>	
MOC62 - SLOW LIGHT ENABLED WAVELENGTH DEMULTIPLEXING	213
<i>Z. Hayran ; M. Turdjev ; M. Botey ; R. Herrero ; K. Staliunas ; H. Kurt</i>	
MOC63 - ANALYSIS OF THE BROWNIAN MOTION OF SINGLY TRAPPED SPHERES IN HOLLOW PHOTONIC CRYSTAL CAVITIES	217
<i>Mario Tonin ; Flavio Mor ; Sylvia Jeney ; László Forró ; Romuald Houdré</i>	
MOC64 - SUPERCONDUCTING PHOTONIC CRYSTALS WITH DEFECT STRUCTURE	219
<i>Igor Lyubchanskii ; Yuliya Dadoenkova ; Nataliya Dadoenkova ; Andrei Zabolotin ; Maciej Krawczyk</i>	
MOC65 - VANISHING GAPS IN PHOTONIC CRYSTALS AND OTHER PERIODIC POTENTIALS	223
<i>S. Caffrey ; G. V. Morozov ; D. Macbeath ; D. W. L. Sprung</i>	
MOC66 - POLARIZATION INDEPENDENT FOCUSING OF LIGHT BY GRADUALLY MODULATED ANNULAR PHOTONIC STRUCTURE	227
<i>Buse Tellioglu ; Emre Bor ; Mirbek Turdjev ; Hamza Kurt</i>	
MOD11 - ON THE GROUP DELAY STATISTICS OF FEW-MODE FIBRES WITH INTERMEDIATE LINEAR MODE COUPLING	231
<i>Filipe M. Ferreira ; Naoise Mac Suibhne ; Christian S. Costa ; Mariia Sorokina ; Stylianos Sygletos ; Andrew Ellis</i>	
MOD12 - ACCURATE MODAL CHARACTERIZATION OF OPTICAL FIBERS USING ACOUSTO-OPTICS	236
<i>E. Alcusa-Sáez ; A. Díez ; M. V. Andrés</i>	

MOD13 - LONG PERIOD GRATINGS IN MULTICORE FIBERS: COMPONENTS FOR SPACE DIVISION MULTIPLEXING SYSTEMS.....	240
<i>Ana M. Rocha ; Telmo Almeida ; Margarida Facão ; Rogério N. Nogueira</i>	
MOD14 - THE ROLE OF DISTRIBUTED RAMAN AMPLIFICATION IN THE TIMES OF THE “CAPACITY CRUNCH”	244
<i>Juan Diego Ania-Castañón ; P. Rosa ; G. Rizzelli ; F. Gallazzi ; J. Nuño ; P. Corredera</i>	
MOD15 - HIGHER ORDER MODE OPTICAL FIBER RAMAN AMPLIFIERS	248
<i>Karsten Rottwitt ; Søren Michael Mørk Friis ; Mario A. Usuga Castaneda ; Erik N. Christensen ; Jacob Gade Kofoed</i>	
MOD21 - COGNITIVE OPTICAL WIRELESS NETWORK	252
<i>Vincent W. S. Chan</i>	
MOD22 - CONTINUOUS TRACKING IN FREE SPACE OPTICAL BALLOON MESH NETWORKS.....	256
<i>Muhammad B. Awan ; Seshadri Mohan</i>	
MOD23 - SYNCHRONIZATION AND CHANNEL ESTIMATION FOR OPTICAL BLOCK-TRANSMISSION SYSTEMS WITH IM/DD	260
<i>Mike Wolf ; Sher Ali Cheema ; Martin Haardt</i>	
MOD24 - PERFORMANCE INVESTIGATION OF OCT PRECODING FOR MIMO-OFDM BASED INDOOR VISIBLE LIGHT COMMUNICATIONS	265
<i>Yang Hong ; Lian-Kuan Chen</i>	
MOD25 - REDUCTION OF INTER-CELL INTERFERENCE IN ASYNCHRONOUS MULTI-CELLULAR VLC BY USING OFDMA-BASED CELL PARTITIONING.....	269
<i>Sun-Young Jung ; Do-Hoon Kwon ; Se-Hoon Yang ; Sang-Kook Han</i>	
MOD31 - PHOTONICS-BASED TRANSCEIVERS FOR FIBER-WIRELESS NETWORKS	273
<i>Paolo Ghelfi ; Francesco Laghezza ; Filippo Scotti ; Giovanni Serafino ; Claudio Porzi ; Antonella Bogoni</i>	
MOD32 - THE NEW FLEXIBLE MOBILE FRONTHAUL: DIGITAL OR ANALOG, OR BOTH?	277
<i>Nathan J. Gomes ; Philippos Assimakopoulos ; Mohamed Kenan Al-Hares ; Usman Habib ; Shabnam Noor</i>	
MOD33 - 5G RADIO OVER FIBER FOR SMALL-CELLS.....	281
<i>Filippo Ponzini ; Luca Giorgi</i>	
MOD34 - THE EFFECT OF DIFFERENT QUEUING REGIMES ON A SWITCHED ETHERNET FRONTHAUL.....	282
<i>Mohamad Kenan Al-Hares ; Philippos Assimakopoulos ; Simon Hill ; Nathan J. Gomes</i>	
MOD41 - OPTICAL SENSING FROM PLASMONIC METAMATERIALS.....	286
<i>Ijeoma Mbonson ; Sean Tabor ; Scott G. McMeekin ; Basudev Lahiri ; Richard M. De La Rue ; Nigel P. Johnson</i>	
MOD42 - NEW MICROPHOTONIC RESONANT DEVICES FOR LABEL-FREE BIOSENSING	289
<i>Caterina Ciminelli ; Francesco Dell’Olio ; Donato Conteduca ; Filomena Innone ; Teresa Tatoli ; Mario N. Armenise</i>	
MOD43 - TECHNOLOGY OF HYBRID PLASMONIC DEVICES FOR OPTICAL BIO-SENSING	293
<i>Lech Wosinski ; Xu Sun ; Lars Thylén</i>	
MOD44 - NONLINEAR OPTICAL EFFECTS USED FOR INVESTIGATIONS ON BIOLOGICAL SAMPLES AT MICRO AND NANOSCALE	295
<i>George A. Stanciu ; Denis E. Tranca ; Radu Hristu ; Stefan G. Stanciu ; Catalin Stoichita ; Antonela Toma</i>	
MOD45 - INFLUENCE OF LASER BEAM QUALITY ON MODAL SELECTION IN TAPERED OPTICAL FIBERS FOR MULTIPOINT OPTOGENETIC CONTROL OF NEURAL ACTIVITY	298
<i>Andrea Della Patria ; Marco Pisanello ; Leonardo Sileo ; Massimo De Vittorio ; Ferruccio Pisanello</i>	
MOD51 - MONOLITHIC HIGH CONTRAST GRATING VCSELS: CONCEPT AND PROSPECTS.....	302
<i>M. Gebiski ; M. Marciniak ; M. Dems ; J. A. Lott ; T. Czystanowski</i>	
MOD52 - PERFORMANCE CHARACTERISTICS OF GASB-BASED TJ-VCSELS WITH EMISSION WAVELENGTH ABOVE 2.6 μM	303
<i>Lukasz Piskorski ; Jaroslaw Walczak ; Magdalena Marciniak ; Piotr Beling ; Maciej Dems ; Włodzimierz Nakwaski</i>	
MOD53 - SINGLE-MODE 1.5-μM VCSELS WITH SMALL-SIGNAL BANDWIDTH BEYOND 20 GHZ	307
<i>Silvia Spiga ; Alexander Andrejew ; Gerhard Boeh M ; Markus-Christian Amann</i>	
MOD54 - ELECTRO-OPTICAL MODULATION PROCESSES IN SI-MOS LEDS OPERATING IN THE AVALANCHE LIGHT EMISSION MODE	311
<i>Kaikai Xu</i>	
MOD55 - CHARACTERIZATION AND EQUALIZATION OF NONLINEARITIES IN DIRECTLY MODULATED RESONANT CAVITY LIGHT-EMITTING DIODES	312
<i>Manuel Schüppert ; Christian-Alexander Bunge</i>	

MOD61 - REPLACEMENT OF THE CONTROLLER AREA NETWORK (CAN) PROTOCOL FOR FUTURE AUTOMOTIVE BUS SYSTEM SOLUTIONS BY SUBSTITUTION VIA OPTICAL NETWORKS.....	316
<i>Daniel Kraus ; Erich Leitgeb ; Thomas Plank ; Markus Löschnigg</i>	
MOD62 - OPTICAL BACKHAUL NETWORK PLANNING FOR DSRC-BASED PUBLIC INTELLIGENT TRANSPORTATION SYSTEM: A CASE STUDY.....	324
<i>E. Grigoreva ; C. Mas Machuca ; W. Kellerer</i>	
MOD63 - TIP TIMING MEASUREMENTS FOR STRUCTURAL HEALTH MONITORING IN THE FIRST STAGE OF THE COMPRESSOR OF AN AIRCRAFT ENGINE	328
<i>Iker García ; Radoslaw Przysowa ; Joseba Zubia ; Joel Villatoro ; Javier Mateo ; Carmen Vázquez</i>	
MOD64 - RESEARCH OF OPPORTUNITIES OF SHORT-RANGE RADAR TO PREVENT FLIGHT ACCIDENTS	332
<i>Andrey Ananenkov ; Yuri Likharev ; Vladimir Rastorguev ; Pavel Sokolov</i>	
MOD65 - EXPERIMENTAL CHARACTERIZATION OF TRANSMISSION PROPERTIES IN MULTI-CORE PLASTIC OPTICAL FIBERS	337
<i>Alicia López ; Sergio Ramón ; Manuel Chueca ; M. Ángeles Losada ; Frank A. Domínguez-Chapman ; Javier Mateo</i>	
TUA11 - MULTI-DIMENSIONAL DEMAPPERS FOR OPTICAL FIBER SYSTEMS WITH SOFT-DECISION FORWARD ERROR CORRECTION	341
<i>Tobias Fehenberger ; Norbert Hanik</i>	
TUA12 - LAYERED LDPC DECODING FOR TURBO-DIFFERENTIAL DECODING IN PRESENCE OF CYCLE SLIPS IN OPTICAL COMMUNICATIONS.....	345
<i>Christian Cabirol ; Wolfgang Sauer-Greff ; Ralph Urbansky</i>	
TUA13 - HAMMERSTEIN-BASED EQUALIZER FOR NONLINEAR COMPENSATION IN COHERENT OFDM LONG-REACH PONS	349
<i>Jose Torres-Zugaide ; Ivan Aldaya ; G. Campuzano ; Gerardo Castanon</i>	
TUA14 - MULTIDIMENSIONAL OFDM FOR PROGRAMMABLE OPTICAL TRANSCEIVERS.....	352
<i>Josep M. Fabrega ; Michela Svaluto Moreolo</i>	
TUA15 - PHASE NOISE IMPACT ON DIRECTLY DETECTED OPTICAL OFDM TRANSMISSION IN UNCOMPENSATED LINKS	356
<i>Silvio Mandelli ; Alberto Gatto ; Maurizio Magarini ; Pierpaolo Boffi ; Paolo Martelli ; Simone Pecorino ; Arnaldo Spalvieri</i>	
TUA16 - BIT LOADING-BASED IRREGULAR LDPC CODED-MODULATION FOR HIGH-SPEED OPTICAL COMMUNICATIONS.....	360
<i>Ding Zou ; Ivan B. Djordjevic</i>	
TUA21 - APPROACHING TERABIT OPTICAL TRANSMISSION OVER STRONG ATMOSPHERIC TURBULENCE CHANNELS.....	364
<i>Zhen Qu ; Ivan B. Djordjevic</i>	
TUA22 - DESIGN OF HIGH SPEED FREE SPACE OPTICAL CHANNELS	369
<i>Milorad Cvijetic</i>	
TUA23 - MODERATE-TO-STRONG TURBULENCE GENERATION IN A LABORATORY INDOOR FREE SPACE OPTICS LINK AND ERROR MITIGATION VIA RAPTORQ CODES.....	373
<i>Riccardo Pernice ; Andrea Andò ; Antonino Parisi ; Alfonso C. Cino ; Alessandro C. Busacca</i>	
TUA24 - PERFORMANCE ANALYSIS OF A HYBRID QAM-MPPM TECHNIQUE UNDER GAMMA-GAMMA TURBULENT CHANNELS.....	377
<i>Haitham S. Khallaf ; Abdallah S. Ghazy ; Hossam M. H. Shalaby ; Seiichi Sampei</i>	
TUA25 - PERFORMANCE ANALYSIS OF SIM-DPSK FSO SYSTEM OVER LOGNORMAL FADING WITH POINTING ERRORS.....	381
<i>T. Ismail ; E. Leitgeb</i>	
TUA31 - OPTICAL LAYER-DRIVEN NETWORK RESTORATION AND REDESIGN FOR IMPROVED FAST REROUTE RELIABILITY	385
<i>Zhen Lu ; Yamini Jayabal ; Miguel Razo ; Marco Tacca ; Andrea Fumagalli ; Gabriele Maria Galimberti ; Giovanni Martinelli ; George Swallow</i>	
TUA32 - STATE-DEPENDENT CONNECTION ADMISSION CONTROL AND ROUTING AND SPECTRUM ASSIGNMENT IN MULTIRATE FLEX-GRID OPTICAL NETWORKS	389
<i>Ronald Romero Reyes ; Thomas Bauschert</i>	
TUA33 - SPECTRALLY EFFICIENT OPERATION OF MIXED FIXED/FLEXIBLE-GRID OPTICAL NETWORKS WITH SUB-BAND VIRTUAL CONCATENATION.....	393
<i>Ya Zhang ; Longfei Li ; Yongcheng Li ; Sanjay K. Bose ; Gangxiang Shen</i>	
TUA34 - MODULATION FORMAT-AWARE RESTORATION AND RE-OPTIMIZATION IN FLEXGRID OPTICAL NETWORKS.....	397
<i>Ll. Gifre ; M. Ruiz ; L. Velasco</i>	

TUA35 - INDIRECT CROSSTALK-AWARE ROUTING AND WAVELENGTH ASSIGNMENT IN TRANSPARENT OPTICAL NETWORKS WITH THE USE OF GENETIC ALGORITHMS.....	401
<i>Demetris Monoyios ; Konstantinos Manousakis ; Chrysovalanto Christodoulou ; Antonis Hadjiantonis ; Kyriakos Vlachos ; Georgios Ellinas</i>	
TUA41 - SURFACE ENHANCED RAMAN SCATTERING IN SURGERY AND FORENSICS	405
<i>Catalin Micsa ; Constantin Rizea ; Madalin Ion Rusu ; Nicolae Dan Becherescu-Barbu ; Raluca Munteanu ; Mircea Virgil Udrea ; Bogdan Chiricuta ; Anca Parau ; Alain Tonetto ; Roger Notonier ; Ioan Alin Birtoiu ; Cristiana-Eugenia-Ana Grigorescu</i>	
TUA42 - PULSE AND MULTIFREQUENCY NEAR-FIELD SUBSURFACE DIAGNOSTICS	409
<i>Konstantin P. Gaikovich</i>	
TUA43 - OPTICAL SINGLE PIXEL DETECTION FOR COMPRESSIVE SENSING WITH UNITARY CIRCULANT MATRICES	413
<i>David Pastor-Calle ; Anna Pastuszczyk ; Michal Mikołajczyk ; Rafal Kotynski</i>	
TUA44 - DESIGN OF SILICON RING RESONATORS FOR CO₂ DETECTION	417
<i>Yaping Zhang ; Siyu Zhao ; Beinu Lu</i>	
TUA45 - ULTRASENSITIVE SENSORS BASED ON SPECIALTY OPTICAL FIBRES.....	420
<i>J. Villatoro ; J. Zubia</i>	
TUA46 - MODIFIED NOISELET TRANSFORM AND ITS APPLICATION TO COMPRESSIVE SENSING WITH OPTICAL SINGLE-PIXEL DETECTORS.....	421
<i>Anna Pastuszczyk ; Bartłomiej Szczygiel ; Michal Mikołajczyk ; Rafal Kotynski</i>	
TUA51 - IMPROVING SOA DIRECT MODULATION CAPABILITY WITH OPTICAL FILTERING.....	425
<i>Zoe V. Rizou ; Kyriakos E. Zoiros ; Pascal Morel</i>	
TUA52 - 40 GBD D(Q)PSK AND OOK AMPLIFICATION USING O-BAND QUANTUM-DOT SEMICONDUCTOR OPTICAL AMPLIFIERS	429
<i>H. Schmeckebier ; A. Zeghuzi ; D. Arsenijevic ; M. Stubenrauch ; C. Meuer ; C. Schubert ; C. A. Bunge ; D. Bimberg</i>	
TUA53 - ALL-OPTICAL MEMORY BASED ON QUANTUM DOT SEMICONDUCTOR OPTICAL AMPLIFIERS (QD-SOAS) FOR ADVANCED MODULATION FORMATS	430
<i>Y. Ben Ezra ; B. I. Lembrikov</i>	
TUA54 - STABILIZATION OF SEMICONDUCTOR AMPLIFIERS WITH LARGE LINEWIDTH ENHANCEMENT FACTORS	433
<i>S. Kumar ; M. Botey ; R. Herrero ; K. Staliunas</i>	
TUA61 - ANALYSIS OF PLANNING CONSTRAINTS FOR WIRELESS ACCESS IN VEHICULAR ENVIRONMENTS WITH RESPECT TO DIFFERENT MOBILITY AND PROPAGATION MODELS.....	437
<i>Kira Kastell</i>	
TUA62 - RADIO-OVER-FIBRE BASED HIGH-SPEED MILLIMETRE-WAVE BACKHAUL SYSTEM FOR HIGH-SPEED TRAINS.....	441
<i>Tetsuya Kawanishi ; Atsushi Kanno ; Pham Tien Dat ; Naokatsu Yamamoto</i>	
TUA63 - COORDINATION AND AGREEMENT AMONG TRAFFIC SIGNAL CONTROLLERS IN URBAN AREAS	445
<i>Maria-Dolores Cano ; Ramon Sanchez-Iborra ; Felipe Garcia-Sanchez ; Antonio-Javier Garcia-Sanchez ; Joan Garcia-Haro</i>	
TUA64 - ON-BOARD COMPUTER NETWORK FOR INFORMATION SUPPORT OF UNMANNED MOBILE VEHICLES CONTROL SYSTEMS	449
<i>S. M. Sokolov ; A. A. Boguslavsky</i>	
TUA65 - ACCESS AND RESOURCE RESERVATION IN VEHICULAR VISIBLE LIGHT COMMUNICATION NETWORKS	454
<i>Mouna Garai ; Maha Sliti ; Noureddine Boudriga</i>	
TUA71 - NUMERICAL SIMULATION AND ANALYSIS OF SINGLE SECTION QUANTUM DOT LASERS FOR OPTICAL COMB GENERATION.....	460
<i>Mariangela Gioannini ; Paolo Bardella ; Lorenzo Columbo ; Ivo Montrosset</i>	
TUA72 - INVESTIGATION OF NOVEL MATERIALS FOR FUTURE COMMUNICATION NEEDS: QUANTUM DOTS AND HIGHLY-MISMATCHED ALLOYS	461
<i>J. M. Rorison ; C. Broderick ; W. Xiong ; Q. Wang</i>	
TUA73 - PULSE TRAIN STABILITY OF MULTI-GIGAHERTZ PASSIVELY MODE-LOCKED SEMICONDUCTOR LASERS.....	462
<i>Oleg Nikiforov ; Lina Jaurigue ; Christoph Weber ; Lukas Drzewietzki ; Kathy Lüdge ; Stefan Breuer</i>	
TUA74 - ON-CHIP MULTI-WAVELENGTH LASER SOURCES FABRICATED USING GENERIC PHOTONIC INTEGRATION TECHNOLOGY	464
<i>S. Latkowski ; K. A. Williams ; E. A. J. M. Bente</i>	

TUA75 - TERAHERTZ WIRELESS COMMUNICATIONS USING PHOTONIC AND ELECTRONIC DEVICES.....	467
<i>G. Ducournau ; P. Szriftgiser ; F. Pavanello ; P. Latzel ; M. Zaknoute ; E. Peytavit ; D. Bacquet ; J. -F. Lampin</i>	
TUA76 - NANOSECONDS WAVELENGTH AND SPACE OPTICAL CROSS-CONNECT SWITCHES FOR HIGH PERFORMANCE OPTICAL NETWORKS	468
<i>Nicola Calabretta ; Wang Miao ; Kevin Williams</i>	
TUB11 - BRIGHT AND DARK VECTOR ROGUE WAVES.....	472
<i>Sergey V. Sergeyev ; Chengbo Mou ; Stanislav Kolpakov ; Vladimir Kalashnikov</i>	
TUB12 - TEMPORAL SCALING OF OPTICAL ROGUE WAVES IN UNIDIRECTIONAL RING FIBER LASER.....	476
<i>Hani Kbashi ; Stanislav A. Kolpakov ; Sergey V. Sergeyev</i>	
TUB13 - IN-CAVITY PULSE SHAPING BY SPECTRAL SCULPTURING IN MODE-LOCKED FIBRE LASERS	480
<i>Sonia Boscolo ; Junsong Peng ; Christophe Finot</i>	
TUB21 - BER ANALYSIS OF WIMAX ON FSO	484
<i>Goran T. Djordjevic ; Ivan B. Djordjevic</i>	
TUB22 - RECEIVER DESIGN FOR OPTICAL INTER-SATELLITE LINKS BASED ON DIGITAL SIGNAL PROCESSING.....	490
<i>Werner Rosenkranz ; Semjon Schaefer</i>	
TUB23 - LASER BASED UNDERWATER COMMUNICATION SYSTEMS	494
<i>Giovanni Giuliano ; Shaun Viola ; Scott Watson ; Leslie Laycock ; Duncan Rowe ; Anthony E. Kelly</i>	
TUB24 - THREE DIMENSIONAL MODULATION FOR IMPROVED TRANSMISSION CAPACITY IN WHITE LED BASED OPTICAL WIRELESS LINK.....	498
<i>Yong-Yuk Won ; Sang Min Yoon ; Dongsun Seo</i>	
TUB25 - EFFECTS OF CARBON DIOXIDE ON DIFFERENT PSK MODULATION FORMATS OF OPTICAL WIRELESS COMMUNICATIONS USING USRP	502
<i>Jan Vitasek ; Radek Martinek ; Ales Vanderka ; Lukas Hajek ; Jan Latal ; Zhenli Lu ; Bin Li</i>	
TUB31 - SCALABLE ELASTIC OPTICAL PATH NETWORKING MODELS	507
<i>Brigitte Jaumard ; Maryam Daryalal</i>	
TUB32 - MANAGEMENT OF RESOURCES UNDER PRIORITIES IN EON USING A MODIFIED RDM BASED ON THE SQUATTING-KICKING APPROACH.....	511
<i>Xavier Hesselbach ; Joana Dantas ; José Roberto Amazonas ; Juan-Felipe Botero ; Jose-Ramon Piney</i>	
TUB33 - IMPACT OF FIBER TYPE AND RAMAN PUMPING IN NYWDM FLEXIBLE-GRID ELASTIC OPTICAL NETWORKS	516
<i>Arsalan Ahmad ; Andrea Bianco ; Hussein Chouman ; Guido Marchetto ; Sarosh Tahir ; Vittorio Curri</i>	
TUB34 - ROUTING, CODE, MODULATION LEVEL AND SPECTRUM ASSIGNMENT (RCMLSA) ALGORITHM FOR ELASTIC OPTICAL NETWORKS.....	520
<i>Demicio Garrido ; Ariel Leiva ; Alejandra Beghelli ; Robert Ahumada ; Ricardo Olivares</i>	
TUB35 - PERFORMANCE EVALUATION OF PROGRAMMABLE FILTERLESS NETWORKS IMPLEMENTED BY OPTICAL WHITE BOXES.....	524
<i>Marija Furdek ; Ajmal Muhammad ; Georgios Zervas ; Christine Tremblay ; Lena Wosinska</i>	
TUB41 - GRAPHENE AND POLARISABLE NANOPARTICLES: LOOKING GOOD TOGETHER?	525
<i>M. I. Vasilevskiy ; Jaime E. Santos ; Rui M. Pereira ; Yu. V. Bludov ; F. Vaz ; N. M. R. Peres</i>	
TUB42 - GRAPHENE-BASED DEVICES: A PLATFORM FOR HIGH FREQUENCY APPLICATIONS?	529
<i>M. Grande ; G. V. Bianco ; M. A. Vincenti ; D. De Ceglia ; P. Capezzuto ; V. Petruzzelli ; M. Scalora ; G. Bruno ; A. D'Orazio</i>	
TUB43 - ADVANCED SPECTROSCOPIES OF GRAPHENE AND 2D MATERIALS	533
<i>Silvia Maria Pietralunga ; Cristian Manzoni ; Ettore Carpena ; Davide Bugini ; Stefano Dal Conte ; Hamoon Hedayat ; Giancarlo Soavi ; Mohammad J. Vahid ; Tersilla Virgili ; Maurizio Zani ; Claudia Dallera ; Roman Sordan ; Alberto Tagliaferri ; Giulio Cerullo</i>	
TUB44 - GRAPHENE FOR WHITE LIGHTING.....	537
<i>W. Strek ; R. Tomala ; L. Marciniak ; M. Lukaszewicz ; Y. Gerasymchuk ; A. Lukowiak ; D. Hreniak</i>	
TUB45 - SINGLE-WALLED CARBON NANOTUBES: STRUCTURAL AND OPTICAL PROPERTIES.....	538
<i>A. Zawadzka ; P. Plóciennik ; P. Szroeder ; A. Korcala ; B. Kulyk ; B. Sahraoui</i>	
TUB51 - SILICON PHOTONICS BASED ON GE/SIGE QUANTUM WELL STRUCTURES.....	541
<i>D. Marris-Morini ; V. Vakarin ; P. Chaisakul ; J. Frigerio ; M. Rahman ; J. M. Ramirez ; M-S. Rouifed ; D. Chrastina ; X. Le Roux ; G. Isella ; L. Vivien</i>	
TUB52 - PT-AXISYMMETRIC PHOTONIC NANOSTRUCTURES	544
<i>Waqas W. Ahmed ; Muriel Botey ; Ramon Herrero ; Kestutis Staliunas</i>	

TUB53 - LINEAR AND NON-LINEAR OPTICAL PROPERTIES OF PLASMONIC NANO-ANTENNAS	550
<i>J. Wang ; A-L. Baudrion ; A. Horrer ; G. L��v��que ; J. Butet ; A. Horneber ; M. Fleischer ; D. Zhang ; P-M. Adam</i>	
TUB54 - MINIATURE OPTICAL DELAY LINES AND BUFFERS	551
<i>Artemiy V. Dmitriev ; Nikita A. Toropov ; M. Sumetsky</i>	
TUB55 - ATOMIC SCALE PLASMONIC DEVICES	554
<i>Alexandros Emboras ; Bojun Cheng ; Ping Ma ; Christian Haffner ; Y. Salamin ; Claudia Hoessbacher ; Wolfgang Heni ; Yuriy Fedoryshyn ; Andreas Pedersen ; Mathieu Luisier ; Juerg Leuthold</i>	
TUB61 - HYBRID PHOTONIC CRYSTAL LASERS	558
<i>Alexandros A. Liles ; Andrei P. Bakoz ; Alfredo A. Gonzalez ; Tatiana Habruseva ; Saydulla Persheyev ; Guillaume Huyet ; Stephen P. Hegarty ; Liam O'Faolain</i>	
TUB62 - ALL PHOTONIC CRYSTAL ELECTRICALLY PUMPED GASB LASER DIODES EMITTING AT 2.4 ��M FOR GAS SENSING APPLICATIONS	562
<i>B. Adelin ; A. Monmayrant ; A. Lecestre ; P. Dubreuil ; Y. Rouillard ; M. Bahriz ; A. Vicet ; O. Gauthier-Lafaye</i>	
TUB63 - DETERMINISTICALLY PLACED QUANTUM DOTS FOR QUANTUM NANOPHOTONICS	565
<i>Ganapathi Subramania ; Arthur J. Fischer ; P. Duke Anderson ; Daniel D. Koleske</i>	
TUB64 - SPATIAL FILTERING BY AXISYMMETRIC PHOTONIC CRYSTALS	569
<i>K. Stali��nas ; D. Gailevicius ; V. Purlys ; L. Maigyte ; M. Peckus</i>	
TUB65 - MANIPULATION OF LIGHT USING SEMI-DIRAC DISPERSION IN LOW-SYMMETRIC PHOTONIC CRYSTALS	574
<i>Utku Gorkem Yasa ; Neslihan Eti ; Hamza Kurt</i>	
TUB66 - PHOTONIC CRYSTAL SUB-WAVELENGTH $\lambda/5$ FOCUSING LENS DESIGN USING OPTIMIZATION METHOD	578
<i>B��sra K����kates ; Mirbek Turd��ev ; Emre Bor ; Hamza Kurt</i>	
TUC11 - EFFICIENT BROADBAND PARAMETRIC CONVERSION: REACHING FOR THE MID IR	582
<i>Camille-Sophie Br��s ; Adrien Billat</i>	
TUC12 - THREE-PHOTON MICROSCOPY WITH A MONOLITHIC ALL-FIBER FORMAT LASER EMITTING AT 1650 NM	586
<i>P. Cadroas ; L. Kotov ; L. Abdeladim ; J. -T. Gomes ; M. Likhachev ; W. Supatto ; D. Lipatov ; M. Tang ; A. Hideur ; E. Beaurepaire ; S. F��vrier</i>	
TUC13 - THERMAL EFFECTS AND GAIN COMPETITION IN YB-DOPED LARGE MODE AREA FIBERS FOR HIGH-POWER APPLICATIONS	587
<i>Federica Poli ; Enrico Coscelli ; Lorenzo Rosa ; Annamaria Cucinotta ; Stefano Selleri</i>	
TUC14 - HIGH ENERGY SQUARE-WAVE GENERATION FROM AN ER:YB PASSIVE MODE-LOCKED FIBER RING LASER	591
<i>G. Semaan ; F. Ben Braham ; M. Salhi ; Y. Meng ; F. Bahloul ; F. Sanchez</i>	
TUC15 - SINGLE-FREQUENCY RADIATION FROM DBR FIBER LASER: NUMERICAL ANALYSIS BY THE METHOD OF SINGLE EXPRESSION	595
<i>Hovik Baghdasaryan ; Tamara Knyazyan ; Tamara Hovhannisyan ; Marian Marciniak</i>	
TUC16 - ULTRA-HIGH POWER NARROW BAND TUNING DBR LASERS FOR TELECOM APPLICATIONS	601
<i>Yaping Zhang</i>	
TUC21 - SOFTWARE DEFINED NETWORKING FOR HETEROGENEOUS ACCESS NETWORKS	604
<i>Matthew Robinson ; Milos Milosavljevic ; Pandelis Kourtessis ; Gary P. Stafford ; Malcolm J. Burrell ; John M. Senior</i>	
TUC22 - COMPARISON OF MULTI-OPERATOR PON TECHNOLOGIES BEYOND NG-PON2: A REAL GREENFIELD CASE-STUDY	608
<i>S. Medranda Posada ; G. Maier ; F. Giannone ; L. Valcarenghi ; A. Marotta ; C. Antonelli</i>	
TUC23 - EFFICIENT MOBILE BACKHAUL ARCHITECTURE OFFERING ULTRA-SHORT LATENCY FOR HANDOVERS	612
<i>Jiajia Chen ; Jun Li</i>	
TUC24 - ENABLING 5G WIRELESS ACCESS USING LI-FI TECHNOLOGY: AN OFDM BASED APPROACH	613
<i>Walid Abdallah ; Noureddine Boudriga</i>	
TUC25 - ENHANCED DC-BIASED OPTICAL OFDM FOR INTENSITY-MODULATED OPTICAL OFDM ACCESS SYSTEMS	619
<i>Ali W. Azim ; Yannis Le Guennec ; Ghislaine Maury</i>	
TUC26 - ALL-OPTICAL VIRTUAL PRIVATE NETWORK BASED ON MICROWAVE PHOTONIC BANDPASS FILTER IN OFDM-PON SYSTEM	623
<i>Chang-Hun Kim ; Sang-Min Jung ; Sang-Kook Han</i>	

TUC31 - TECHNICAL CHALLENGES AND DEPLOYMENT PERSPECTIVES OF SDN BASED ELASTIC OPTICAL NETWORKS	627
<i>José Roberto De Almeida Amazonas ; Germán Santos-Boada ; Sergio Ricciardi ; Josep Solé-Pareta</i>	
TUC32 - NEXT STEPS IN ELASTICITY: ENABLING SIGNAL OVERLAP IN OPTICAL NETWORKS	632
<i>Piero Castoldi ; Tommaso Foggi ; Francesco Paolucci ; Filippo Cugini</i>	
TUC33 - SUNSET: SUSTAINABLE NETWORK INFRASTRUCTURE ENABLING THE FUTURE DIGITAL SOCIETY	636
<i>Jose A. Lazaro ; Salvatore Spadaro ; Jordi Perello ; Joan Gene ; Jose A. Altabas ; A. Pagès ; Davide Careglio ; Pere Barlet-Ros ; Albert Cabellos ; Josep Sole-Pareta</i>	
TUC34 - PRONET: A PROGRAMMABLE OPTICAL NETWORK PROTOTYPE	642
<i>D. Hicks ; C. Malina-Maxwell ; M. Razo ; M. Tacca ; A. Fumagalli ; D. Nguyen</i>	
TUC35 - AN EMULATION ENVIRONMENT FOR SDN ENABLED FLEXIBLE IP/OPTICAL NETWORKS	646
<i>Aristotelis Kretsis ; Loris Corazza ; Kostas Christodouloupoulos ; Panagiotis Kokkinos ; Emmanouel Varvarigos</i>	
TUC41 - DARK-FIELD Z-SCAN IMAGING TECHNIQUE AND APPLICATION TO OPTICAL NONLINEAR REFRACTION MEASUREMENT	650
<i>Georges Boudebs ; Hongzhen Wang ; Christophe Cassagne ; Meharzia Chniti</i>	
TUC42 - TRANSVERSE CROSS-CORRELATION SCHEME FOR PULSE SHAPE MEASUREMENT IN RANDOM NONLINEAR CRYSTALS	654
<i>Crina Cojocaru ; Bingxia Wang ; Jose Trull</i>	
TUC43 - NONLINEAR SCATTERING OF LASER RADIATION BY HIGH-REFRACTIVE-INDEX NANOPARTICLES	657
<i>Daria A. Smirnova ; Alexander I. Smirnov</i>	
TUC45 - NONLINEAR OPTICAL PROPERTIES OF TRIS-(8-HYDROXYQUINOLINE)-ALUMINUM	660
<i>Beata Derkowska-Zielinska</i>	
TUC51 - SILICON PHOTONIC INTEGRATED CIRCUITS FOR OPTICAL COHERENCE TOMOGRAPHY	663
<i>W. Freude ; S. Schneider ; M. Lauermann ; P. -I. Dietrich ; C. Weimann ; C. Koos</i>	
TUC52 - SLOTTED SILICON PHOTONIC STRUCTURES FOR HYBRID ON-CHIP INTEGRATION	667
<i>Weiwei Zhang ; Samuel Serna ; Thi Hong Cam Hoang ; Xavier Le Roux ; Laurent Vivien ; Eric Cassan</i>	
TUC53 - HYBRID SILICON-FERROELECTRIC OXIDE PLATFORM FOR TUNABLE NANOPHOTONICS ON SILICON	670
<i>S. Cuffey ; P. Castera ; A. M. Gutierrez ; P. Rojo Romeo ; R. Orobitchouk ; B. Wague ; B. Vilquin ; P. Regreny ; A. Rosa ; T. Angelova ; A. Griol ; P. Sanchis ; G. Saint-Girons</i>	
TUC54 - STRAINED SILICON PHOTONICS: RECENT ADVANCES	674
<i>P. Damas ; X. Le-Roux ; M. Berciano ; G. Marcaud ; C. Alonso-Ramos ; D. Benedikovic ; D. Marris-Morini ; E. Cassan ; L. Vivien</i>	
TUC55 - TOPOLOGICAL OPTICAL WAVEGUIDING IN SOI STRUCTURES	675
<i>Imanol Andonegui ; A. Blanco-Redondo ; M. J. Collins ; G. Harari ; Y. Lumer ; M. C. Rechtsman ; B. J. Eggleton ; M. Segev ; Angel J. Garcia-Adeva</i>	
TUC61 - IMPRINTED POLYMERS AND PHOTONIC CRYSTALS FOR SENSING OF MOLECULES AND NANOPARTICLES	678
<i>S. Gam-Derouich ; C. Bourdillon ; Willy Daney De Marcillac ; L. Coolen ; A. Maître ; Claire Mangeney ; C. Schwob</i>	
TUC62 - FULL OPTICAL CONFINEMENT IN 1D MESOSCOPIC PHOTONIC CRYSTAL-BASED MICROCAVITIES: A PRELIMINARY EXPERIMENTAL DEMONSTRATION	682
<i>G. Magno ; A. Monmayrant ; M. Grande ; O. Gauthier-Lafaye ; G. Calò ; B. Dagens ; V. Petruzzelli</i>	
TUC63 - IMAGING LABEL-FREE BIOSENSOR FOR MULTIPLEXED PROTEIN DETECTION	686
<i>Sabrina Jahns ; Martina Gerken</i>	
TUC64 - EIGHT-BAND K P CALCULATIONS OF THE ELECTRONIC STATES IN INAS/GASB SUPERLATTICES	690
<i>Elzbieta Machowska-Podsiadlo ; Maciej Bugajski</i>	
TUC65 - SELF-PULSING AND PHONON LASING IN OPTOMECHANICAL CRYSTALS	694
<i>D. Navarro-Urrios ; N. E. Capuj ; J. Gomis-Bresco ; M. F. Colombano ; P. D. García ; M. Sledzinska ; F. Alzina ; A. Griol ; A. Martinez ; C. M. Sotomayor-Torres</i>	
TUC66 - T-SHAPE SLOTTED PHOTONIC CRYSTAL BASED SENSOR WITH HIGH SENSITIVITY	698
<i>Ceren Babayigit ; Mirbek Turduev ; Ibrahim H. Giden ; Emre Bor ; Hamza Kurt</i>	

TUD11 - COMPARISON OF LINEAR AND NONLINEAR EQUALIZATION FOR ULTRA-HIGH CAPACITY SPECTRAL SUPERCHANNELS	702
<i>Vassiliki Vgenopoulou ; M. Sezer Erkilinc ; Rachid Bouziane ; Alex Tolmachev ; Moshe Nazarathy ; Robert Kille ; Ioannis Tomkos</i>	
TUD12 - NETWORK SAVINGS ENABLED BY PROBABILISTIC SHAPING AND NONLINEAR COMPENSATION	711
<i>Camila A. S. Diniz ; Miquel Garrich Alabarc ; Darli A. A. Mello</i>	
TUD13 - PERTURBATIVE DISCRETE-TIME MULTIVARIATE FIBER CHANNEL MODEL WITH FINITE MEMORY	715
<i>Mariia Sorokina ; Stylianos Sygletos ; Sergei Turitsyn</i>	
TUD14 - COMPENSATION OF NONLINEAR DISTORTION THROUGH FREQUENCY SHIFT FREE MID-SPAN SPECTRAL INVERSION USING COUNTER-PROPAGATING DUAL PUMPED FWM IN FIBER	719
<i>Abhishek Anchal ; Pradeep Kumar ; Pascal Landais</i>	
TUD15 - EVALUATION OF THE IMPACT OF SPATIAL AND SPECTRAL GRANULARITIES ON THE PERFORMANCE OF SPATIAL SUPERCHANNEL SWITCHING SCHEMES	723
<i>Behnam Shariati ; Dimitrios Klonidis ; Jose M. Rivas-Moscoso ; Ioannis Tomkos</i>	
TUD16 - LINK OPTIMISATION FOR DWDM TRANSMISSION WITH AN OPTICAL PHASE CONJUGATION	727
<i>Pawel Rosa ; Giuseppe Rizzelli ; Juan Diego Ania-Castañón</i>	
TUD21 - DO “MASTER-SLAVE” CONFIGURATIONS MAKE SENSE FOR OPTICAL INTERCONNECT?.....	730
<i>S. Straullu ; M. S. Khaliq ; V. Curri ; S. Abrate</i>	
TUD22 - IMPACT OF DEMAND UNCERTAINTY MODELS ON FTTH NETWORK DESIGN.....	734
<i>Mateusz Zolkiewicz ; Mariusz Mycek</i>	
TUD23 - WAVELENGTH-AGNOSTIC WDM-PON SYSTEM	738
<i>C. Wagner ; M. Eiselt ; S. Zou ; M. Lawin ; B. Teipen ; K. Grobe ; J. J. Vegas Olmos ; I. Tafur Monroy</i>	
TUD24 - BER PERFORMANCE IMPROVEMENT IN FFH-OCMA NETWORKS WITH BPSK MODULATION FORMAT	742
<i>Anderson L. Sanches ; Thiago R. Raddo ; Jose V. Dos Reis ; Luiz H. Bonani ; Ben-Hur V. Borges</i>	
TUD25 - DESIGN OF FLEXIBLE UDWDM METRO-ACCESS NETWORK DEVICES ASSISTED BY HIGH RESOLUTION COMPLEX SPECTROSCOPY	746
<i>J. A. Altabas ; D. Izquierdo ; A. Pascual ; S. Sarmiento ; J. A. Lazaro ; I. Garces ; A. Villafranca</i>	
TUD26 - IN-SERVICE LINE MONITORING OF A COLOURLESS WAVELENGTH DIVISION MULTIPLEXED PASSIVE OPTICAL NETWORK.....	750
<i>F. Chiarello ; L. Palmieri ; P. Parolari ; M. Brunero ; P. Boffi ; A. Galtarossa ; M. Santagiustina</i>	
TUD27 - EXTERNALLY-SEEDED WDM PON FOR NEXT GENERATION MOBILE ACCESS BASED ON PULSE-WIDTH MODULATION.....	754
<i>P. Parolari ; A. Gatto ; L. Combi ; P. Boffi ; U. Spagnolini ; R. Brenot ; M. Martinelli</i>	
TUD31 - IMPACT OF TUNABILITY AND BLOCKING FABRIC ON OPTICAL SLOT SWITCHING RING PERFORMANCE.....	758
<i>Nihel Benzaoui ; Yvan Pointurier</i>	
TUD32 - INCORPORATING AN INDICATOR BASED ON MODULARITY TO IMPROVE ROUTING IN OPTICAL NETWORKS	762
<i>Carmelo J. A. Bastos-Filho ; Danilo R. B. Araújo ; Joaquim F. Martins-Filho</i>	
TUD33 - INFLUENCE OF THE SPATIAL SUPER CHANNEL GUARD-BAND WIDTH ON THE PERFORMANCE OF DYNAMIC FLEX-GRID/SDM OPTICAL CORE NETWORKS.....	766
<i>Rubén Rumipamba-Zambrano ; Jordi Perelló ; Albert Pagès ; Joan M. Gené ; Salvatore Spadaro</i>	
TUD34 - RECENT ADVANCES IN OPTICAL AND HYBRID PACKET SWITCHING	770
<i>Cédric Ware ; Wiem Samoud ; Philippe Gravey ; Mounia Lourdiane</i>	
TUD35 - PERFORMANCES OF ALL OPTICAL LOGICAL GATES FOR PACKET FORWARDING.....	774
<i>Rim Farhat ; Amel Farhat ; Mourad Menif</i>	
TUD36 - INVESTIGATION OF HYBRID OPTO-ELECTRONIC PACKET SWITCH CONNECTED TO SDM FIBERS CONSIDERING VARIOUS TRAFFIC DISTRIBUTIONS.....	778
<i>Wiem Samoud ; Cédric Ware ; Mounia Lourdiane</i>	
TUD41 - HYBRID METAL NANOSTRUCTURE ARRAYS FOR COLOUR PRINTING	782
<i>K. Wilson ; C. A. Marocico ; E. Pedreza ; C. Smith ; A. L. Bradley</i>	
TUD42 - SPONTANEOUS OXYGEN ISOTOPE EXCHANGE BETWEEN CARBON DIOXIDE AND OXYGEN CONTAINING MINERALS (DO THE MINERALS “BREATHE” CO₂?)	786
<i>Svatopluk Civiš ; Antonín Knížek ; Petr Kubelik ; Martin Ferus</i>	

TUD43 - SILVER NANOPARTICLES IN TITANIUM DIOXIDE HOST PLASMONIC ABSORBERS.....	790
<i>P. Nyga ; S. Chmiel ; M. Szczurek ; M. Liszewska ; M. Stefaniak ; J. Firak ; M. Michalska-Domanska ; J. Mierczyk ; M. Norek</i>	
TUD44 - LATTICE EFFECTS IN SECOND-HARMONIC GENERATION FROM METASURFACES	791
<i>R. Czaplicki ; A. Kiviniemi ; J. Laukkanen ; J. Lehtolahti ; M. Kuittinen ; M. Kauranen</i>	
TUD45 - SUBWAVELENGTH OPTICS WITH HYPERBOLIC METAMATERIALS: WAVEGUIDES, SCATTERING, AND OPTICAL TOPOLOGICAL TRANSITIONS	792
<i>Satoshi Ishii ; Viktoriia E. Babicheva ; Mikhail Y. Shalaginov ; Alexandra Boltasseva ; Alexander V. Kildishev ; Evgenii Narimanov</i>	
TUD51 - AN INTEGRATED PHOTONICS RESERVOIR COMPUTING APPROACH TO SIGNAL EQUALIZATION FOR TELECOMMUNICATIONS	796
<i>A. Katumba ; B. Schneider ; J. Dambre ; P. Bienstman</i>	
TUD52 - PROGRAMMABLE INTEGRATED PHOTONICS FOR SPACE DIVISION (DE)MULTIPLEXING	797
<i>Andrea Melloni</i>	
TUD53 - INFRARED EMITTING ERBIUM-DOPED QUINOLINES FOR SILICON ORGANIC HYBRID TECHNOLOGY	798
<i>Stefano Penna ; Silvia Di Bartolo ; Vincenzo Attanasio ; Leonardo Mattiello</i>	
TUD54 - ELECTRICAL SWITCHING IN HYBRID VO₂/SI PHOTONIC STRUCTURES	801
<i>L. D. Sánchez ; A. Rosa ; T. Angelova ; J. Hurtado ; A. Griol ; P. Sanchis ; M. Menghini ; P. Homm ; B. Van Bilzen ; J. -P. Locquet ; L. Zimmermann</i>	
TUD55 - INTEGRATED OPTICS ON SINGLE-CRYSTAL LITHIUM NIOBATE THIN FILM: SOME RECENT PROGRESS.....	805
<i>Lutong Cai ; Huangpu Han ; Shuang Li ; Hui Hu</i>	
TUD61 - SITE-CONTROLLED QUANTUM DOTS COUPLED TO PHOTONIC CRYSTAL CAVITIES AND WAVEGUIDES	809
<i>B. Rigal ; C. Jarlov ; A. Lyasota ; I. Kulkova ; B. Dwir ; A. Rudra ; E. Kapon</i>	
TUD62 - ENHANCED EMISSION NEAR AN EXCEPTIONAL POINT IN AN ASYMMETRIC MICROCAVITY	810
<i>Kyungwon An</i>	
TUD63 - RIGOROUS MODEL FOR THE DESIGN OF ULTRA-HIGH Q-FACTOR RESONANT CAVITIES.....	811
<i>Caterina Ciminelli ; Filomena Innone ; Giuseppe Brunetti ; Donato Conteduca ; Francesco Dell'Olio ; Teresa Tatoli ; Mario N. Armenise</i>	
TUD64 - OPTIMISING FIBRE-TIP MICROCAVITIES WITH GAUSSIAN-SHAPED MIRRORS FOR QUANTUM NETWORKS	815
<i>Nina Podoliak ; Hiroki Takahashi ; Matthias Keller ; Peter Horak</i>	
TUD65 - ULTRA-LONG PHOTON LIFETIME IN A SLOW-LIGHT MICROCAVITY	816
<i>V. Huet ; P. Guillemé ; M. Mortier ; Y. Dumeige ; P. Féron</i>	
TUP01 - ENERGY EFFICIENT IOT VIRTUALIZATION FRAMEWORK WITH PASSIVE OPTICAL ACCESS NETWORKS	817
<i>Zaineb T. Al-Azez ; Ahmed Q. Lawey ; Taisir E. H. El-Gorashi ; Jaafar M. H. Elmirghani</i>	
TUP02 - LAYERED PAM-DMT FOR NEXT GENERATION PASSIVE OPTICAL NETWORKS.....	821
<i>Mai A. F. Banawan ; Ziad A. El-Sahn ; Hossam M. H. Shalaby</i>	
TUP03 - FFT-BASED UNIVERSAL FILTERED MULTICARRIER TECHNOLOGY FOR LOW OVERHEAD AND AGILE DATACENTER INTERCONNECT	825
<i>Lu Zhang ; Shilin Xiao ; Meihua Bi ; Ling Liu ; Xinfei Chen</i>	
TUP04 - SCALABLE OCS-BASED INTRA/INTER DATA CENTER NETWORK WITH OPTICAL TOR SWITCHES	829
<i>Sohini Basu ; Conor McArdle ; Liam P. Barry</i>	
TUP05 - PRELIMINARY IDEA FOR A CONVERGED FIXED AND MOBILE NETWORK INFRASTRUCTURE WITH 5G USING RADIO-OVER-FIBER TECHNOLOGY AND AN OPTO-ELECTRONIC OSCILLATOR IN THE MILLIMETER-WAVE RANGE	833
<i>Mehmet Alp Ilgaz ; Bostjan Batagelj</i>	
TUP06 - A VESTIGIAL SIDEBAND MODULATION SCHEME IN RADIO OVER FIBER SYSTEM USING ELECTRO-OPTIC MODULATORS.....	837
<i>Hum Nath Parajuli ; Eszter Udvary</i>	
TUP07 - LMS-BASED DIGITAL PRE-EQUALIZER FOR COGNITIVE ROF SYSTEM.....	841
<i>Sarra Rebhi ; Rim Barrak ; Mourad Menif</i>	

TUP08 - OPTICAL-WIRELESS HYBRID VIRTUAL NETWORK EMBEDDING BASED ON LOCATION RECOMMENDATIONS	845
<i>Xiaoxue Gong ; Qihan Zhang ; Lei Guo</i>	
TUP09 - EXTENSION OF THE CONCEPT OF THE THIRD ORDER INTERCEPT POINT	849
<i>K. M. Osbáth ; J. Ladvánszky</i>	
TUP10 - RESERVE OUTPUT LINK AND FDL TOGETHER OR SEPARATELY IN OPTICAL BURST SWITCHING NETWORKS?.....	853
<i>Jikai Li</i>	
TUP11 - WIDEBAND IMPEDANCE MATCHING FOR VCSELS USED IN FREE-SPACE QUANTUM COMMUNICATION.....	857
<i>Balázs Matolcsy ; Attila Zólmoy ; Eszter Udvary</i>	
TUP12 - PHOTON STATISTICS DETERMINATION FOR SINGLE PHOTON BASED QUANTUM KEY DISTRIBUTION	861
<i>Ágoston Schranz ; Eszter Udvary ; Zsolt Kis</i>	
TUP13 - MEASUREMENT AND MODELLING OF THERMAL TURBULENCE EFFECTS ON FSO OPTICAL BEAMS	865
<i>Jan Vitasek ; Jan Latal ; Marian Bojko ; Ales Vanderka ; Lukas Hajek ; Stanislav Hejduk</i>	
TUP14 - PRE-COMMERCIAL PROCUREMENT IN OPTICAL NETWORKING DOMAIN.....	869
<i>Radek Velc ; Rudolf Vohnout ; Josef Vojtech ; Pavel Škoda ; Bartosz Belter ; Piotr Ridlichowski ; Chrysostomos Tziouvaras</i>	
TUP15 - POLARIZATION MODE DISPERSION MONITORING IN THE PRESENCE OF XPM EFFECT FOR HIGH SPEED WDM COMMUNICATION SYSTEMS	873
<i>Latifa Guesmi ; Abir Hraghi ; Mourad Menif</i>	
TUP16 - DESIGN AND IMPLEMENTATION OF CDR AND SERDES FOR HIGH SPEED OPTICAL COMMUNICATION NETWORKS USING FPGA	877
<i>Kareem Ismail ; Tawfik Ismail ; Hassan Mostafa</i>	
TUP17 - 25 GBPS MOBILE VISIBLE LIGHT COMMUNICATION SYSTEM EMPLOYING FAST ADAPTATION TECHNIQUES	880
<i>Ahmed Taha Hussein ; Mohammed T. Alresheedi ; Jaafar M. H. Elmirghani</i>	
TUP18 - UTILIZATION OF SOFTWARE DEFINED RADIO FOR LASER BEAM MODULATION OF OWC BY INFLUENCE OF SIMULATED ATMOSPHERIC PHENOMENA.....	887
<i>Ales Vanderka ; Jan Latal ; Lukas Hajek ; Jan Vitasek ; Petr Koudelka ; Radek Martinek ; Vladimir Vasinek ; Homer Nazeran</i>	
TUP19 - EXPERIMENTAL INVESTIGATION OF MULTIPLEXING METHODS IN VISIBLE LIGHT COMMUNICATION SYSTEM FOR INDOOR POSITIONING	895
<i>Viktor Zsolczai ; Gábor Szabó ; Gábor Fehér ; Eszter Udvary</i>	
TUP20 - PERFORMANCE ANALYSIS OF ADVANCE MODULATION SCHEMES FOR FREE SPACE OPTICAL NETWORKS.....	899
<i>Salman Arain ; Muhammad Naveed Shaikh ; Abi Waqas ; B. S Chowdhry ; Christos Themistos</i>	
TUP21 - CONSTRAINED FAIRNESS PLACEMENT SCHEME IN COOPERATIVE DYNAMIC FREE SPACE OPTICAL NETWORK	903
<i>Abdallah S. Ghazy ; Hossam A. I. Selmy ; Ziad A. El-Sahn ; Hossam M. H. Shalaby</i>	
TUP22 - PRELIMINARY INVESTIGATIONS OF THE EFFECTS OF AIR TURBULENCES ON THE PERFORMANCE OF AN INDOOR OPTICAL WIRELESS LINK	908
<i>Stefano Penna ; Vincenzo Attanasio ; Mattia Quadrini ; Luigi Salamandra ; Gianpaolo Susanna ; Silvia Di Bartolo ; Francesca Brunetti</i>	
TUP23 - A FUZZY SOLUTION TO ROUTING PROBLEM IN ELASTIC OPTICAL NETWORKS	912
<i>Ítalo B. Brasileiro ; André C. B. Soares ; José V. Dos Reis ; Anderson L. Sanches</i>	
TUP24 - THE EFFECT OF HIGH OPTICAL POWER ON MODERN FIBRE AT 1.5 μM	916
<i>Naoise Mac Suibhne ; Filipe M. Ferreira ; Mary E. McCarthy ; Arvind Mishra ; Andrew D. Ellis</i>	
TUP25 - ENHANCED SPECTRAL COMPRESSION IN NONLINEAR OPTICAL FIBRES	920
<i>Sonia Boscolo ; Christophe Finot</i>	
TUP26 - SEVEN-CORE OPTICAL FIBER DESIGN AND FABRICATION FOR SPACE-DIVISION MULTIPLEXING OPTIMIZED FOR LOW CROSSTALK	924
<i>Ahmed Samir ; Bostjan Batagelj</i>	
TUP27 - STUDY OF EXTENDED FOCAL SEGMENT FORMATION BY CONIC AXICONS AND LAYERED LENSES	928
<i>Dmitry Savelyev ; Svetlana Khonina</i>	
TUP28 - COMB SOURCE GENERATION BY DUAL-TONE EXCITATION OF A DUAL-ARM MZM.....	932
<i>Abir Hraghi ; Latifa Guesmi ; Mourad Menif ; Samir Ben Abid</i>	

TUP29 - LOW-COST WDM CROSS-CONNECTS BASED ON THE MULTI-DIRECTIONAL WAVELENGTH SELECTIVE SWITCH	936
<i>D. Villafani ; A. Rostami ; B. Skubic ; Z. Ghebretensae</i>	
TUP30 - PERFORMANCE IMPROVEMENT OF BROADBAND DISTRIBUTED RAMAN AMPLIFIER USING BIDIRECTIONAL PUMPING WITH FIRST AND DUAL ORDER FORWARD PUMPS	939
<i>Md A. Iqbal ; Giuseppe R. Martella ; Francesca Gallazzi ; Mingming Tan ; Paul Harper ; Juan Diego Ania-Castañón</i>	
TUP31 - OPTICAL TRANSFORMS AND CGH FOR SDM SYSTEMS	943
<i>Cátia Pinho ; Ali Shahpari ; Isiaka Alimi ; Mário Lima ; António Teixeira</i>	
TUP32 - WDM FOR APPLICATION IN PASSIVE POF LAN NETWORKS	947
<i>P. Bienias ; G. Budzyn ; E. Beres-Pawlik</i>	
TUP33 - A POF MODEL FOR SHORT FIBER SEGMENTS IN AVIONICS APPLICATIONS	950
<i>Natali Pujols ; M. Ángeles Losada ; Javier Mateo ; Alicia López ; Dwight Richards ; N. Antoniadis</i>	
TUP34 - ANALYSIS OF PCE-BASED PATH OPTIMIZATION IN MULTI-DOMAIN SDN/MPLS/BGP-LS NETWORK	954
<i>Grzegorz Rzym ; Krzysztof Wajda ; Krzysztof Rzym</i>	
WEA11 - EFFICIENT SPECTRUM ASSIGNMENT IN ELASTIC OPTICAL NETWORKS	959
<i>J. Comellas ; X. Calzada ; G. Junyent</i>	
WEA12 - A COMPARATIVE DISCUSSION OF SOME FAIRNESS-GENERATING SCHEMES IN ELASTIC NETWORKING	963
<i>H. Waldman ; I. D. T. De Souza ; R. C. Almeida ; R. C. Bortoletto</i>	
WEA13 - MULTI-ADAPTIVE S-BVT FOR SOFTWARE DEFINED OPTICAL NETWORKS	968
<i>Michela Svaluto Moreolo ; Josep M. Fabrega ; Laia Nadal</i>	
WEA14 - PERFORMANCE EVALUATION OF PARTITION SCHEME WITH FIRST-LAST FIT SPECTRUM ALLOCATION FOR ELASTIC OPTICAL NETWORKS	972
<i>Eiji Oki ; Bijoy Chand Chatterjee</i>	
WEA15 - LIGHTPATH THRESHOLD ADAPTATION ALGORITHM FOR DISPERSION-ADAPTIVE FIRST-LAST FIT SPECTRUM ALLOCATION SCHEME IN ELASTIC OPTICAL NETWORKS	976
<i>Bijoy Chand Chatterjee ; Eiji Oki</i>	
WEA16 - A STATISTICAL ANALYSIS OF TRANSPARENT OPTICAL NETWORKS COMPARING MERIT OF FIBER TYPES AND ELASTIC TRANSCEIVERS	980
<i>Mattia Cantono ; Roberto Gaudino ; Vittorio Curri</i>	
WEA31 - A QUICK VIEW ON CURRENT TECHNIQUES AND MACHINE LEARNING ALGORITHMS FOR BIG DATA ANALYTICS	984
<i>Josep Lluís Berral-García</i>	
WEA32 - INCREMENTAL CAPACITY PLANNING IN OPTICAL TRANSPORT NETWORKS BASED ON PERIODIC PERFORMANCE METRICS	988
<i>Fernando Morales ; Marc Ruiz ; Luis Velasco</i>	
WEA33 - BIG DATA ANALYTICS FOR THE VIRTUAL NETWORK TOPOLOGY RECONFIGURATION USE CASE	992
<i>L. Gifre ; F. Morales ; L. Velasco ; M. Ruiz</i>	
WEA41 - HIGH ORDER FREQUENCY MIXING IN FIELD EFFECT TRANSISTORS AND FRACTIONAL DYAKONOV-SHUR RESONANCES	996
<i>M. R. Razafindrakoto ; F. Bigourdan ; D. Felbacq</i>	
WEA43 - THREE-DIMENSIONAL PHOTONIC STRUCTURES ON TRANSPARENT SUBSTRATES FABRICATED BY TWO-PHOTON POLYMERIZATION FOR USE AS CELL SUBSTRATES AND FOR WETTING EXPERIMENTS	1000
<i>Johannes Heitz ; Cristina Plamadeala ; Moritz Wiesbauer ; Peter Freudenthaler ; Richard Wollhofen ; Jaroslav Jacak ; Sujitha Puthukodan ; Thomas A. Klar ; Agnes Weth ; Werner Baumgartner ; Birte Magnus ; Rainer Marksteiner</i>	
WEA44 - FEMTOSECOND LASER WRITTEN PHOTONIC CIRCUITS IN DIAMOND FOR QUANTUM INFORMATION	1004
<i>S. M. Eaton ; B. Sotillo ; V. Bharadwaj ; M. Sakakura ; Ya. Shimotsuna ; A. Chiappini ; M. Ferrari ; J. P. Hadden ; P. E. Barclay ; K. Miura ; R. Ramponi</i>	
WEA45 - NEW GENERATION OF COMPACT LASER SOURCES FOR BIOMEDICAL APPLICATIONS	1005
<i>E. U. Rafailov ; K. S. Litvinova ; S. G. Sokolovski</i>	

WEA51 - MULTI-TERABIT/S TRANSMISSION USING CHIP-SCALE FREQUENCY COMB SOURCES	1006
<i>C. Koos ; T. J. Kippenberg ; L. P. Barry ; L. Dalton ; A. Ramdane ; F. Lelarge ; W. Freude ; J. N. Kemal ; P. Marin ; S. Wolf ; P. Trocha ; J. Pfeifle ; C. Weimann ; M. Lauermaun ; T. Herr ; V. Brasch ; R. T. Watts ; D. Elder ; A. Martinez ; V. Panapakkam ; N. Chimot</i>	
WEA52 - FLEXIBLE OPTICAL NETWORKING EMPLOYING INTEGRATED FREQUENCY COMBS	1008
<i>Aleksandra Kaszubowska ; Luis Jacobo Alvarez Ruiz De Ojeda ; M. Deseada Gutierrez Pascual ; Christian Blumm ; Jules Bradell ; Frank Smyth ; Prince M. Anandarajah</i>	
WEA53 - EFFICIENT DIELECTRIC WAVEGUIDE LASERS	1009
<i>Markus Pollnau</i>	
WEA54 - FABRICATION OF HIGH-CONTRAST WAVEGUIDE AMPLIFIERS IN ERBIUM DOPED POTASSIUM DOUBLE TUNGSTATES	1013
<i>Mustafa Akin Sefunc ; Theoni Alexoudi ; Jinfeng Mu ; Meindert Dijkstra ; Sonia M. Garcia-Blanco</i>	
WEA55 - HALIDE PEROVSKITE AMPLIFIERS INTEGRATED IN POLYMER WAVEGUIDES	1017
<i>I. Suárez ; E. J. Juárez-Pérez ; I. Mora-Seró ; J. Bisquert ; J. P. Martínez-Pastor</i>	
WEA61 - LABEL-FREE NANOSCOPY WITH CONTACT MICROLENSES: SUPER-RESOLUTION MECHANISMS AND LIMITATIONS	1020
<i>Vasily N. Astratov ; Farzaneh Abolmaali ; Aaron Brettin ; Kenneth W. Allen ; Alexey V. Maslov ; Nicholas I. Limberopoulos ; Dennis E. Walker ; Augustine M. Urbas</i>	
WEA62 - OPTICAL MICROCAVITY SENSING: FROM DISPERSIVE TO DISSIPATIVE INTERACTIONS	1024
<i>Yun-Feng Xiao ; Yanyan Zhi ; Xiao-Chong Yu ; Bo-Qiang Shen</i>	
WEA63 - PROPULSION OF DIELECTRIC PARTICLES INSIDE HOLLOW-CORE PHOTONIC CRYSTAL FIBERS	1025
<i>A. V. Maslov</i>	
WEA64 - FAST BEAM SWITCHING OPERATION OF TWO-DIMENSIONAL MICROCAVITY LASER DIODE	1029
<i>Takehiro Fukushima ; Koichiro Sakaguchi ; Yasunori Tokuda</i>	
WEA65 - INTEGRATED SUBWAVELENGTH GRATING NANO STRUCTURES FOR PHOTONICS APPLICATIONS	1033
<i>Wenxi Yu ; Mao Ye ; Ya Sha Yi</i>	
WEB11 - MOIRÉ EFFECT-BASED SPECTRAL RESOLUTION ENHANCEMENT FOR FINE WDM-BASED OPTICAL SIGNAL PROCESSING AND MEASUREMENT	1038
<i>Tsuyoshi Konishi</i>	
WEB12 - OPTICAL PERFORMANCE MONITORING BASED ON 2-D PHASE PORTRAIT GENERATED BY SINGLE-CHANNEL SAMPLING TECHNIQUE	1042
<i>Changyuan Yu ; Yi Yu ; Xiaodong Fu</i>	
WEB13 - SUBWAVELENGTH STRUCTURES FOR NANOPHOTONIC COUPLERS, COLOURLESS SPLITTERS, POLARIZATION CONTROL AND MID-INFRARED WAVEGUIDES	1046
<i>P. Cheben ; J. H. Schmid ; D. -X. Xu ; S. Janz ; J. Lapointe ; M. Rahim ; S. Wang ; M. Vachon ; R. Halir ; A. Ortega-Monux ; J. D. Sarmiento-Merenguel ; G. Wangüemert-Pérez ; I. Molina-Fernández ; J. Pond ; D. Benedikovic ; C. Alonso-Ramos ; X. Le Roux ; L. Vivien ; D. Marris-Morini ; J. S. Penadés ; M. Nedeljkovic ; G. Z. Mashanovich ; A. V. Velasco ; M. L. Calvo ; M. Dado ; J. Müllerová ; W. Ye ; M. Pápeš ; V. Vašinek</i>	
WEB14 - RECENT ADVANCES IN ALL-OPTICAL SIGNAL PROCESSING FOR PERFORMANCE ENHANCEMENT OF OCDMA INTERCONNECTS	1047
<i>Md Shakil Ahmed ; Ivan Glesk</i>	
WEB15 - OPTIMIZATION OF ALL-OPTICAL SIGNAL PROCESSING VIA NONLINEAR FIBER BRAGG GRATINGS	1051
<i>L'Ubomir Scholtz ; Libor Ladányi ; Jarmila Müllerová</i>	
WEB21 - 5G NETWORK CHALLENGES AND REALIZATION INSIGHTS	1055
<i>P. S. Khodashenas ; J. Aznar ; A. Legarrea ; C. Ruiz ; M. S. Siddiqui ; E. Escalona ; S. Figuerola</i>	
WEB22 - FIBER MONITORING IN ANALOG MOBILE FRONTHAUL	1059
<i>Patryk J. Urban</i>	
WEB23 - HIGH OPTICAL LABEL SWITCHING ADD-DROP MULTIPLEXER NODES WITH NANOSECONDS LATENCY FOR 5G METRO/ACCESS NETWORKS	1062
<i>Nicola Calabretta ; Wang Miao ; Huug De Waardt</i>	
WEB24 - OPTIMIZATION OF CENTRALIZED RADIO ACCESS NETWORKS IN INDOOR AREAS	1066
<i>Carla Raffaelli ; Federico Tonini ; Matteo Fiorani ; Marija Furdek ; Paolo Monti ; Lena Wosinska</i>	

WEB31 - VALIDATION OF MULTI-LAYER NETWORK OPTIMIZATION	1070
<i>Yu Peng ; Rongping Lin ; Fan Li ; Chang Xing ; Jun Guo ; Wenjie Hu ; Vyacheslav Abramov ; Ronald G. Addie ; Moshe Zukerman</i>	
WEB32 - TRAFFIC GENERATION FOR TELECOM CLOUD-BASED SIMULATION	1074
<i>Alba P. Vela ; Anna Via ; Fernando Morales ; Marc Ruiz ; Luis Velasco</i>	
WEB33 - CONNECTIVITY REQUIREMENTS FOR CLOUD-BASED SERVICES	1078
<i>A. Asensio ; M. Ruiz ; L. Velasco</i>	
WEB34 - PERFORMANCE EVALUATION OF VIDEO DISTRIBUTION IN THE TELECOM CLOUD.....	1082
<i>Lluís Gifre ; Luis Velasco</i>	
WEB41 - STM-BASED ELECTRICAL GENERATION OF SURFACE PLASMONS ENHANCED BY NANOANTENNA	1086
<i>F. Bigourdan ; J-P. Hugonin ; F. Marquier ; C. Sauvan ; J-J. Greffet</i>	
WEB42 - STIMULATED SCATTERING OF SURFACE PLASMON POLARITONS (SPPS) IN SMECTIC A LIQUID CRYSTAL	1089
<i>B. I. Lembrikov ; Y. Ben-Ezra ; D. Ianez</i>	
WEB43 - SURFACE PLASMON GENERATION THROUGH HYBRIDIZATION WITH TAMM MODES	1093
<i>C. Symonds ; S. Azzini ; G. Lheureux ; P. Senellart ; A. Lemaitre ; J. -J. Greffet ; C. Sauvan ; C. Blanchard ; J. Bellessa</i>	
WEB44 - SURFACE WAVES ON METAL-DIELECTRIC METAMATERIALS.....	1094
<i>Osamu Takayama ; Evgeniy Shkondin ; Mohammad Esmail Aryaee Panah ; Taavi Repän ; Radu Malureanu ; Flemming Jensen ; Andrei V. Lavrinenko</i>	
WEB45 - INTEGRATED PLASMONIC NANOTWEEZERS: TOWARD THE MANIPULATION OF NANOOBJECTS	1098
<i>Giovanni Magno ; Aurore Ecarnot ; Vy Yam ; Philippe Gogol ; Robert Mégy ; Béatrice Dagens</i>	
WEB51 - CAVITY-RESONATOR-INTEGRATED GUIDED-MODE RESONANCE FILTER WITH POSITION-SHIFTED GRATING COUPLER.....	1102
<i>Kenji Kintaka ; Junichi Inoue ; Shogo Ura</i>	
WEB52 - FOUR-WAVE MIXING IN POROUS SILICON MICRORING RESONATORS	1106
<i>Angelica Simbula ; Gilbert A. Rodriguez ; Matteo Menotti ; Matteo Galli ; Daniele Bajoni ; Sharon Weiss ; Marco Liscidini</i>	
WEB53 - LOCAL PARITY-TIME SYMMETRY FUNCTIONAL DEVICES FOR INTEGRATED OPTICS	1110
<i>Natalia Dubrovina ; Vincent Brac De La Perrière ; Henri Benisty ; Abderrahim Ramdane ; Anatole Lupu</i>	
WEB54 - LONG WAVELENGTH MONOLITHIC PHOTONIC INTEGRATION TECHNOLOGY FOR GAS SENSING APPLICATIONS	1114
<i>S. Latkowski ; A. Hänsel ; D. D'Agostino ; P. J. Van Veldhoven ; H. Rabbani-Haghighi ; B. Docter ; N. Bhattacharya ; P. J. A. Thijs ; H. P. M. M. Ambrosius ; M. K. Smit ; K. A. Williams ; E. A. J. M. Bente</i>	
WEB55 - TIME RESOLVED ELECTRO-OPTIC MEASUREMENTS IN STRAINED SILICON RACETRACK RESONATORS	1118
<i>Massimo Borghi ; Mattia Mancinelli ; Florian Merget ; Jeremy Witzens ; Martino Bernard ; Mher Ghulinyan ; Georg Pucker ; Lorenzo Pavesi</i>	
WEB56 - LINEAR ABSORPTION COEFFICIENT OF GRAPHENE-SILICON HYBRID WAVEGUIDE DETERMINED BY IN-PLANE SYMMETRICAL ADD-DROP SILICON MICRORING RESONATOR.....	1122
<i>Heng Cai ; Yi Wang</i>	
WEB61 - ON THIRD-ORDER NONLINEAR SCATTERING IN WHISPERING GALLERY MODE RESONATORS.....	1125
<i>Guoping Lin ; Souleymane Diallo ; Yanne K. Chembo</i>	
WEB62 - LIGHTWAVE CIRCUIT ELEMENTS BASED ON MICROSPHERE RESONATORS AND MEANDERING WAVEGUIDES	1128
<i>Ali Serpengüzel</i>	
WEB63 - SIMULATION OF GRAPHENE-DISK ANTENNA WITH AXIALLY SYMMETRIC EXCITATION USING MAR AND ORTHOGONAL POLYNOMIALS	1129
<i>Alexander I. Nosich ; Ronan Sauleau</i>	
WEB64 - A SCALABLE REDUCED ORDER MODELLING APPROACH FOR WHISPERING-GALLERY MODE RESONATORS	1133
<i>G. Abbiati ; F. Turri ; F. Ramiro-Manzano ; L. Pavesi ; O. S. Bursi</i>	
WEB65 - ULTRA-HIGH Q LITHIUM NIOBATE WHISPERING-GALLERY-MODE RESONATORS.....	1137
<i>Yu Pan ; Yanne K. Chembo</i>	

WEB66 - ELASTIC LIGHT SCATTERING FROM A GERMANIUM MICROSPHERE IN THE FAR-IR REGION	1138
<i>Farhan Azeem ; Muhammad Hamza Humayun ; Ali Serpengüzel</i>	
WEC11 - POLARIZATION GRATING-BASED WAVELENGTH SELECTIVE SWITCHES	1142
<i>G. Cincotti ; G. Costa</i>	
WEC12 - OPTIMIZING GRATING COUPLERS FOR SILICON PHOTONICS	1146
<i>Lucio Claudio Andreani ; Dario Gerace ; Marco Passoni ; Angelo Bozzola ; Lee Carroll</i>	
WEC13 - THEORY OF QUADRATIC OPTICAL FREQUENCY COMBS.....	1150
<i>Tobias Hansson ; François Leo ; Miro Erkintalo ; Stephane Coen ; Iolanda Ricciardi ; Maurizio De Rosa ; Stefan Wabnitz</i>	
WEC14 - NEAR-INFRARED SPECTRAL COMBS PROBE MOLECULAR INTERACTIONS	1154
<i>Christophe Caucheteur ; Clotilde Ribaut ; Ruddy Wattiez</i>	
WEC15 - PERFORMANCE OPTIMIZATION OF AN APODIZED-CHIRPED FIBER BRAGG GRATINGS BASED CHROMATIC DISPERSION COMPENSATOR	1158
<i>Yosef Taher Aladadi ; Ahmad Fauzi Abas ; Mohammed Thamer Alresheedi</i>	
WEC21 - REQUIREMENTS FOR 5G FRONTHAUL	1163
<i>L. Valcarenghi ; K. Kondepu ; F. Giannone ; P. Castoldi</i>	
WEC22 - APPLICABILITY OF 5GT AND DYNAMIC VM MOBILITY USING CROSS STRATUM ORCHESTRATION (CSO)	1168
<i>Young Lee ; John Kaippallimalil</i>	
WEC24 - SPECTRALLY EFFICIENT FRONTHAUL ARCHITECTURES FOR A COST-EFFECTIVE 5G C-RAN.....	1173
<i>D. A. A. Mello ; A. N. Barreto ; F. A. Barbosa ; C. Osorio ; M. Fiorani ; P. Monti</i>	
WEC25 - EVALUATION OF BANDWIDTH AND POWER CONSUMPTION IN RECONFIGURABLE FRONTHAUL NETWORK ARCHITECTURE	1178
<i>V. Eramo ; M. Listanti ; F. G. Lavacca ; P. Iovanna ; G. Bottari ; F. Ponzini</i>	
WEC31 - OPTIMIZATION MODELS FOR TOTAL COST OF OWNERSHIP ANALYSIS OF NEXT-GENERATION TRANSPORT NETWORKS BASED ON SBVTS	1184
<i>António Eira ; João Pedro ; Marco Quagliotti</i>	
WEC32 - DETERMINATION OF USER OPINION BASED ON IPTV DATA.....	1189
<i>M. Kren ; U. Sedlar ; J. Bešter ; A. Kos</i>	
WEC33 - NETWORK-BASED TELEMETRY TO FACILITATE THE PROGRAMMABLE MANAGEMENT PLANE FOR OPTICAL TRANSPORT INFRASTRUCTURE	1194
<i>D. King ; C. Roštos ; A. Aguado ; L. Velasco ; N. Georgalas</i>	
WEC34 - TO DISTRIBUTE OR NOT TO DISTRIBUTE? IMPACT OF LATENCY ON VIRTUAL NETWORK FUNCTION DISTRIBUTION AT THE EDGE OF FMC NETWORKS	1195
<i>Marco Savi ; Ali Hmaity ; Giacomo Verticale ; Stefan Höst ; Massimo Tornatore</i>	
WEC41 - SLOW AND STORED LIGHT IN AMPLIFYING FOUR WAY MIXING PROCESS	1199
<i>Bojan Zlatkovic ; Aleksandar Krmpot ; Ivan Radojicic ; Dušan Arsenovic ; Milan Minic ; Brana Jelenkovic</i>	
WEC42 - LUMINESCENCE PROPERTIES OF ER³⁺ IONS IN NANOCRYSTALLINE GLASS-CERAMICS	1202
<i>R. Balda ; A. Miguel ; R. Morea ; J. Gonzalo ; J. Fernández</i>	
WEC43 - UP-CONVERSION LUMINESCENCE AND μ-RAMAN INVESTIGATIONS OF KGD(WO₄)₂ CRYSTALLINE POWDERS DOPED WITH RARE EARTH IONS	1206
<i>D. Kasprowicz ; P. Gluchowski ; K. Jaroszewski ; M. Chrunik ; A. Majchrowski</i>	
WEC44 - ELECTRONIC STATES IN CORE-SHELL QUANTUM RINGS	1209
<i>Anna Sitek ; Gunnar Thorgilsson ; Vidar Gudmundsson ; Andrei Manolescu</i>	
WEC45 - RANDOM LASING OF LILA_{1-x}ND_xP₄O₁₂ CRYSTAL POWDERS	1213
<i>J. Azkargorta ; L. Marciniak ; I. Iparraguirre ; R. Balda ; W. Strek ; M. Barredo-Zuriarrain ; S. García-Revilla ; J. Fernández</i>	
WEC51 - MULTI-CHANNEL MACH-ZEHNDER IQ MODULATOR PICS ON INP FOR HYBRID OFDM TRANSMITTER INTEGRATION	1217
<i>B. Gomez Saavedra ; R. Kaiser ; J. Beyer ; M. Rausch ; M. Gruner ; W. Fürst ; M. Schell</i>	
WEC52 - POLARIZATION-, CARRIER-, AND FORMAT-SELECTABLE OPTICAL FLOW GENERATION BASED ON A MULTI-FLOW TRANSMITTER USING PASSIVE POLYMERS	1221
<i>V. Katopodis ; M. Spyropoulou ; C. Tsokos ; P. Groumas ; D. Felipe ; N. Keil ; A. Beretta ; A. Vannucci ; T. K. Johansen ; M. Quagliotti ; A. Pagano ; J. -Y. Dupuy ; A. Konczykowska ; C. Delezoide ; H. Mardoyan ; Ch. Kouloumentas ; H. Avramopoulos</i>	
WEC53 - RECONFIGURABLE LATTICE MESH DESIGNS FOR PROGRAMMABLE PHOTONIC PROCESSORS AND UNIVERSAL COUPLERS.....	1225
<i>Daniel Pérez ; Ivana Gasulla ; José Capmany ; Richard A. Soref</i>	

WEC54 - FLEXIBLE 90° HYBRID COUPLER FOR COHERENT OPTICAL SYSTEMS BASED ON ORGANIC-INORGANIC HYBRIDS	1229
<i>A. R. N. Bastos ; C. M. S. Vicente ; L. D. Carlos ; M. Lima ; P. S. André ; R. A. S. Ferreira</i>	
WEC55 - DESIGN AND SIMULATION OF Si₃N₄ BASED ARRAYED WAVEGUIDE GRATINGS APPLYING AWG-PARAMETERS TOOL	1233
<i>D. Seyringer ; C. Burtscher ; S. Partel ; J. Edlinger ; A. Maese-Novo ; P. Muellner ; R. Hainberger ; J. Kraft ; G. Koppitsch ; G. Meinhardt</i>	
WEC56 - AN IMPROVED MODEL TO PREDICT THERMO-OPTIC COEFFICIENT IN INGAASP WAVEGUIDES	1238
<i>Abi Waqas ; Andrea Alippi ; Daniele Melati ; Andrea Melloni</i>	
WEC61 - BRAGG GRATING UV INSCRIPTION IN A BIORESORBABLE PHOSPHATE GLASS OPTICAL FIBER	1242
<i>Maria Konstantaki ; Stavros Pissadakis ; Diego Pugliese ; Edoardo Ceci-Ginistrelli ; Nadia G. Boetti ; Daniel Milanese</i>	
WEC62 - PHOSPHATE-BASED GLASSES AND NANOSTRUCTURES	1246
<i>A. Lukowiak ; L. Marciniak ; I. Vasilchenko ; C. Armellini ; A. Chiasera ; A. Vaccari ; M. Ferrari ; D. Dorosz ; W. Strek</i>	
WEC63 - RF-SPUTTERING DERIVED PHOSPHOSILICATE PLANAR WAVEGUIDES ACTIVATED BY ER³⁺ IONS	1250
<i>A. Chiasera ; I. Vasilchenko ; D. Dorosz ; M. Cotti ; S. Varas ; E. Iacob ; G. Speranza ; A. Vaccari ; S. Valligatla ; L. Z. Zur ; A. Lukowiak ; G. C. Righini ; M. Ferrari</i>	
WEC64 - BIORESORBABLE CALCIUM-PHOSPHATE GLASSES FOR BIOPHOTONIC APPLICATIONS	1254
<i>Diego Pugliese ; Edoardo Ceci-Ginistrelli ; Nadia G. Boetti ; Annarita Ambrosone ; Joris Lousteau ; Daniel Milanese</i>	
WEC65 - CONTACTLESS TEMPERATURE SENSING VIA LUMINESCENCE	1258
<i>M. D. Dramicanin ; Z. Antic ; S. Kuzman ; T. Thundat</i>	
WED15 - PHYSICAL LAYER ENCRYPTION ALGORITHM FOR CHAOTIC OPTICAL OFDM TRANSMISSION AGAINST CHOSEN-PLAINTEXT ATTACKS	1259
<i>Xuelin Yang ; Zanwei Shen ; Xiaonan Hu ; Weisheng Hu</i>	
WED11 - RELIABILITY PERFORMANCE OF OPTICAL NETWORKS BASED ON PROGRAMMABLE ROADMS	1264
<i>Lena Wosinska ; Marija Furdek ; Matija Džanko</i>	
WED12 - FULL MONITORING FOR LONG-REACH TWDM PASSIVE OPTICAL NETWORKS BASED ON TRA TECHNIQUE	1265
<i>Min Cen ; Jiajia Chen ; Véronique Moeyaert ; Patrice Mégret ; Marc Wuilpart</i>	
WED13 - WAVELENGTH OVERPROVISIONING STRATEGIES FOR ENHANCED OPTICAL PATH RESTORATION	1270
<i>Meiqian Wang ; Marija Furdek ; Lena Wosinska ; Paolo Monti</i>	
WED14 - RECODIS: RESILIENT COMMUNICATION SERVICES PROTECTING END-USER APPLICATIONS FROM DISASTER-BASED FAILURES	1275
<i>Jacek Rak ; David Hutchison ; Eusebi Calle ; Teresa Gomes ; Matthias Gunkel ; Paul Smith ; Janos Tapolcai ; Sofie Verbrugge ; Lena Wosinska</i>	
WED16 - A PRACTICAL LAYERED MODEL FOR FLEXIBLE-GRID OPTICAL NETWORKS TO REDUCE THE ROUTING COMPLEXITY	1279
<i>Aysegül Yayimli</i>	
WED17 - ROUTING POST-DISASTER TRAFFIC FLOODS HEURISTICS	1283
<i>Zaid H. Nasralla ; Mohamed O. I. Musa ; Taisir E. H. El-Gorashi ; Jaafar M. H. Elmirghani</i>	
WED21 - THROUGHPUT ASSESSMENT OF TCP OVER DISTRIBUTED WIFI ACCESS NETWORKS SUPPORTED BY ROF	1287
<i>A. De Sousa ; C. B. Lopes ; P. M. Monteiro ; M. C. R. Medeiros</i>	
WED22 - OQAM-OFDM ROF WITH IM-DD REMOTE HETERODYNE 28 GHZ UPCONVERSION FOR 5G MILLIMETER RANS	1291
<i>Abayomi T. Latunde ; Milos Milosavljevic ; Pandelis Kourtessis ; John Senior</i>	
WED23 - TANDEM-MODULATOR GENERATED W-BAND OCDMA RADIO-OVER-FIBER SYSTEM	1295
<i>Morad Eghbal ; Mehdi Shadaram</i>	
WED24 - TERAHERTZ BAND FOR NEXT-GENERATION MOBILE COMMUNICATIONS SYSTEMS	1298
<i>A. Stöhr ; B. Shih ; M. Freire ; A. Ng'Oma ; S. Abraha ; M. Steeg</i>	
WED25 - OPTICAL FRONTHAUL TECHNOLOGIES FOR NEXT-GENERATION MOBILE COMMUNICATIONS	1299
<i>Byung Gon Kim ; Sung Hyun Bae ; Hoon Kim ; Yun C. Chung</i>	

WED31 - REOPTIMIZING SHORTEST PATHS: FROM STATE OF THE ART TO NEW RECENT PERSPECTIVES	1302
<i>Daniele Ferone ; Paola Festa ; Antonio Napoletano ; Tommaso Pastore</i>	
WED32 - ANYCAST (RE)ROUTING OF MULTI-PERIOD TRAFFIC IN DIMENSIONING RESILIENT BACKBONE NETWORKS FOR MULTI-SITE DATA CENTERS	1307
<i>Ting Wang ; Brigitte Jaumard ; Chris Develder</i>	
WED33 - A HEURISTIC ALGORITHM FOR ROUTING, SPECTRUM, TRANSCEIVER AND REGENERATION ALLOCATION PROBLEM IN ELASTIC OPTICAL NETWORKS	1313
<i>Mirosław Klinkowski ; Krzysztof Walkowiak</i>	
WED34 - ON THE TRADE-OFF BETWEEN MAXIMIZING SPECTRAL EFFICIENCY AND MINIMIZING CAPACITY OVERPROVISIONING IN DWDM NETWORKS	1317
<i>João Pedro ; Nelson Costa</i>	
WED41 - LINEAR GUIDED WAVES AND SOLITONS SUSTAINED BY HYPERBOLIC METAMATERIALS UNDER STRONG OPTIC AXIS AND MAGNETOOPTIC CONTROL	1323
<i>A. D. Boardman ; A. Alberucci ; I. Nefedov ; M. McCall ; Y. Rapoport ; G. Assanto</i>	
WED42 - THZ POLARIZATION CONTROL WITH CHIRAL AND BIANISOTROPIC METAMATERIALS AND METASURFACES	1324
<i>M. Kafesaki ; G. Kenanakis ; A. C. Tasolamprou ; E. N. Economou ; C. M. Soukoulis</i>	
WED43 - SILICON BASED METAMATERIAL DESIGN WITH CIRCULAR RING RESONATOR TOPOLOGY AS A NEAR-INFRARED CONCENTRATOR	1325
<i>Ozan T. Gunduz ; Cumali Sabah ; Erich Leitgeb</i>	
WED44 - RESONANT COMBINATORIAL FREQUENCY GENERATION IN NON-HERMITIAN HYPERBOLIC METAMATERIALS	1329
<i>O. V. Shramkova ; G. P. Tsironis</i>	
WED51 - QUANTUM SYSTEMS ENGINEERING: A STRUCTURED APPROACH TO ACCELERATING THE DEVELOPMENT OF A QUANTUM TECHNOLOGY INDUSTRY	1333
<i>M. J. Everitt ; Michael J. De C. Henshaw ; Vincent M. Dwyer</i>	
WED52 - STRATEGIES FOR BRIGHT SINGLE PHOTON SOURCES IN SOLID STATE: COUPLED QUANTUM DOT CAVITIES AND MONOLAYER-BASED SYSTEMS	1337
<i>Christian Schneider ; Yu-Ming He ; Sebastian Unsleber ; Sebastian Maier ; Stefan Gerhard ; Nils Lundt ; Oliver Iff ; Martin Kamp ; Sven Höfling</i>	
WED53 - SILICON QUANTUM PHOTONICS	1340
<i>Damien Bonneau</i>	
WED54 - WAVEGUIDE INTEGRATED SUPERCONDUCTING SINGLE-PHOTON DETECTORS	1341
<i>S. Ferrari ; A. Vetter ; P. Rath ; W. H. P. Pernice</i>	
WED55 - PHOTON COUNTING WITH A 24-PIXEL SSPD BASED PHOTON NUMBER RESOLVING DETECTOR	1344
<i>Alessandro Gaggero ; Francesco Mattioli ; Zili Zhou ; Rosalinda Gaudio ; Roberto Leoni ; Andrea Fiore</i>	
WED61 - CHARACTERISING REFRACTIVE INDEX DISPERSION IN CHALCOGENIDE GLASSES	1348
<i>Y. Fang ; L. Sojka ; D. Jayasuriya ; D. Furniss ; Z. Q. Tang ; C. Markos ; S. Sujecki ; A. B. Seddon ; T. M. Benson</i>	
WED62 - PREPARATION OF CHALCOGENIDE GLASSES VIA PLASMA-ENHANCED CHEMICAL VAPOR DEPOSITION ON THE EXAMPLE OF AS-S SYSTEM	1353
<i>Leonid Mochalov ; Aleksey Lobanov ; Askold Strikovskiy ; Aleksandr Kostrov ; Aleksey Murzanev ; Aleksey Nezhdanov ; Mikhail Kudryashov ; Aleksandr Mashin</i>	
WED63 - ORIGINAL DESIGNS OF CHALCOGENIDE MICROSTRUCTURED OPTICAL FIBERS FOR MID-IR APPLICATIONS	1357
<i>Johann Troles ; Celine Caillaud ; Clement Gilles ; Laurent Provino ; Mathieu Carras ; Mickael Brun ; Jean-Luc Adam ; Laurent Brilland</i>	
WED64 - CHALCOGENIDE CIRCUITS FOR THE REALIZATION OF CO₂ MICRO-SENSORS OPERATING AT 4.23 μM	1361
<i>Caroline Vigreux ; Raphaël Escalier ; Raphaël Kribich ; Annie Pradel</i>	
WED65 - CHALCOGENIDE GLASSES FOR INFRARED OPTICS: A NEW METHOD OF ELABORATION	1365
<i>Laurent Calvez ; Elena Petracovschi ; Anna Novikova ; Jean-Luc Adam</i>	
WED66 - NOVEL PUMPING SCHEMES OF MID-IR PHOTONIC CRYSTAL FIBER LASERS FOR AEROSPACE APPLICATIONS	1369
<i>M. C. Falconi ; G. Palma ; F. Starecki ; V. Nazabal ; J. Troles ; J. L. Adam ; S. Taccheo ; M. Ferrari ; F. Prudeniano</i>	
WEP01 - LIGHT LOCALIZATION IN CHIRPED WOODPILE PHOTONIC CRYSTALS	1374
<i>Zeki Hayran ; Hamza Kurt ; Kestutis Staliunas</i>	

WEP02 - TUNING FOUR-WAVE MIXING THROUGH TEMPERATURE IN ETHANOL-FILLED PHOTONIC CRYSTAL FIBER	1377
<i>Lorena Velázquez-Ibarra ; Antonio Díez ; Enrique Silvestre ; Miguel V. Andrés</i>	
WEP03 - GENERATION OF CYLINDRICAL VECTOR BEAMS ON THE BASIS OF UNIAXIAL CRYSTALS AND VARIOUS TYPES OF DOES	1379
<i>Vyacheslav Parandin ; Svetlana Khonina ; Sergey Karpeev ; Dmitry Savelyev</i>	
WEP04 - ELASTIC SCATTERING FROM GERMANIUM MICROSPHERES IN THE TERAHERTZ REGION	1383
<i>Syed Sultan Shah Bukhari ; Muhammad Rehan Chaudhry ; Ali Serpengüzel</i>	
WEP05 - MID-INFRARED ELASTIC SCATTERING FROM GERMANIUM MICROSPHERES	1384
<i>Muhammad Zakwan ; Mustafa Mert Bayer ; Muhammad Sohail Anwar ; Ulas Sabahattin Gökay ; Ali Serpengüzel</i>	
WEP06 - RESILIENCE OF SEMICONDUCTOR OPTICAL AMPLIFIER WITH HOLDING BEAM INJECTION TO REFLECTIONS IN BIDIRECTIONAL RECIPROCAL OPERATION	1385
<i>Josef Vojtech ; Jan Radil ; Ondrej Havlis ; Michal Altmann ; Pavel Skoda ; Vladimír Smotlacha</i>	
WEP08 - NUMERICAL ANALYSIS OF SUPPRESSION OF THE HIGHER ORDER MODES IN NITRIDE VCSELS USING AN INVERTED SURFACE RELIEF	1388
<i>Jaroslav Walczak ; Patrycja Spiewak ; Lukasz Piskorski ; Michal Wasiak ; Tomasz Czystanowski ; Robert P. Sarzala</i>	
WEP09 - EFFECT OF INCREASING TEMPERATURE ON THE PHYSICAL PROPERTIES OF NANO-COMPOSITE PHOSPHO-SILICATE	1392
<i>Z. Shaker ; M. El Shaarawy ; N. M. H. Shash ; H. Khoder ; M. A. Salem ; A. Lukowiak ; M. Ferrari ; I. K. Battisha</i>	
WEP10 - PBWO₄ MICRO-/NANOCRYSTALS IN TRANSPARENT GLASS-CERAMICS: SYNTHESIS, STRUCTURE-PROPERTY RELATIONSHIP AND LANTHANIDE DOPING	1393
<i>Izabela Czopek ; Joanna Pisarska ; Tomasz Goryczka ; Wojciech A. Pisarski</i>	
WEP11 - ENERGY TRANSFER PROCESSES BETWEEN RARE EARTH IONS AND WHITE LIGHT EMISSION IN INORGANIC GLASSES	1397
<i>Marta Soltys ; Agnieszka Kos ; Joanna Janek ; Lidia Zur ; Wojciech A. Pisarski ; Joanna Pisarska</i>	
WEP12 - SPECTROSCOPIC INVESTIGATIONS OF YB³⁺/HO³⁺ AND YB³⁺/TM³⁺/HO³⁺ CO-DOPED GERMANATE GLASSES AND OPTICAL FIBERS	1401
<i>M. Kochanowicz ; J. Zmojda ; P. Miluski ; P. Jelen ; M. Sitarz ; D. Dorosz</i>	
WEP13 - DESIGN OF RARE-EARTH DOPED CHALCOGENIDE MICRORESONATORS FOR BIOSENSING IN MID-IR	1405
<i>G. Palma ; M. C. Falconi ; F. Starecki ; V. Nazabal ; L. Bodiou ; Y. Dumeige ; J. Lemaitre ; J. Charrier ; F. Prudenizano</i>	
WEP14 - SUPERRESOLUTION IMAGING WITH CONTACT MICROSPHERES: IMPORTANCE OF NUMERICAL APERTURE	1409
<i>Aaron Brettin ; Farzaneh Abolmaali ; Nicholas I. Limberopoulos ; Dennis E. Walker ; Augustine M. Urbas ; Vasily N. Astratov</i>	
WEP15 - SIMULATION OF ELASTIC SCATTERING FROM A GERMANIUM MICROSPHERE IN THE NEAR-IR	1413
<i>Hüseyin Ozan Çirkinoglu ; Imran Khan ; Ali Serpengüzel</i>	
WEP16 - CONTROL OF Q-FACTOR IN NOBEAM CAVITIES ON SUBSTRATE	1414
<i>Daniilo Panettieri ; Liam O'Faolain ; Marco Grande</i>	
WEP17 - FIELD PATTERNS OF WHISPERING-GALLERY AND BOW-TIE MODES OF ELLIPTIC MICROCAVITY LASERS WITH CIRCULAR ACTIVE REGIONS	1418
<i>Alexander O. Spiridonov ; Evgenii M. Karchevskii</i>	
WEP19 - EXPERIMENTAL DEMONSTRATION OF INTEGRATED PHOTONIC FREE-LABEL BIOSENSOR FOR CBRN THREATS USING MICRO-RING RESONATORS	1422
<i>Nicola Peserico ; Andrea Annoni ; Antonio Varriale ; Sabato D'Auria ; Laurent Bellieres ; Francisco Cuesta-Soto ; Manuel Rodrigo ; Sergio Peransi ; Andrea Melloni</i>	
WEP20 - INTEGRATED RACETRACK MICRO-RESONATOR BASED ON POROUS SILICON RIDGE WAVEGUIDES	1426
<i>L. Poffo ; P. Girault ; N. Lorrain ; J. Lemaitre ; M. Guendouz ; P. Azuelos ; I. Hardy ; A. Gutierrez ; L. Bodiou ; M. Thual ; J. Charrier</i>	
WEP21 - STUDY OF THE OPTICAL PROPERTIES OF 1×16 SPLITTER BASED ON Y-BRANCH AND MMI APPROACHES	1428
<i>C. Burtcher ; D. Seyringer ; M. Lucki</i>	
WEP22 - PHOTONIC INTEGRATED CIRCUITS BASED MILLIMETER-WAVES GENERATION	1432
<i>Robinson C. Guzmán M. ; Guillermo Carpintero ; Tadao Nagatsuma ; Carlos Gordón ; Mu Chieh Lo</i>	
WEP23 - MODELING AND VALIDATION OF HIGH-PERFORMANCE AND ATHERMAL AWGS FOR THE SILICON PHOTONICS PLATFORM	1436
<i>Stefano Tondini ; Claudio Castellan ; Mattia Mancinelli ; Lorenzo Pavesi</i>	

WEP25 - NON-INVASIVE TDC BASED TEMPERATURE METHOD FOR THE LOCAL INTERCONNECTS PROPERTIES IDENTIFICATION	1440
<i>Robert Frankowski ; Marcin Kowalski ; Przemysław Plóciennik ; Marek Zielinski</i>	
WEP27 - OPTICAL PROPERTIES OF DIARYLETHYLENE POLYMERS	1445
<i>Beata Derkowska-Zielinska ; Ernest Mateuszuk ; Lukasz Skowronski ; Tomasz Kozłowski ; Oksana Krupka ; Vitaly Smokal ; Oleksiy Kolendo</i>	
WEP29 - STABILITY CRITERIA OF A TAPERED INAS/INGAAS QUANTUM DOT LASER BASED ON PULSE AMPLITUDE JITTER AND TIMING JITTER INVESTIGATIONS	1449
<i>Lukas Drzewietzki ; Christoph Weber ; Stefan Breuer</i>	
WEP30 - MONOLITHIC PASSIVELY MODE-LOCKED SEMICONDUCTOR QUANTUM-WELL LASER EMITTING AT 1070 NM: PICOSECOND PULSE GENERATION AND PULSE TRAIN STABILITY ANALYSIS	1453
<i>Christoph Weber ; Andreas Klehr ; Andrea Knigge ; Stefan Breuer</i>	
WEP31 - COMPARISON OF MODE THRESHOLDS IN MICRODISK AND MICRORING LASERS WITH UNIFORM AND NON-UNIFORM GAIN PROFILES	1457
<i>Anna S. Zolotukhina ; Alexander O. Spiridonov ; Evgenii M. Karchevskii</i>	
WEP32 - SELECTED METHODS OF THIN FILMS DEPOSITION AND THEIR APPLICATIONS	1461
<i>Przemysław Plóciennik ; Anna Zawadzka ; Robert Frankowski ; Andrzej Korcala</i>	
WEP33 - WAVELENGTH-SCALE ANALYSIS OF INFLUENCE OF CHIRPED DBRS ON OPTICAL CHARACTERISTICS OF MULTINANOLAYER PHOTOVOLTAIC CELLS.....	1465
<i>Hovik V. Baghdasaryan ; Tamara M. Knyazyan ; Tamara T. Hovhannisyan ; Gurgen R. Mardoyan ; Marian Marciniak</i>	
WEP34 - MULTIWAVELENGTH ERBIUM RING LASER BASED ON MULTICORE FIBRE	1470
<i>L. Sojka ; L. Pajewski ; H. Stawska ; P. Mergo ; S. Sujecki ; T. M. Benson ; E. Beres-Pawlik</i>	
WEP35 - IMPROVING THE HIGH-SPEED RESPONSE OF THE GAAS METAL-SEMICONDUCTOR-METAL PHOTODETECTOR.....	1473
<i>S. Benzeghda ; F. Hobar ; Didier Decoster</i>	
WEP36 - ND³⁺ AND LU³⁺ DOPED CAF₂ CRYSTALS AS NOVEL AMPLIFIER MATERIALS FOR HIGH-ENERGY INFRARED LASERS.....	1479
<i>S. Normani ; A. Braud ; J. L. Doualan ; R. Moncorgé ; C. Maunier ; D. Stoffel ; P. Camy</i>	
WEP37 - PHOTONIC CRYSTAL SLAB STRAIN SENSORS: A VIABLE TOOL FOR STRUCTURAL HEALTH MONITORING.....	1483
<i>Valentina Piccolo ; Anna Piotrowska ; Andrea Chiappini ; Alessandro Vaccari ; Maurizio Ferrari ; Luca Deseri ; Daniele Zonta</i>	
THA11 - SPECTRAL REALLOCATION IN LIGHTPATHS ENCOMPASSING THE MOST FRAGMENTED LINK OF ELASTIC OPTICAL NETWORKS	1487
<i>Ricardo Vicente Fávero ; Luiz Henrique Bonani ; Marcelo Luís Francisco Abbade</i>	
THA12 - MULTICASTING VERSUS ANYCASTING: HOW TO EFFICIENTLY DELIVER CONTENT IN ELASTIC OPTICAL NETWORKS	1491
<i>Michal Aibin ; Róza Goscien ; Krzysztof Walkowiak</i>	
THA13 - A CASE STUDY OF REGENERATOR PLACEMENT AND REGENERATOR ASSIGNMENT IN DYNAMIC TRANSLUCENT ELASTIC OPTICAL NETWORKS	1495
<i>Daniel A. R. Chaves ; Matheus A. Cavalcante ; Helder A. Pereira ; Raul C. Almeida</i>	
THA14 - SDN-ENABLED FLEXIBLE OPTICAL NODE DESIGNS AND TRANSCEIVERS FOR SUSTAINABLE METRO-ACCESS NETWORKS CONVERGENCE.....	1499
<i>S. Sarmiento ; R. Montero ; J. A. Altabas ; D. Izquierdo ; F. Agraz ; A. Pagès ; J. Perello ; J. Gene ; M. Alonso ; A. Pascual ; I. Garces ; S. Spadaro ; J. A. Lazaro</i>	
THA21 - ADAPTIVE VIDEO STREAMING AND FIXED-MOBILE CONVERGENCE: A GOOD TEAM TO REDUCE POWER CONSUMPTION AND IMPROVE USERS' QOE.....	1503
<i>Ramon Aparicio Pardo ; Lucile Sassatelli</i>	
THA22 - ASSESSMENT OF FIXED MOBILE CONVERGED BACKHAUL AND FRONTHAUL NETWORKS.....	1507
<i>Erik Weis ; Dirk Breuer ; Sandro Krauß</i>	
THA23 - OPTICAL WIRELESS COMMUNICATIONS FOR HIGH-SPEED IN-BUILDING PERSONAL AREA NETWORKS.....	1511
<i>Christina Lim ; Ke Wang ; Ampalavanapillai Nirmalathas</i>	
THA24 - COHERENT PHOTONIC TRUE-TIME-DELAY BEAMFORMING SYSTEM FOR A PHASED ARRAY ANTENNA RECEIVER	1515
<i>Vanessa C. Duarte ; Miguel V. Drummond ; Rogério N. Nogueira</i>	
THA25 - DELAY ANALYSIS FOR OPTICAL WIRELESS MULTIHOP NETWORKS	1520
<i>Florian Knobloch</i>	

THA31 - FIWIN5G - FIBER-WIRELESS INTEGRATED NETWORKS FOR 5TH GENERATION DELIVERY	1525
<i>John E. Mitchell</i>	
THA32 - OPTICAL RADIO CONVERGENCE INFRASTRUCTURE FOR COMMUNICATIONS AND POWER DELIVERING (ORCIP).....	1529
<i>Paulo P. Monteiro ; Atilio Gameiro ; Nuno Borges Carvalho</i>	
THA33 - CONVERGED OPTICAL-WIRELESS ACCESS NETWORKS ENABLING FIXED AND 60 GHZ CONNECTIVITY IN WDM-PONS	1532
<i>Dimitris Tsiokos ; Charoula Mitsolidou ; Chris Vagionas ; George Kalfas ; Amalia Miliou ; Nikos Pleros</i>	
THA34 - A MARKOV MODEL COMBINING HANDOVER ALGORITHMS WITH CALL ADMISSION CONTROL POLICIES IN VEHICULAR ROF NETWORKS AT 60 GHZ	1536
<i>Nikolaos D. Tselikas</i>	
THA41 - THE SOFTWARE DEFINED TRANSPORT NETWORK: FUNDAMENTALS, FINDINGS AND FUTURES	1540
<i>Daniel King ; Charalampos Rotsos ; Alejandro Aguado ; Nektarios Georgalas ; Victor Lopez</i>	
THA42 - SDN APPLICATION-CENTRIC ORCHESTRATION FOR MULTI-LAYER TRANSPORT NETWORKS	1544
<i>Federico Pederzoli ; Domenico Siracusa ; Pontus Sköldström ; Stephane Junique ; Ciril Rožic ; Dimitrios Klonidis ; Thomas Szyrkowicz ; Mohit Chamania ; Victor Uceda ; Victor Lopez ; Yona Shikhmanter ; Ori Gerstel</i>	
THA43 - DEMONSTRATION OF SDN-BASED ORCHESTRATION FOR MULTI-DOMAIN SEGMENT ROUTING NETWORKS	1548
<i>Navin Kukreja ; Rodolfo Alvizu ; Ana Kos ; Guido Maier ; Roberto Morro ; Alessandro Capello ; Carlo Cavazzoni</i>	
THA44 - MANAGING SERVICES IN THE TELECOM CLOUD: AN EXAMPLE FOR CDN	1552
<i>Luis Velasco</i>	
THA51 - EXTENDED RANGE 100 GIGABIT ETHERNET	1553
<i>Leo Spiekman</i>	
THA52 - SCALING MULTIMODE FIBRE IM/DD TRANSMISSION CAPACITY THROUGH SPATIAL-SPECTRAL MULTIPLEXING	1554
<i>C. P. Tsekrekos ; N. G. Varithimiadis ; D. I. Kassos ; D. Syvridis ; S. Sygletos</i>	
THA53 - A FLEXIBLE OPTICAL NETWORK ARCHITECTURE PROVIDING ENHANCED PERFORMANCE TO DATA CENTRES	1558
<i>Nogol Panahi ; Davide Careglio ; Josep Solé-Pareta</i>	
THA54 - OPTIMAL RESOURCE ALLOCATION IN HYBRID PACKET/OPTICAL CIRCUIT SWITCHED NETWORKS	1563
<i>Weiqliang Sun ; Zhangxiao Feng ; Weisheng Hu</i>	
THA55 - LARGE-SCALE OPTICAL DATACENTRE NETWORKS USING HYBRID FIBRE DELAY LINE BUFFERS AND PACKET RETRANSMISSION	1566
<i>Jingyan Wang ; Conor McArdle ; Liam P. Barry</i>	
THA61 - OXYFLUORIDE GLASS AND GLASS CERAMICS DOPED WITH ER³⁺, YB³⁺ AND ND³⁺ FOR NEAR-INFRARED APPLICATIONS	1570
<i>T. S. Gonçalves ; M. De Oliveira ; H. Eckert ; A. S. S. De Camargo</i>	
THA62 - RARE-EARTH DOPED OPTICAL FIBERS WITH NANO-PHASE GLASS-CERAMIC STRUCTURES	1571
<i>J. Zmojda ; M. Kochanowicz ; P. Miluski ; A. Lukowiak ; W. A. Pisarski ; J. Pisarska ; M. Marciniak ; M. Ferrari ; G. Righini ; M. Sitarz ; D. Dorosz</i>	
THA63 - DY³⁺ DOPED ZBLAN FIBER AMPLIFIER PUMPED BY A SINGLE FREQUENCY 1064 NM LASER FOR MID INFRARED APPLICATIONS	1575
<i>T. T. Fernandez ; Y. Wang ; A. Gambetta ; N. Coluccelli ; P. Laporta ; G. Galzerano</i>	
THA64 - NUMERICAL MODELLING OF LANTHANIDE-ION DOPED FIBRE LASERS OPERATING WITHIN MID-INFRARED WAVELENGTH REGION	1578
<i>L. Sójka ; D. Furniss ; Z. Tang ; H. Sakr ; E. Barney ; T. M. Benson ; A. B. Seddon ; S. Sujecki ; K. Scholle ; S. Lamrini ; P. Fuhrberg</i>	
THA65 - RARE EARTH-DOPED BARIUM GALLO-GERMANATE GLASSES FOR BROADBAND NEAR-INFRARED LUMINESCENCE	1582
<i>Martyna Kowal ; Joanna Pisarska ; Marcin Kochanowicz ; Jacek Zmojda ; Jan Dorosz ; Dominik Dorosz ; Wojciech A. Pisarski</i>	
THB11 - CONSIDERATIONS ON PERFORMANCE, COST AND POWER CONSUMPTION OF CANDIDATE 100G EPON ARCHITECTURES	1586
<i>Z. Vujicic ; A. Shahpari ; B. Neto ; N. Pavlovic ; A. Almeida ; A. Tavares ; M. Ribeiro ; S. Ziaie ; R. Ferreira ; R. Bastos ; A. Teixeira</i>	

THB12 - EVALUATION OF THE HYBRID FTTX/VDSL2-VECTORING APPROACH IN AN ACCESS NETWORK	1592
<i>Vincenzo Attanasio ; Alessandro Valenti ; Francesco Persia ; Arianna Rufini ; Stefano Penna ; Donato Del Buono ; Giacomo Verticale ; Guido Maier</i>	
THB13 - OPEN FTTH NETWORKS AND DIGITAL HOME-CARE SERVICES: EXPERIENCES FROM THE CONNECTED FOR HEALTH PROJECT	1597
<i>Marco Forzati</i>	
THB14 - TECHNICAL AND MARKET FEASIBILITY OF HIGH-SPEED SOFTWARE-RECONFIGURABLE OOFDM/DFMA-BASED OPTICAL TRANSCEIVERS FOR NEXT GENERATION ACCESS NETWORK PONS	1603
<i>Richard M. Dorward ; Michael J. Anderson ; Roger P. Giddings</i>	
THB15 - LOW-COST 100 GBPS TRANSPORT SOLUTION BASED ON DCO-CFP AND G.657.A2 FIBRE FOR LONG-HAUL WDM TRANSMISSION	1607
<i>Erwan Pincemin ; Mengdi Song ; Yann Loussouarn ; Thierry Guillossou ; Noëlla Evanno ; Françoise Lissillour ; Louis-Anne De Montmorillon ; Pierre Sillard</i>	
THB16 - IMPACT OF NODE/FIBER/WSS DEGREES IN CREATING COST EFFECTIVE OXCS	1611
<i>Ken-Ichi Sato</i>	
THB21 - MINIMIZING LATENCY OF PERIODIC MONITORING TRAFFIC IN SMART BODY AREA NETWORKS (SMARTBANS)	1615
<i>Elaine Wong ; Lihua Ruan ; Maluge P. I. Dias</i>	
THB22 - DISPERSION AND OFF-SET FILTERING IN RSOA BASED NETWORKS	1619
<i>Eszter Udvary ; Ágoston Schranz ; Balázs Matoicsy</i>	
THB23 - FREQUENCY INVARIANCE IN A NEW ALLOCATION SCHEME FOR OPTICAL COMMUNICATIONS	1623
<i>János Ladvánszky</i>	
THB24 - EXPERIMENTAL COMPARISON OF SIMULTANEOUS TRANSMISSION OF LTE-A MULTI-BAND AND GIGABIT/S 4-PAM SIGNALS UP TO 50 M OF LARGE-CORE GRADED-INDEX POF	1629
<i>F. Forni ; Y. Shi ; H. P. A. Van Den Boom ; E. Tangdiongga ; A. M. J. Koonen</i>	
THB31 - ENERGY CONSUMPTION OF COMMUNICATION SYSTEMS USING INTEGRATED NANOPHOTONIC DEVICES	1633
<i>Gerardo Castanon ; Amir Atabaki ; Rajeev Ram</i>	
THB32 - OPTIMAL SUSTAINABLE MANAGEMENT OF BACKBONE NETWORKS	1639
<i>Lavinia Amorosi ; Luca Chiaraviglio ; Paolo Dell'Olmo ; Marco Listanti</i>	
THB33 - SERVER-CENTRIC PON DATA CENTER ARCHITECTURE	1643
<i>Ali Hammadi ; Taisir E. H. El-Gorashi ; Mohamed O. I. Musa ; Jaafar M. H. Elmirghani</i>	
THB34 - ENERGY EFFICIENT RESOURCE PROVISIONING WITH VM MIGRATION HEURISTIC FOR DISAGGREGATED SERVER DESIGN	1647
<i>Howraa M. Mohammad Ali ; Ali M. Al-Salim ; Ahmed Q. Lawey ; Taisir El-Gorashi ; Jaafar M. H. Elmirghani</i>	
THB35 - ENERGY-EFFICIENT SOFTWARE-DEFINED AWGR-BASED PON DATA CENTER NETWORK	1652
<i>Ali Hammadi ; Taisir E. H. El-Gorashi ; Jaafar M. H. Elmirghani</i>	
THB36 - A FRAMEWORK FOR ENERGY EFFICIENT NFV IN 5G NETWORKS	1657
<i>A. Al-Quzweeni ; A. Lawey ; T. El-Gorashi ; Jaafar M. H. Elmirghani</i>	
THB37 - NETWORK CODING FOR ENERGY EFFICIENCY IN BYPASS IP/WDM NETWORKS	1661
<i>Mohamed O. I. Musa ; Taisir E. H. El-Gorashi ; Jaafar M. H. Elmirghani</i>	
THB41 - SCALABLE NETWORK MANAGEMENT AND CONTROL FOR DYNAMIC AGILE OPTICAL FLOWS	1664
<i>V. W. S. Chan</i>	
THB42 - THE ACTION PROJECT: APPLICATION COORDINATING WITH TRANSPORT, IP AND OPTICAL NETWORKS	1665
<i>Naoaki Yamanaka ; Satoru Okamoto ; Yukihiko Imakiire ; Mai Arase ; Eiji Oki ; Malathi Veeraraghavan</i>	
THB43 - DYNAMIC OPERATION OF AN IP/MPLS-OVER-WDM NETWORK USING AN OPEN-SOURCE ACTIVE STATEFUL BGP-LS-ENABLED MULTILAYER PCE	1669
<i>Jose-Luis Izquierdo-Zaragoza ; Jose-Juan Pedreno-Manresa ; Pablo Pavon-Marino ; Oscar Gonzalez De Dios ; Victor Lopez</i>	
THB44 - NETWORK AND DATACENTER RESOURCE ORCHESTRATION STRATEGIES FOR MOBILE VIRTUAL NETWORKS OVER TELCO CLOUDS	1673
<i>B. Martini ; M. Gharbaoui ; I. Cerutti ; P. Castoldi</i>	
THB51 - BANDWIDTH ALLOCATION IN THE NEPHELE HYBRID OPTICAL INTERCONNECT	1677
<i>K. Christodoulououlos ; K. Kontodimas ; K. Yiannopoulos ; E. Varvarigos</i>	

THB52 - THE HI-RING ARCHITECTURE FOR DATACENTRE NETWORKS	1681
<i>Michael Galili ; Valerija Kamchevska ; Yunhong Ding ; Leif K. Oxenlowe</i>	
THB53 - RING VERSUS BUS TOPOLOGY: A NETWORK PERFORMANCE COMPARISON OF PHOTONIC INTEGRATED NOC	1685
<i>Isabella Cerutti ; Aman Mohammed Behredin ; Nicola Andriolli ; Odile Liboiron Ladouceur ; Piero Castoldi</i>	
THB54 - GREENING BIG DATA NETWORKS: VOLUME IMPACT	1689
<i>Ali M. Al-Salim ; Howraa M. Mohammad Ali ; Ahmed Q. Lawey ; Taisir El-Gorashi ; Jaafar M. H. Elmirghani</i>	
THB55 - PULSE AMPLITUDE MODULATION APPLIED TO EXTENDED PASSIVE OPTICAL POD INTERCONNECT, FOR SMALL ENERGY-AWARE DATA CENTERS	1695
<i>Bárbara Dumas Feris ; Philippe Gravey ; Marie-Laure Moulinard ; Pascal Morel ; Michel Morvan ; Ammar Sharaiha</i>	
THB61 - TRUE MID-INFRARED PR³⁺ ABSORPTION CROSS-SECTION IN A SELENIDE-CHALCOGENIDE HOST-GLASS	1699
<i>A. B. Seddon ; D. Furniss ; Z. Q. Tang ; L. Sojka ; T. M. Benson ; R. Caspary ; S. Sujecki</i>	
THB62 - NOVEL NANOMATERIAL-BASED SATURABLE ABSORBERS FOR ULTRASHORT-PULSED MID-INFRARED WAVEGUIDE CHIP LASERS	1705
<i>A. Fuerbach ; X. Jiang ; S. Gross ; H. Zhang ; Z. Guo ; F. Rotermund ; D. Yeom ; M. J. Withford</i>	
THB63 - MATERIALS APPROACHES TO MITIGATING PARASITIC EFFECTS IN OPTICAL NETWORKS: TOWARDS THE PERFECT OPTICAL FIBER	1708
<i>John Ballato ; Peter Dragic</i>	
THB64 - THE USE OF ION BEAM TECHNIQUES FOR THE FABRICATION OF INTEGRATED OPTICAL ELEMENTS	1712
<i>I. Bányász ; S. Berneschi ; M. Fried ; V. Havranek ; N. Q. Khanh ; G. U. L. Nagy ; A. Németh ; G. Nunzi-Conti ; S. Pelli ; I. Rajta ; C. Righini ; E. Szilágyi ; M. Veres ; Z. Zolnai</i>	
THB65 - CONCENTRATION DEPENDENCE OF THE INFRARED PHOTOLUMINESCENCE OF PR³⁺ IN FLUOROINDATE GLASSES	1716
<i>Sidney J. L. Ribeiro ; Gustavo Galleani ; Luis Fortes ; Danilo Manzani ; Rute A. S. Ferreira ; Luis D. Carlos</i>	
THB66 - PHOTOLUMINESCENCE SPECTROSCOPY OF RARE EARTH DOPED MATERIALS: WHY MEASURE AT THE QUANTUM LIMIT?	1719
<i>Roger Fenske ; Georgios Arnaoutakis</i>	
THC1 - CHALLENGES AND FUTURE TRENDS IN FIBER LASERS	1720
<i>S. Taccheo ; K. Schuster ; M. Ferrari ; A. Seddon ; M. Marciniak ; C. Taudt ; J. Troles ; G. Valentini ; D. Dorosz ; F. Prudeniano ; M. Jaeger ; C. Dandrea ; M. Ivanda ; A. Chiasera ; S. Sujecki ; V. Nazabal ; D. Comelli ; H. Baghdasaryan ; T. Baselt ; P. Hartmann ; A. Lucianetti ; P. Peterka ; A. Klotzbach ; J. -L. Adam ; H. Gebavi</i>	