

# **2023 23rd International Conference on Transparent Optical Networks (ICTON 2023)**

**Bucharest, Romania  
2-6 July 2023**

**Pages 1-607**



**IEEE Catalog Number: CFP23485-POD  
ISBN: 979-8-3503-0304-9**

**Copyright © 2023 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 is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP23485-POD
ISBN (Print-On-Demand):	979-8-3503-0304-9
ISBN (Online):	979-8-3503-0303-2
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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## TABLE OF CONTENTS

Nanoplasmonics as Enabler of Room-Temperature Quantum Nanophotonic Networks .....	1
<i>Ortwin Hess</i>	
Intelligent Network Slicing in the Multi-Access Edge Computing for 6G Networks .....	2
<i>Xavier Hesselbach</i>	
Towards 6G AI-Enabled Service Orchestration in the Cloud Continuum .....	6
<i>Gaetano Francesco Pittalà, Davide Borsatti, Gianluca Davoli, Walter Cerroni, Daniele Tarchi, Carla Raffaelli</i>	
A Scalable Data Collection System for Continuous State of Polarisation Monitoring .....	10
<i>Steinar Bjørnstad, Jameel Ali, Thomas Dreibholz, Erik Sæthre</i>	
TDEC Metric for 50G-PON Using Optical Amplification .....	14
<i>Mariacristina Casasco, Giuseppe Caruso, Ivan Cano, Annachiara Pagano, Roberto Mercinelli, Maurizio Valvo, Valter Ferrero, Roberto Gaudino</i>	
High-Speed IM/DD System Based on OTDM Technique for Next-Generation Datacenter Network .....	18
<i>M. S. Kim, S. H. Bae, J. W. Park, K. Yu, Y. C. Chung</i>	
Optical Interconnection for Datacenters: To Switch Or Not to Switch.....	21
<i>Jaume Comellas, Gabriel Junyent</i>	
Challenges and Opportunities of a Vastly Distributed Cloud Computing Infrastructure – in the Context of the Dong Shu Xi Suan (DSXS) Project of China .....	25
<i>Ruiyun Liu, Shengnan Yue, Junyi Shao, Shuai Zhang, Jiawen Zhu, Baojun Chen, Weiqiang Sun, Weisheng Hu</i>	
CC-IRAS: A Centralized-Control Intra-Rack Access Strategy for Optical Data Center Networks .....	29
<i>Peristera Baziana</i>	
Point-To-Multi-Point Coherent Optics on Data Processing Units (DPUs) for beyond-5G Low-Latency Applications .....	33
<i>Filippo Cugini, Mauro Agus, Marco Quagliotti, Emilio Riccardi, Carlos Castro, Bernhard Spinnler, Antonio Napoli</i>	
Comparison of Statistical and Machine Learning-Based Approaches for Telemetry Data Size Reduction .....	37
<i>Ahmad El Sayed, Marc Ruiz, Hassan Harb, Luis Velasco</i>	
Evaluations of 10Gbps/25Gbps Narrow Band DBR EMLs for 5G Smart Applications .....	41
<i>Mengxiao Li, Kun Shang, Jianfei Gu, Yuchao Zhang, Haikun Zhang, Yaping Zhang</i>	
Application of Linear Regression in Latency Estimation in Packet-Switched 5G xHaul Networks .....	45
<i>Mirosław Klinkowski, Jordi Perelló, Davide Careglio</i>	
Performance Analysis of Network Slicing in Packet-Switched 5G xHaul Access Network .....	49
<i>Damian Mrozinski, Mirosław Klinkowski, Krzysztof Walkowiak</i>	
Combining Random Forest and Linear Regression to Improve Network Traffic Prediction .....	53
<i>Blazej Ulanowicz, Dawid Dopart, Aleksandra Knapinska, Piotr Lechowicz, Krzysztof Walkowiak</i>	

Fabrication of Tapered Devices with Fluoride and Chalcogenide Optical Fibers for Mid-IR Applications.....	57
<i>Francesco Anelli, Andrea Annunziato, Antonella Maria Loconsole, Vincenza Portosi, Vito Vincenzo Francione, Mario Christian Falconi, Paul Le Pays Du Teilleul, Solenn Cozic, Samuel Poulain, Francesco Prudenzeno</i>	
Path Planning Algorithm for a Hybrid Wireless Sensor Network and UAV as Mobile Sink Considering Energy Constraints .....	61
<i>Leonardo C. Moro, Antonio S. Da Silva, Otávio A. R. Da Cruz, Juliano A. Da Silva, João Paulo J. Da Costa, Carlos E. Pereira, Alexey Vinel, Edison P. De Freitas, Kira Kastell</i>	
Radio Jamming in Vehicle-To-Everything Communication Systems: Threats and Countermeasures.....	65
<i>Antonio S. Da Silva, João Paulo J. Da Costa, Giovanni A. Santos, Zohair Miri, Muhammad I. B. M. Fauzi, Alexey Vinel, Edison P. De Freitas, Kira Kastell</i>	
Awareness Information Dissemination Using Aggregation into Collective Perception Messages for Connected Vehicles .....	69
<i>Jordi Marias I Parella, Jordi Casademont, Francisco Vázquez-Gallego, Elena Lopez-Aguilera</i>	
An Automotive Communication Bus Using OFDMA.....	73
<i>Matthias Koepp, Kai Habel, Volker Jungnickel</i>	
A Digital Twin for Enhanced Cybersecurity in Connected Vehicles .....	79
<i>Chiara Grasselli, Andrea Melis, Roberto Girau, Franco Callegati</i>	
Flexible Photonic Integrated Circuits: A New Paradigm to Process Data on-Board Satellites.....	83
<i>Mario Nicola Armenise, Annarita Di Toma, Giuseppe Brunetti, Nabarun Saha, Caterina Ciminelli</i>	
Standardization and Automation of Test Processes in the Production Flow of Integrated Photonics.....	84
<i>Sylwester Latkowski, Dzimitry Pustakhod, Ruud Jansen, Xaveer Leijtens, Kevin Williams</i>	
Calibration of a Photonic Neural Network Considering Fabrication Tolerances.....	88
<i>Onur Düzgöl, Manos Kirtas, Nikolaos Passalis, André Richter</i>	
Design and Fabrication Challenges of Integrated Optical Circuits for Quantum Computing Applications.....	92
<i>Simeon I. Tsintzos, Konstantinos Tsimvrakidis, Alexandra Sinani, Adonis Bogris, James C. Gates, Peter G. R. Smith, Ali W. Elshaari, Val Zwiller, Christos Riziotis</i>	
Direct Laser Writing of Photonic Waveguide Components in Polymer .....	96
<i>Tigran Baghdasaryan, Koen Vanmol, Francis Berghmans, Hugo Thienpont, Jürgen Van Erps</i>	
High-Baudrate Silicon Photonics Ring Resonator and Mach-Zehnder Modulators for Short-Reach Applications.....	100
<i>Oskars Ozolins, Armands Ostrovskis, Michael Koenigsmann, Toms Salgals, Benjamin Krüger, Fabio Pittalà, Ryan P. Scott, Hansjoerg Haisch, Hadrien Louchet, Aleksandrs Marinins, Sandis Spolitis, Jurgis Porins, Lu Zhang, Richard Schatz, Xianbin Yu, Vjaceslavs Bobrovs, Markus Gruen, Xiaodan Pang</i>	
High Data-Rate and Wideband Transmission in Single and Multi-Core Fibers .....	101
<i>Ben Puttnam, Ruben Luis, Georg Rademacher, Yoshinari Awaji, Hideaki Furukawa</i>	
The Nonlinear Fourier Transform and Its Extension to the Strong Coupling Multi-Mode Case.....	105
<i>Benedikt Leible, Norbert Hanik</i>	

Physics-Informed Neural Network for Fibre Channel Modelling in Optical Communication Systems.....	109
<i>Joshua Uduagbomen, Subhash Lakshminarayana, Zheng Liu, Mark S. Leeson, Tianhua Xu</i>	
Characterization of the Modal Distribution from Linear and Nonlinear Mode Coupling in Multimode Fibers .....	113
<i>Mario Zitelli, Mario Ferraro, Fabio Mangini, Stefan Wabnitz</i>	
Algorithms for the Nonlinear Fourier Transform in the Strong Coupling Multi-Mode Case.....	117
<i>Benedikt Leible, Norbert Hanik</i>	
Observing Disaggregated Cross-Channel NLI Generation in Dispersion-Managed Links .....	121
<i>Elliot London, Emanuele Virgillito, Andrea D'Amico, Vittorio Curri</i>	
High-Capacity and Ultra-Long-Haul Transmission Over Transoceanic Distances Using Coupled and Uncoupled 4-Core Fibers with Standard Cladding Diameter .....	125
<i>Masatoshi Suzuki, Daiki Soma, Shohei Beppu, Yuta Wakayama, Noboru Yoshikane, Takehiro Tsuritani</i>	
Effect of Core-Dependent Loss on the Intercore Crosstalk in Multicore Fiber Systems with Concatenated Random Loss Fiber Segments .....	129
<i>João L. Rebola, Adolfo V. T. Cartaxo</i>	
On the Use of Feedforward Neural Networks to Improve the Intercore Crosstalk Tolerance in Self-Coherent MCF Systems.....	133
<i>Tiago M. F. Alves, Derick Piedade, Tomás Brandão, João L. Rebola, Adolfo V. T. Cartaxo</i>	
Dispersion-Diversity Signal Processing in Space-Division Multiplexing Fibers .....	137
<i>Sergi García, Elham Nazemosadat, Mario Ureña, Ivana Gasulla</i>	
Advanced Resource Allocation Strategies for MCF-Based SDM-EONs: Crosstalk Aware and Machine Learning Assisted Algorithms.....	141
<i>Shrinivas Petale, Suresh Subramaniam</i>	
Self-Coherent Detection in Multicore Fiber Systems Impaired by Intercore Crosstalk .....	145
<i>Nelson J. Muga, Tiago M. F. Alves, Romil K. Patel, Isiaka A. Alimi, Armando N. Pinto, Adolfo V. T. Cartaxo</i>	
PILOT: A Methodology for Modeling the Performance of Packet Connections .....	149
<i>Jaume Comellas, Marc Ruiz, Luis Velasco</i>	
A Distributed Telemetry Architecture for Optical Networks .....	153
<i>Pol González, Luis Velasco, Marc Ruiz</i>	
Reinforcement Learning for Autonomous Traffic Flow Capacity Management .....	157
<i>Sima Barzegar, Marc Ruiz, Luis Velasco</i>	
Disaggregated Delay Modeling in Multidomain Networks.....	161
<i>Davide Careglio, Marc Ruiz, Luis Velasco</i>	
Latest Advances in Quartz Enhanced Photoacoustics Spectroscopy for Environmental and Industrial Applications.....	165
<i>Andrea Zifarelli, Giansergio Menduni, Marilena Giglio, Angelo Sampaolo, Pietro Patimisco, Hongpeng Wu, Lei Dong, Vincenzo Spagnolo</i>	

Partial Least Squares and Partial Least Squares-Discriminant Analysis to Detect and Quantify Adulterations in Olive Oil Using Optical Methods of Analysis. a Comparative Study Between NIR and UV-Vis Spectroscopy.....	168
<i>D. Castro, M. C. Ortiz, S. Sanllorente, I. García, I. Ayesta, M. Azkune, J. Zubia</i>	
Photonic Multilayers for Broadband and Large Area Superchiral Surface Waves .....	172
<i>Giovanni Pellegrini, Erika Moggi, Jorge Gil-Rostra, Francisco Yubero, Giuseppina Simone, Stefan Fossati, Jakub Dostálek, Rebeca Martínez Vázquez, Roberto Osellame, Michele Celebrano, Marco Finazzi, Paolo Biagioni</i>	
From Smart Materials for Space Industry to Soil Temperature Gauges for Climate Change Monitoring: A Review of New Applications of Distributed Optical Fiber Sensors.....	176
<i>Lukasz Szostkiewicz</i>	
Integrated Microwave Photonic Signal Processing and Sensing .....	179
<i>R. A. Minasian, X. Yi</i>	
Silicon Photonics for Millimeter-Wave Band Signal Generation .....	183
<i>Claudio Porzi, Antonio Malacarne, Filippo Scotti, Mirco Scaffardi, Paolo Ghelfi, Antonella Bogoni</i>	
Integrated Microwave Photonics: A Chip Platform by Hybrid Integration of InP and SiN TriPLeX .....	187
<i>Chris Roeloffzen, Peter Maat, Ilka Visscher, Marcel Hoekman, Lennart Wevers, Edwin Klein, Paul Van Dijk, Roelof Bernardus Timens, Robert Grootjans, Furkan Sahin, Rick Heuvink, Ronald Dekker</i>	
Microwave-Based Remote Bio-Sensing Behind Walls .....	191
<i>Ohad Meshulam, Nisan Ozana, Dan Scheffer, Shlomo Zach, Zeev Zalevsky</i>	
Experimental Characterization of a MMW Signal Generation Approach Based on Optical Phase Modulation and Optical Filtering for Data Transmission Over a Directly Modulated Laser .....	195
<i>M. Botella-Campos, J. Mora, B. Ortega</i>	
Pulsed Fluoride Glass Fibre Lasers Operating Near 3 $\mu\text{m}$ .....	199
<i>Slawomir Sujecki, Lukasz Sójka, Lukasz Pajewski, Sendy Phang, Mark Farries, David Furniss, Emma Barney, Trevor Benson, Angela Seddon, Samir Lamrini</i>	
Transparent Ceramic Films for Short- And Mid- Infrared Lasers .....	203
<i>Jan Mrázek, Ondrej Podrazký, Jan Aubrecht, Ivo Barton, Yauhen Baravets, Jana Proboštová</i>	
Thulium Cross Sections Temperature Dependence and Its Effect on Fiber Laser Operation.....	207
<i>Pavel Peterka, Bára Jiricková, Ondrej Schreiber, Martin Grábner</i>	
Fabrication of a Cr <sup>4+</sup> : YAG Crystal Fiber and Its Use in a Mode-Locked All-Fiber Laser Source.....	211
<i>Kai-Chieh Chang, Chun-Nien Liu, Sheng-Lung Huang, Wood-Hi Cheng</i>	
Design of a Pr <sup>3+</sup> :InF <sub>3</sub> Fiber Laser Pumped in near-IR and Emitting at 4 Micron Wavelength .....	215
<i>Antonella Maria Loconsole, Andrea Annunziato, Francesco Anelli, Vito Vincenzo Francione, Vincenza Portosi, Mario Christian Falconi, Francesco Prudenzano</i>	
High-Speed Random Number Generation and Key Distribution in Fiber Networks Using Amplified Spontaneous Emission.....	219
<i>Xinran Huang, Zhi Chai, Mingye Li, Liuming Zhang, Zanwei Shen, Weiqiang Sun, Xuelin Yang</i>	

Time-Expanded in Distributed Optical Fiber Sensing.....	223
<i>Miguel Soriano-Amat, Hugo F. Martins, Vicente Durán, Sonia Martin-Lopez, Miguel Gonzalez-Herraez, María R. Fernández-Ruiz</i>	
Detection, Localization and Emulation of Environmental Activities Using SOP Monitoring of IMDD Optical Data Channels .....	227
<i>Emanuele Virgillito, Stefano Straullu, Francesco Aquilino, Rudi Bratovich, Hasan Awad, Roberto Proietti, Andrea D'Amico, Rosanna Pastorelli, Vittorio Curri</i>	
Optical Combining in Medium Infrared Wavelength Range and Its Applications .....	231
<i>Andrea Annunziato, Francesco Anelli, Antonella Maria Loconsole, Mario Christian Falconi, Vincenza Portosi, Vito Vincenzo Francione, Francesco Prudeniano</i>	
Pressure-Induced Long-Period Gratings in Multi-Core Fibers.....	235
<i>Liliana M. Sousa, Ricardo Oliveira, Rogério N. Nogueira, Ana M. Rocha</i>	
Maximizing Performance of SiN Bragg Filters for TE/TM Polarization Through Non-Coherent Cascading for Ultra-High Rejection .....	239
<i>David E. Medina-Quiroz, Quentin Wilmart, Olivier Ségolène, Sylvain Guerber, Sébastien Tanzilli, Laurent Vivien, Laurent Labonté, Éric Cassan, Carlos Alonso-Ramos</i>	
Colour Centres in Aluminium Nitride Are Bright, Room-Temperature Quantum Light Sources.....	243
<i>Joseph K. Cannon, Sam G. Bishop, Yanzhao Guo, H. Bilge Yagci, Rachel N. Clark, John P. Hadden, Anthony J. Bennett</i>	
Silicon Nitride Integrated Quantum Photonics.....	245
<i>Khaled Mnaymneh, Edith Yeung, David B. Northeast, Jeongwan Jin, Patrick Laferrière, Sofiane Haffouz, Philip J. Poole, Dan Dalacu, Robin L. Williams</i>	
Bright Multimode Entanglement Out of a SiN Microring .....	248
<i>A. Bensemhoun, V. D'Auria, M. Melalkia, G. Esposito, Y. Désières, S. Guerber, Q. Wilmart, K. Roux, S. Olivier, A. Zavatta, C. Gonzalez-Arciniegas, O. Pfister, A. Martin, J. Etesse, L. Labonté, G. Patera, S. Tanzilli</i>	
Intent-Based Networking for Zero-Touch Optical Networking.....	250
<i>Sima Barzegar, Marc Ruiz, Luis Velasco</i>	
Dynamic Drift-Adaptive Ensemble-Based Quality of Transmission Classification Framework in OTN.....	254
<i>Huy Quang Tran, Javier Errea, Van-Quan Pham, Dominique Verchere, Adlen Ksentini, Djamel Zeghlache</i>	
Using SHAP Values to Validate Model's Uncertain Decision for ML-Based Lightpath Quality-of-Transmission Estimation .....	258
<i>Hadi Houssiany, Omran Ayoub, Cristina Rottondi, Andrea Bianco</i>	
Iterative Transfer Learning Approach for QoT Prediction of Lightpath in Optical Networks.....	263
<i>Hafsa Tariq, Fehmida Usmani, Ihtesham Khan, Muhammad Umar Masood, Arsalan Ahmad, Vittorio Curri</i>	
Knowledge Distillation-Based Compression Model for QoT Estimation of an Unestablished Lightpaths.....	267
<i>Fehmida Usmani, Ihtesham Khan, Muhammad Umar Masood, Arsalan Ahmad, Vittorio Curri</i>	
Stabilization of Laser Emission by non-Hermitian Potentials .....	271
<i>R. Herrero, S. B. Ivars, M. Botey, K. Staliunas</i>	

Lasing Threshold in Nanolasers with Extreme Dielectric Confinement .....	275
<i>Marco Saldutti, Yi Yu, Jesper Mørk</i>	
Optical Properties of Some Selected Organometallic Compounds.....	278
<i>A. Aamoum, S. Taboukhat, Y. El Kouari, A. Zawadzka, A. Andrushchak, B. Sahraoui</i>	
Self-Cleaning in non-Hermitian Linear Multimode Fibers .....	282
<i>M. N. Akhter, S. B. Ivars, R. Herrero, K. Staliunas, M. Botey</i>	
Cascade PI Constant Current Regulator for High Power Infrared Laser Diode Bars .....	285
<i>Mihnea-Antoniou Covaci, Ramona Voichita Galatus, Lorant Andras Szolga</i>	
Intensity Noise of Gain-Switched Quantum Dot Laser Based on Multi-Population Rate Equations .....	289
<i>Nuran Dogru, Hilal S. Duranoglu Tunc, Erkan Cengiz</i>	
Super-Resolved Non-linear Optical Microscopy: Architectures, Advantages and Perspectives .....	293
<i>Stefan G. Stanciu, Radu Hristu, George A. Stanciu, Denis E. Tranca, Lucian Eftimie, Adrian Dumitru, Mariana Costache, Harald A. Stenmark, Juan M. Bueno, Paolo Bianchini, Erik M. M. Manders</i>	
Surface Roughness and Optical Characterization of Nanoporous Silver Films Synthesized by One-Step Dealloying .....	294
<i>Stefan R. Anton, Engang Fu, Denis E. Tranca, Stefan G. Stanciu, Antonela Toma, Charles V. Sammut, Zhaoyi Hu, George A. Stanciu</i>	
Collagen Organization in Second Harmonic Generation Images for the Assessment of Thyroid Nodule Capsular Invasion .....	298
<i>Radu Hristu, Stefan G. Stanciu, Denis E. Tranca, Lucian G. Eftimie, Adrian Enache, George A. Stanciu</i>	
Investigations on Liquid Crystal Embedded CdTe Quantum Dots with Spectrally Resolved Confocal Laser Scanning Microscopy.....	302
<i>Cristina Cirtoaje, Stefan R. Anton, Vladislav Ghidic, Stefan G. Stanciu</i>	
Recent Advances in Mid-Infrared Fluoroindate Fiber Lasers.....	303
<i>Mario Christian Falconi</i>	
Rare-Earth-Doped Silica Optical Fibers and All-Fiber Lasers Operating in the 2- $\mu$ m Spectral Range.....	309
<i>Filip Todorov, Michal Kamrádek, Ivan Kašík</i>	
Harnessing Vector Multi-Pulsing Soliton Dynamics .....	313
<i>S. V. Sergeev, H. Khashi, C. Mou</i>	
Rate Splitting for 6G Optical Wireless Networks.....	317
<i>Khulood D. Alazwary, Ahmad Adnan Qidan, T. E. H. El-Gorashi, Jaafar M. H. Elmirghani</i>	
Random Linear Network Coding for Non-Orthogonal Multiple Access in Multicast Optical Wireless Systems.....	322
<i>Ahmed Ali Hassan, Ahmad Adnan Qidan, Taisir Elgorashi, Jaafar Elmirghani</i>	
Multiuser Beam Steering OWC System Based on NOMA .....	327
<i>Y. Zeng, Sanaa H. Mohamed, Ahmad Qidan, Taisir E. H. El-Gorashi, Jaafar M. H. Elmirghani</i>	
Relay Assisted Multiuser OWC Systems Under Human Blockage.....	332
<i>Y. Zeng, Sanaa H. Mohamed, Ahmad Qidan, Taisir E. H. El-Gorashi, Jaafar M. H. Elmirghani</i>	



Using Control Signals to Obtain Synchronization of Transmitters in Indoor VLC Systems.....	337
<i>Safwan Hafeedh Younus</i>	
Mobility Management for Indoor VLC Systems.....	341
<i>Safwan Hafeedh Younus</i>	
AI-Driven Resource Allocation in Optical Wireless Communication Systems.....	346
<i>Abdelrahman S. Elgamal, Osama Z. Aletri, Barzan A. Yosuf, Ahmad Adnan Qidan, Taisir El-Gorashi, Jaafar M. H. Elmirghani</i>	
Resource Allocation in IRS-Aided Optical Wireless Communication Systems.....	351
<i>Ahrar N. Hamad, Ahmad Adnan Qidan, Taisir E. H. El-Gorashi, Jaafar M. H. Elmirghani</i>	
Scaling of the Number of Modes in Mode Division Multiplexing Systems.....	356
<i>Filipe M. Ferreira, Fabio A. Barbosa, Rekha Yadav, Zun Htay</i>	
Single-Pixel Imaging: Concepts and Application to Imaging Through Scattering Media.....	360
<i>Pedro G. Vaz, Beatriz Guerra, João Cardoso</i>	
Perspectives for Co-Packaged Optics in Radio Access Networks.....	369
<i>Antonio Tartaglia, Fabio Cavaliere, Mikael Lostedt, Alessandra Bigongiari, Alfredo Palagi, Ulf Parkholm, Anna Tavemark, Stefano Stracca, Antonio D'Errico, Stephane Lessard, Mats Johansson</i>	
Reconfigurable MCF-SDM Designs for 5/6G RAN and PON with Optical Feeding Capability.....	376
<i>Fahad M. A. Al-Zubaidi, R. Altuna, J. D. Lopez Cardona, D. S. Montero, C. Vázquez</i>	
Influence of Frequency Mapping on Intermodulation Distortion in an SOA-Based Optical Fronthaul C-RAN Architecture for 5G Communications.....	380
<i>Mahdi Kasmi, Pascal Morel, Mihai Telescu, Vincent Choqueuse, Noël Tanguy, Stéphane Azou</i>	
Is the Digital Twin of the Optical Transport the Enabler for Multi-Band Open and Disaggregated Optical Networks?.....	384
<i>Vittorio Curri</i>	
Accurate Representation of Signal Power Spectral Density in the Optical Network Emulation (ONE) Engine.....	388
<i>Aparaajitha Gomathinayakam Latha, Muhammad Ridwanur Rahim, Tianliang Zhang, Rongqing Hui, Andrea Fumagalli</i>	
Autonomous Equalization of Independent Open ROADMs Via NETCONF Protocol .....	392
<i>Renato Ambrosone, Rocco D'Ingillo, Giacomo Borraccini, Stefano Straullu, Andrea D'Amico, Emanuele Virgillito, Alessio Giorgetti, Vittorio Curri</i>	
A Comprehensive Network Performance Analysis of Multi-Band Photonic Integrated WSS for 400G and 800G Transmission .....	396
<i>Muhammad Umar Masood, Lorenzo Tunesi, Ihtesham Khan, Bruno Correia, Enrico Ghillino, Paolo Bardella, Andrea Carena, Vittorio Curri</i>	
Influence of the ROADM Architecture on the Cost-Per-bit in C+L+S Multi-band Optical Networks .....	400
<i>João Frederico Ó Ramos, Luís Cancela, João Rebola</i>	
Impact of Network Physical Topology on Planning Multiband Optical Networks Aware of Physical Layer Impairments.....	404
<i>Margarida Vaz, Luís Cancela, João Rebola</i>	

Next-Generation InP Technology for High-Demand Communication Networks and Emerging Applications.....	408
<i>Yi Wang, Sylwester Latkowski, Ekaterina Panina, Jos Van Der Tol, Kevin Williams, Yuqing Jiao</i>	
Experimental Study of Quantum Random Number Generation Using Polarization Switching in Gain-Switched VCSELs .....	412
<i>I. Rivero, M. Valle-Miñón, A. Quirce, A. Valle</i>	
Investigation of Material Properties for Use in UV Metasurfaces.....	416
<i>Leonid Yu. Beliaev, Mads Hagen Jakobsen, Evgeniy Shkondin, Pernille Voss Larsen, Andrei Lavrinenko, Radu Malureanu</i>	
The Poynting Vector in Light-Emitting Multilayer Micro/Nanostructures: Wavelength-Scale Analysis by the Method of Single Expression.....	420
<i>Hovik V. Baghdasaryan, Tamara M. Knyazyan, Tamara T. Hovhannisyan, Marian Marciniak, Tigran Baghdasaryan</i>	
Low-Energy Electronic States in Tubular Wires .....	424
<i>Anna Sitek, Andrei Manolescu</i>	
Energy Efficiency in Next-Generation Optical Networks .....	428
<i>N. Sambo, C. Castro, N. Costa, P. Castoldi, A. Napoli</i>	
Energy Efficient Resource Allocation for Demand Intensive Applications in a VLC Based Fog Architecture .....	432
<i>Wafaa B. M. Fadlelmula, Sanaa H. Mohamed, Taisir E. H. El-Gorashi, Jaafar M. H. Elmirghani</i>	
Energy Efficient Laser-Based Optical Wireless Communication Networks.....	438
<i>Walter Zibusiso Ncube, Ahmad Adnan Qidan, Taisir El-Gorashi, Jaafar M. H. Elmirghani</i>	
Superoscillating Signal Transmission Over Dispersive Media.....	442
<i>Y. Ben-Ezra, B. I. Lembrikov</i>	
Digital Signal Processing for Optical Phase Conjugation Assisted Coherent Systems .....	446
<i>Long H. Nguyen, Tu T. Nguyen, Andrew D. Ellis, Stylianos Sygletos, Sonia Boscolo</i>	
Entanglement Assisted MIMO Quantum Radars.....	450
<i>Ivan B. Djordjevic</i>	
Experimental Investigation of Phase-Space Portraits of Ideal Four-Wave Mixing .....	454
<i>Anastasiia Sheveleva, Andrei Ermolaev, Pierre Colman, John M. Dudley, Christophe Finot</i>	
Fiber Dispersion and Nonlinearity Compensation by Multiple Optical Phase Conjugation .....	458
<i>Yizhao Jia, Norbert Hanik</i>	
Quantum-Optical Principle for Photons/Bosons, Equivalent to Pauli's Exclusion Principle .....	464
<i>Markus Pollnau</i>	
Spatial Fano Resonance and Its Implication for a Glass Microsphere .....	468
<i>Vasily Klimov, Reza Heydarian, Constantin R. Simovski</i>	
Entangled Pairs of Photons for Squeezed Light: Generation and Application .....	472
<i>Marija Curcic, Dušan Arsenovic, Brana Jelenkovic</i>	

Efficient Generation of Squeezed Light Via Spontaneous Four-Wave Mixing in Integrated Structures.....	475
<i>Alice Viola, Luca Zatti, Marco Liscidini</i>	
Threshold Quantum State Tomography.....	479
<i>Diego Maragnano, Daniele Binosi, Giovanni Garberoglio, Claudio Cusano, Maurizio Dapor, Marco Liscidini</i>	
Practical Spectral Efficiency Estimation for Optical Networking.....	483
<i>Joan M. Gené, Jordi Perello, Junho Cho, Salvatore Spadaro</i>	
Evaluating the Impact of the Guard Band Width on the Benefits of Probabilistic Constellation Shaping in Future Flex-Grid Over Multicore Fibre Optical Backbone Networks.....	487
<i>Jordi Perelló, Joan M. Gené, Junho Cho, Salvatore Spadaro</i>	
Performance of Defragmentation Approach Based on Route Partitioning in 1+1 Protected Elastic Optical Networks.....	491
<i>Eiji Oki, Bijoy Chand Chatterjee</i>	
PDavXT: Partition-Based Crosstalk-Avoided Defragmentation Scheme for Spectrally-Spatially Elastic Optical Networks.....	495
<i>Rushil Khantwal, Vinay Kumar, Eiji Oki, Bijoy Chand Chatterjee</i>	
Large Nonlinear Efficiency Enhancement in the Visible and UV Range from Plasmonic Gold Nanogratings.....	499
<i>C. Cojocaru, S. Mukhopadhyay, L. Rodriguez-Suné, M. A. Vincenti, R. Vilaseca, M. Scalora, J. Trull</i>	
Nanostructured Fiber Optics for High Sensitivity, Minimally Invasive, Spatially-Resolved, Plasmonic Diagnosis and Therapeutics.....	503
<i>Liam Collard, Filippo Pisano, Di Zheng, Antonio Balena, Muhammad Fayyaz Kashif, Marco Pisanello, Barbara Spagnolo, Rosa Mach-Batlle, Antonella D'Orazio, Francesco De Angelis, Manuel Valiente, Liset M De La Prida, Cristian Ciraci, Marco Grande, Ferruccio Pisanello, Massimo De Vittorio</i>	
Electrical Manipulation of Plasmonic Relaxation and the Application of Voltage-Modulated Plasmon Resonance to Biosensing.....	507
<i>Kuntal Barman, Syu-Cing Ma, Rohit Gupta, Liang-Yun Lee, Jian-Jang Huang</i>	
Analysis of Plasmonic Interactions in Nonlocal and Nanosnowman Structures.....	511
<i>Pavel Kwiecien, Milan Burda, Premysl Klajs, Lucie Marešová, Ivan Richter</i>	
Generation of Hot Surface Plasmons in Graphene by a Powerful Optical Beam.....	517
<i>Rui Dias, Diogo Cunha, Mikhail Vasilevskiy</i>	
Overcoming Silicon Limitations Short Review: How Geometrical Innovation Can Revolutionize Nanophotonics and Nanoelectronics.....	521
<i>Avi Karsenty</i>	
Photothermal Efficiency of Gold Nanoparticles Using CW Z-Scan Technique in the Visible Range.....	525
<i>Georges Boudebs, Julien-Bilal Zinoune, Christophe Cassagne, Mathieu Loumagne, Mihaela Chis, Martinus H. V. Werts</i>	
Mechanical and Optical Investigations of Cr Thin Films Deposited on Si Substrate.....	529
<i>Denis E. Tranca, Arcadie Sobetkii, Radu Hristu, Stefan R. Anton, Stefan G. Stanciu, Efsthathios Fiorentis, Eugeniu Vasile, Cosmin K. Banica, George A. Stanciu</i>	

Multi-Sensor Scanners and Machine-Learning Data Processing: A Novel Instrumentation and Data Analysis Method in Heritage Science.....	533
<i>Raphael Moreau, Thomas Calligaro, Sorin Hermon</i>	
Experimental Demonstration and Results of Cross-Layer Monitoring Using OpenNOP: An Open Source Network Observability Platform .....	542
<i>Nathan Ellsworth, Sebastian Troia, Tianliang Zhang, Marco Tacca, Guido Maier, Andrea Fumagalli</i>	
Cost-Efficient Capacity Scaling Using Multi-Wavelength Transponders and Adaptive Modulation .....	546
<i>Jasper Müller, Gabriele Di Rosa, Achim Autenrieth, Jörg-Peter Elbers, Carmen Mas-Machuca</i>	
High-Speed Continuous-variable Quantum Key Distribution with Advanced Digital Signal Processing.....	550
<i>Matteo Schiavon, Yoann Piétri, Luis Trigo Vidarte, Damien Fruleux, Manon Huguenot, Baptiste Gouraud, Amine Rhouni, Philippe Grangier, Eleni Diamanti</i>	
CV-QKD Design for Network Integration.....	556
<i>Hans H. Brunner, Chi-Hang Fred Fung, Momtchil Peev</i>	
Efficient Solutions for Quantum Secure Communications in Future Optical Networks .....	560
<i>Michela Svaluto Moreolo, Masab Iqbal, Laia Nadal, Raul Muñoz</i>	
Quantum Virtual Link Generation Via Reinforcement Learning.....	564
<i>Ramon Aparicio-Pardo, Antoine Cousson, Redha A. Alliche</i>	
Multi-Dimensional Reconciliation Encoder with Quasi-cyclic LDPC Codes on FPGA.....	568
<i>M. Origlia, N. Andriolli, L. Maggiani, P. Castoldi, M. Secondini, E. Forestieri, T. Rydberg, T. Gehring</i>	
ML-Aided SOP Compensation to Increase Key Exchange Rate in QKD Systems .....	572
<i>Morteza Ahmadian, Marc Ruiz, Jaume Comellas, Luis Velasco</i>	
Secure Optical Communications Based on Fast Cryptography.....	577
<i>Luis Velasco, Masab Iqbal, Marc Ruiz</i>	
Reliable Quantum Communication .....	581
<i>Masab Iqbal, Morteza Ahmadian, Luis Velasco, Marc Ruiz</i>	
Using a SNR Digital Twin for Failure Management .....	585
<i>Luis Velasco, Sima Barzegar, Marc Ruiz</i>	
Extending the OCATA Digital Twin to the Frequency Domain .....	589
<i>M. Devigili, M. Ruiz, N. Costa, C. Castro, A. Napoli, J. Pedro, L. Velasco</i>	
Advanced Photodetectors, Sensors and Energy Harvesting Devices.....	593
<i>Jean-Michel Nunzi</i>	
Automatization Steps for Laser Direct Writing .....	594
<i>Reinhard Caspary, Lei Zheng, Axel Günther, Bernhard Roth</i>	
Phase-Matched Magnetization-Induced Second-Harmonic Generation in Epitaxial Iron Garnet Thin Films.....	597
<i>D. Guichaoua, I. Syvorotka, N. Syvorotka, R. Wielgosz, A. Andrushchak, H. El Karout, B. Sahraoui</i>	

Selected Lanthanide Complexes for Nonlinear Optical Applications .....	601
<i>H. El Karout, A. Andrushchak, Z. Sofiani, Y. El Kouari, B. Sahraoui</i>	
Highlighting Cerebral Metastases Using Two-Photon Microscopy.....	605
<i>Adrian Enache, Lucian G. Eftimie, Radu Hristu, Ana-Maria Graur, Remus R. Glogojeanu, Maria Sajin, George A. Stanciu</i>	
Advances in Optical Coherence Tomography .....	608
<i>Adrian Podoleanu</i>	
Applications of Phasor Data Analysis on Scattering Scanning Near-Field Optical Microscopy Investigations.....	609
<i>Denis E. Tranca, Arcadie Sobetkii, Radu Hristu, Stefan G. Stanciu, Catalin Stoichita, George A. Stanciu</i>	
Advances and Overcoming Challenges in Tomographic Diffractive Microscopy.....	613
<i>Bertrand Simon, Nicolas Verrier, Matthieu Debailleul, Olivier Haeberlé</i>	
Influence of Deposition Time on the Opto-Electronic Properties of 400 °C Annealed ITO Thin Films Deposited by DC Magnetron Sputtering .....	617
<i>Iulian Iordache, Arcadie Sobetkii, Elena Chitanu, Gabriela Beatrice Sbarcea, Virgil Marinescu, Cristina Antonela Banciu, Delia Patroi</i>	
Nonlinear Conversion in Cavity-Resonator Integrated Grating Filters .....	624
<i>S. Calvez, F. Renaud, E. Hemsley, A. Monmayrant, O. Gauthier-Lafaye, E. Popov, A.-L. Fehrembach</i>	
The 6th Generation Fixed Network (F6G): Vision and Directions.....	628
<i>Marcus Brunner</i>	
Multi-RAT Fiber-Wireless Technologies Towards 6G Networks .....	632
<i>Chris Vagionas, Ronis Maximidis, Konstantina Kanta, Panagiotis Toumasis, Giannis Giannoulis, Dimitris Apostolopoulos, George Kalfas, Marios Gatzianas, Agapi Mesodiakaki, Hercules Avramopoulos, Amalia Miliou, Nikos Pleros</i>	
F5G OpenLab: Enabling Twin Transition Through Ubiquitous Fiber Connectivity .....	636
<i>Mihail Balanici, Behnam Shariati, Pooyan Safari, Paul Chojecki, Moritz Chemnitz, David Przewozny, Johannes Karl Fischer, Ronald Freund</i>	
FDMA in Point-To-Multipoint Fibre Access Systems for Non-Residential Applications .....	640
<i>Ivan N. Cano, Giuseppe Caruso, Jinlong Wei, Giuseppe Talli, Christian Bluemm, Stefano Calabro, Heinrich Von Kirchbauer, Ullrich Wuensche, Pablo Leyva, Huang Rongfang, Kuo Zhang, Zhicheng Ye</i>	
Point-To-multipoint Coherent Transceivers for Next-Generation Mobile Transport.....	644
<i>Carlos Castro, Antonio Tartaglia, Roberto Magri, Bernhard Spinnler, João Pedro, Antonio Napoli</i>	
Oblivious Keys for Secure Multiparty Computation Obtained from a CV-QKD.....	650
<i>Armando N. Pinto, Manuel B. Santos, Nuno A. Silva, Nelson J. Muga, Paulo Mateus</i>	
BB84 Decoy-State QKD Protocol Over Long-distance Optical Fiber .....	654
<i>Giulia Guarda, Domenico Ribezzo, Daniela Salvoni, Ciro Bruscano, Pasquale Ercolano, Mikkel Ejrnaes, Loredana Parlato, C. Zhang, H. Li, L. You, Ilaria Vagniluca, Claudia De Lazzari, Tommaso Occhipinti, Giovanni Piero Pepe, Alessandro Zavatta, Davide Bacco</i>	

An FPGA-Based Physical Layer Approach for a CV-QKD Transmitter .....	658
<i>Gustavo Anjos, Margarida Almeida, José Martins, Nuno A. Silva, Nelson J. Muga, Armando N. Pinto</i>	
Advances on the Feasibility Analysis of Underwater Optical Communications .....	662
<i>Marco Pinel, Sebastiano Cocchi, Claudia De Lazzari, Marco Menchetti, Tommaso Occhipinti, Alessandro Zavatta, Davide Bacco</i>	
AI-Assisted Polarization Basis Alignment for Quantum Key Distribution System Receivers .....	666
<i>Sara T. Mantey, Nuno A. Silva, Armando N. Pinto, Nelson J. Muga</i>	
Free-Space QKD Link Supported by AI Algorithm .....	670
<i>Sebastiano Cocchi, Claudio Pereti, Giulia Guarda, Domenico Ribezzo, Marco Pinel, Marco Menchetti, Claudia De Lazzari, Tommaso Occhipinti, Alessandro Zavatta, Davide Bacco</i>	
Optical Network Traffic Analysis Under B5G/6G RAN Operation .....	674
<i>Shaoxuan Wang, Marc Ruiz, Luis Velasco</i>	
CURSA-SQ Models for Time-Sensitive Networking .....	678
<i>Marc Ruiz, Davide Careglio, Luis Velasco</i>	
SSMS: A Split Step MultiBand Simulation Software .....	682
<i>P. Khare, N. Costa, J. Pedro, A. Napoli, F. Arpanaei, J. Comellas, M. Ruiz, L. Velasco</i>	
Predicting Loss in Optical Transport Segments: A GNN-GRU Approach for a Nationwide Optical Network .....	686
<i>F. Donnangelo, I. Bianchi, A. Rodríguez, A. Castro</i>	
Fibre Optic Sensor Systems Without Using Spectral Analysis .....	690
<i>Trevor Benson, Jacek Palmowski, Natalia Kubicka, Franek Golek, Luke Benson, Sindy Phang, Elzbieta Beres-Pawlik</i>	
Simultaneous Study of Fluorescence and Transmission Based on a Sensor with a Doped Optical Fibre .....	694
<i>Natalia Kubicka, Franciszek Golek, Jacek Palmowski, Sindy Phang, Trevor Benson, Elzbieta Beres-Pawlik</i>	
Tuning Oxide Nanoparticles in Optical Fibers .....	698
<i>Zhuorui Lu, Martiane Cabié, Malgorzata Guzik, Michèle Ude, Thomas Neisius, Daniele Tosi, Carlo Molardi, Franck Mady, Mourad Benabdesselam, Franck Pigeonneau, Wilfried Blanc</i>	
Fiber Interferometric Sensors for Monitoring the Telecom Infrastructure Integrity .....	702
<i>M. Fasano, M. Brunero, A. Madaschi, J. Morosi, M. Ferrario, P. Boffi</i>	
Optical Fiber Sensors Based on Lossy Mode Resonances (LMRs): Fundamentals and Recent Developments .....	706
<i>J. J. Imas, Ignacio Del Villar, Carlos R. Zamarreño, Ignacio R. Matías</i>	
Fiber Photometry with Tapered Optical Fibers: Exploiting Mode-Division to Gain Depth-Resolution in Brain Tissue .....	710
<i>Marco Bianco, Marco Pisanello, Antonio Balena, Filippo Pisano, Maria Samuela Andriani, Cinzia Montinaro, Leonardo Sileo, Barbara Spagnolo, Massimo De Vittorio, Ferruccio Pisanello</i>	

Resonant Multi-Dielectric Coverslip for Enhanced Total Internal Reflection Fluorescence Microscopy.....	718
<i>Y. Toumi, A. Mouttou, F. Lemarchand, G. Demesy, C. Koc, D. Muriaux, A. Moreau, J. Lumeau, C. Favard, A. L. Lereu</i>	
Micro-Fabricated Optics for Multiphoton Microscopy .....	721
<i>R. Martínez Vázquez, A. Nardini, C. Conci, E. Jacchetti, M. Marini, D. Panzeri, L. Sironi, M. Bouzin, M. Collini, D. Inverso, B. S. Kariman, E. Kabouraki, M. Farsari, R. Osellame, G. Cerullo, M. T. Raimondi, G. Chirico</i>	
Second Harmonic Generation Microscopy of the Living Human Eye: Limitations, Performance and Image Improvement.....	724
<i>Juan M. Bueno, Rosa M. Martínez-Ojeda, Francisco J. Ávila, Pablo Artal</i>	
Third Order Nonlinear Optical Correlators in a 4f Configuration .....	728
<i>Julien-Bilal Zinoune, Mihaela Chis, Georges Boudebs</i>	
Holographic and Nonlinear Optical Study of Natural Photonic Structures: Where Biology Meets Physics.....	732
<i>Marina Simovic Pavlovic, Bojana Bokic, Charlotte Verstraete, Darko Vasiljevic, Sébastien R. Mouchet, Thierry Verbiest, Branko Kolaric</i>	
SOA-Based Optical Networks with Sub-Microsecond Control Plane for Low-Latency Applications.....	736
<i>Henrique Santana, Ali Mefleh, Nicola Calabretta</i>	
Band Evaluation of Coherent udWDM-PON with Paired Lasers.....	740
<i>Josep Segarra, Vicent Sales, Josep Prat</i>	
PIC-Based Transceiver for Access Networks: Package and Functionalities Verification Towards a Commercial Solution.....	744
<i>Francisco Rodrigues, João Santos, Carla Rodrigues, Hugo Neto, António Teixeira</i>	
Optical DACs for Ultra-High-Speed Green Photonic Interconnects .....	748
<i>Moshe Nazarathy, Ioannis Tomkos</i>	
The Madrid Testbed: QKD SDN Control and Key Management in a Production Network.....	752
<i>V. Martín, J. P. Brito, L. Ortiz, R. Brito-Méndez, R. Vicente, J. Saez-Buruaga, A. J. Sebastian, D. G. Aguado, M. I. García-Cid, J. Setien, P. Salas, C. Escribano, E. Dopazo, J. Rivas-Moscoso, A. Pastor-Perales, D. Lopez</i>	
Integration of the QKD Layer in Fibre Networks Using Multicore Fibres.....	756
<i>Alessandro Gagliano, Alberto Gatto, Paolo Martelli, Pierpaolo Boffi, Tetsuya Hayashi, Antonio Mecozzi, Cristian Antonelli, Paola Parolari</i>	
Atomic Ensembles as Nodes of Quantum and Classical Optical Networks .....	760
<i>M. Parniak, M. Mazelanik, A. Leszczynski, M. Lipka, M. Jastrzebski, S. Kurzyna, B. Niewelt, J. Nowosielski, S. Borówka, U. Pylypenko, W. Wasilewski</i>	
Effect of Pointing Errors on BER Performance of Multidimensional LDPC-Coded OAM Modulation with Direct Detection Over Turbulent FSO Channels.....	763
<i>Goran T. Djordjevic, Ivan B. Djordjevic</i>	
A Model-Driven Satellite Quantum Communication Simulator .....	767
<i>Alberto Sebastián-Lombrana, Ulises Martínez Córdova, Juan Pedro Brito, Vicente Martín, Laura Ortiz</i>	

VPN Protection with QKD-Derived Keys Using Standard Interfaces .....	771
<i>Jaime S. Buruaga, Hans H. Brunner, Fred Fung, Momtchil Peev, Antonio Pastor, Diego R. López, Laura Ortiz, Vicente Martín, Juan P. Brito</i>	
A Machine Learning-Based Approach for Nonlinearity Compensation in Subcarrier Multiplexing System .....	775
<i>Waddah S. Saif, Sunish Kumar Orappanpara Soman, Octavia A. Dobre</i>	
A Comparison of Machine Learning Techniques for Fiber Non-Linearity Compensation: Multilayer Perceptron Vs. Learned Digital BackPropagation .....	779
<i>Abraham Sotomayor, Erwan Pincemin, Vincent Choqueuse, Michel Morvan</i>	
Machine Learning-Based Polarization Drift Compensation for High Speed DV-QKD Homodyne Receiver .....	783
<i>Mariana F. Ramos, Elias Gutmann, Hannes Hübel</i>	
Machine Learning for Real-Time Anomaly Detection in Optical Networks .....	787
<i>Sadananda Behera, Tania Panayiotou, Georgios Ellinas</i>	
Modal Analysis of Acoustic Resonances in an Optical Fiber: All-Optical Excitation and Detection .....	791
<i>L. A. Sánchez, C. A. Álvarez-Ocampo, M. Delgado-Pinar, A. Díez, J. L. Cruz, M. V. Andrés</i>	
Early-Warning Debris Flow and Avalanches Detection System Based on Optical Fiber Polarization Sensing .....	795
<i>Giuseppe Rizzelli, Saverio Pellegrini, Marco Lacidogna, Santina Aiassa, Francesco Antolini, Alessandra Insana, Marco Barla, Roberto Gaudino</i>	
Lab-On-Chip for Liquid Biopsy: A New Approach for the Detection of Biochemical Targets .....	799
<i>C. Ciminelli, P. Colapietro, G. Brunetti, M. N. Armenise</i>	
A Pilot Study Using Biospeckle Photography for Optical Breast Cancer Screening .....	803
<i>Doaa Youssef, Tawfik Ismail, Somia A. M. Soliman, Jala El-Azab</i>	
Intent-Based Networking: Current Advances, Open Challenges, and Future Directions .....	808
<i>M. Gharbaoui, B. Martini, P. Castoldi</i>	
Photonic and Quantum Communication Technologies for Optical Networks Evolution .....	813
<i>Michela Svaluto Moreolo, Laia Nadal, Josep M. Fabrega, Javier Vilchez</i>	
Dynamic Subcarrier Allocation for P2MP Connections .....	817
<i>H. Shakespear-Miles, M. Ruiz, L. Velasco</i>	
Two-Micron Wavelength Dual-Comb Spectrometer Using a New Design of Dispersion-Controlled Highly Nonlinear Fibre .....	821
<i>Alix Malfondet, Moise Deroh, Alexandre Parriaux, Sidi-Ely Ahmedou, Romain Dauliat, Laurent Labonté, Sébastien Tanzilli, Jean-Christophe Delagnes, Philippe Roy, Raphaël Jamier, Guy Millot</i>	
Intense Sub-Half-Cycle Terahertz Waveforms for Lightwave-Driven Scanning Tunnelling Microscopy .....	825
<i>Christian Meineke, Michael Prager, Johannes Hayes, Qiannan Wen, Lukas Z. Kastner, Dominique Bougeard, Mackillo Kira, Rupert Huber</i>	
Grating-Based Structure for in-PIC Temperature Monitoring .....	829
<i>Sushma Pandey, Adebayo Emmanuel Abejide, Francisco Rodrigues, Mario Lima, Antonio Teixeira</i>	



28 Gb/s High-Speed Signal Generation Using a Hybrid Modulation Scheme .....	833
<i>Adebayo Abejide, Sushma Pandey, Mario Lima, Antonio Teixeira</i>	
Optimized Method to Reach the Multi-Pulse Regime in Mode-Locked Fibre Laser .....	836
<i>Alix Malfondet, Philippe Grellu, Guy Millot, Patrice Tchofo-Dinda</i>	
Image Denoising in Femtosecond Stimulated Raman Scattering Microscopy .....	840
<i>Giovanni Costa, Rajeev Ranjan, Maria Antonietta Ferrara, Mario Sansone, Luigi Sirleto</i>	
Analysis of CVSS Vulnerability Base Scores in the Context of Exploits' Availability .....	844
<i>Artur Balsam, Maciej Nowak, Michal Walkowski, Jacek Oko, Slawomir Sujecki</i>	
A Cost Effective FBG Sensor System Based on Narrow Band DBR Laser and FPGA Demodulation Technology .....	848
<i>Yuchao Zhang, Kun Shang, Jianfei Gu, Mengxiao Li, Gang Zhao, Yaping Zhang</i>	
A Study on DBR Lasers and Related Demodulation Technologies.....	852
<i>Jianfei Gu, Kun Shang, Yuchao Zhang, Mengxiao Li, Peng Song, Yanan Zhai, Xingwei Sun, Yaping Zhang</i>	
Possible Impacts of Extreme Solar/Cosmic Activity on the Mutation and Evolution of Coronavirus Spike Proteins.....	856
<i>Shaomin Yan, Guang Wu</i>	
256-Channel 10-GHz AWG Demultiplexer for Ultra-Dense WDM.....	861
<i>Dana Seyringer, Stanislava Serecunova, Frantisek Uherek, Heinz Seyringer, Jozef Chovan</i>	
Photodetection Performances of MAPbI <sub>3</sub> Perovskites .....	865
<i>Sandra Soriano, Omar E. Solis, Diego Ramirez, Pablo P. Boix, Juan P. Martínez-Pastor, Isaac Suárez</i>	
ML-Based Optimization of Geometric Constellation Shaping for Unamplified Coherent Optical Systems.....	869
<i>Beatriz M. Oliveira, Manuel S. Neves, Fernando P. Guiomar, Maria C. R. Medeiros, Paulo P. Monteiro</i>	
Performance Evaluation of High Data Rate Transmission and Optically Powered IoT Ecosystem Over SI-POF for Smart Home Applications.....	873
<i>Fahad M. A. Al-Zubaidi, D. S. Montero, P. J. Pinzón, C. Vázquez</i>	
Experimental Demonstration of a 400 Gb/s Full Coherent Transmission in an In-Field Metro-Access Scenario.....	877
<i>Mariacristina Casasco, Giuseppe Rizzelli, Annachiara Pagano, Roberto Mercinelli, Maurizio Valvo, Valter Ferrero, Roberto Gaudino</i>	
Investigation of Mid-Term Migration Scenarios to Multi-Band Solutions in Metropolitan Networks .....	881
<i>Juan Pedro Fernández-Palacios, Farhad Arpanaei, José Manuel Rivas-Moscoso, José Alberto Hernández, David Larrabeiti</i>	
Prospects of Chip-Based Multi-Protocol Quantum Key Distribution Transceivers .....	885
<i>Alexander Grebenchukov, Hui Lui, Gleb Nazarikov, Bruno Cimoli, Simon Rommel, Idelfonso Tafur Monroy</i>	
Photonic Integrated Circuits and Components for Quantum Key Distribution .....	889
<i>Daniel Cano, Daniel Balado, Verónica Fernández</i>	

Scalable Quantum Signal Processing with Integrated Photonics and Fiber-Based Modules.....	893
<i>Nicola Montaut, Piotr Roztocki, Hao Yu, Stefania Sciara, Mario Chemnitz, Yoann Jestin, Benjamin Maclellan, Bennet Fischer, Michael Kues, Christian Reimer, Luis Romero Cortes, Benjamin Wetzler, Yanbing Zhang, Sebastien Loranger, Raman Kashyap, Alfonso Cino, Sai T. Chu, Brent E. Little, David J. Moss, Lucia Caspani, William J. Munro, José Azaña, Roberto Morandotti</i>	
Programmable Silicon Photonic Sources of Frequency Bin Entangled Qubits and Qudits.....	897
<i>Massimo Borghi, Noemi Tagliavacche, Marco Clementi, Federico Andrea Sabattoli, Linda Gianini, Houssein El Dirani, Laurene Youssef, Nicola Bergamasco, Camille Petit-Etienne, Erwine Pargon, J. E. Sipe, Marco Liscidini, Corrado Sciancalepore, Matteo Galli, Daniele Bajoni</i>	
Optimizing Resource Allocation in Long-Reach PONs for Improved Performance in 6G Networks.....	901
<i>Adebanjo Haastrup, Mohamad Zehri, David Rincón, José Ramón Piney</i>	
Dynamic Service Placement in 6G Multi-Cloud Scenarios.....	905
<i>Fatemeh Tabatabaei, Hamzeh Khalili, Manuel Requena, Sarang Kahvazadeh, Josep Mangues-Bafalluy</i>	
Secure and Agile 6G Networking – Quantum and AI Enabling Technologies .....	909
<i>Carlos Rubio García, Oumayma Bouchmal, Catalina Stan, Panagiotis Giannakopoulos, Bruno Cimoli, Juan Jose Vegas Olmos, Simon Rommel, Idelfonso Tafur Monroy</i>	
Evolutional Analysis of Coronavirus Spike Proteins with Big-Data .....	913
<i>Shaomin Yan, Guang Wu</i>	
Indoor Obstacle Detector for Visual Impaired Persons .....	918
<i>Papara Radu, Buzura Loredana, Galatus Ramona</i>	
Chemical Sensor Utilizing a New Type of D-Shaped Optical Fiber .....	922
<i>Sarah Pulikottil Alex, Grzegorz Stepniewski, Andrius Baltuška, Ryszard Buczynski, Ignác Bugár</i>	
Super-Resolution Imaging of Plasmonic and Dielectric Nanostructures by Using Photothermal Scattering Nonlinearity.....	926
<i>Kentaro Nishida, Shi-Wei Chu</i>	
Accurate Estimation of non-Resonant Far-Field Superresolution by a Glass Microparticle .....	928
<i>Constantin R. Simovski, Reza Heydarian</i>	
Noise Investigation in Femtosecond Stimulated Raman Scattering Microscopy .....	932
<i>Rajeev Ranjan, Giovanni Costa, Maria Antonietta Ferrara, Mario Sansone, Luigi Sirleto</i>	
Numerical Modelling and Characterization of Active Silicon Ring Resonators .....	936
<i>Kambiz Jamshidi, Mircea Catuneanu, Menglong He, Abdou Shetewy, Arezoo Zarif, Sourav Dev, Hrishikesh Vithalani, Shiyao Fang, David Heydari, Ryan Hamerly, Hideo Mabuchi</i>	
Research Progress on Cavity-Resonator-Integrated Guided-Mode Resonance Mirror for Gaussian Beam.....	940
<i>Kenji Kintaka, Akari Watanabe, Keisuke Ozawa, Junichi Inoue, Shogo Ura</i>	
Silicon Ring Resonator with Phase-Change Material as a Plastic Dynamical Node for Scalable All-Optical Neural Networks with Synaptic Plasticity .....	944
<i>Alessio Lugnan, Santiago Garcia-Cuevas Carrillo, Junchao Song, Samarth Aggarwal, Frank Brücknerhoff-Plückelmann, Wolfram H. P. Pernice, Harish Bhaskaran, C. David Wright, Peter Bienstman</i>	

Measured Anomalous Dispersion, Kerr Comb, and Lasing in Hybrid TeO <sub>2</sub> -Coated Si <sub>3</sub> N <sub>4</sub> Waveguides.....	948
<i>Hamidu M. Mbonde, Bruno Luís Segat Frare, Thibault Wildi, Pooya Torab Ahmadi, Batoul Hashemi, Dawson B. Bonneville, Tobias Herr, Jonathan D. B. Bradley</i>	
Li-Fi and Visible Light Communication for Smart Cities and Industry 4.0: Challenges, Research & Market Status in 2023.....	952
<i>Véronique Georlette, Véronique Moeyaert</i>	
Advanced Digital Signal Processing for High-Capacity Mode-Division Multiplexed Free-Space Optical Communications.....	956
<i>Zhouyi Hu, Zhaozhong Chen, Yiming Li, David M. Benton, Abdallah A. I. Ali, Mohammed Patel, Martin P. J. Lavery, Andrew D. Ellis</i>	
A Portable Ambient Optical Noise Measurement Station.....	960
<i>Ágoston Schranz, Eszter Udvary, Balázs Matolesy, László Bacsárdi, András Nagy</i>	
Covert Optical Communication Over Turbulent Terrestrial Free-Space Optical Link .....	966
<i>Vijay Nafria, Ivan B. Djordjevic</i>	
Multi-Wavelength Entanglement Distribution Over Turbulent Free-Space Optical Link with Wavefront Corrections from Adaptive Optics .....	970
<i>Vijay Nafria, Ivan B. Djordjevic</i>	
A Network Server for Distributing Quantum Random Numbers .....	974
<i>Nuno A. Silva, Maurício J. Ferreira, André Carvalho, André Souto, Nikola Paunkovic, Paulo Mateus, António Teixeira, Armando N. Pinto</i>	
Probable Prime Generation from a Quantum Randomness Source .....	978
<i>Maurício J. Ferreira, André Carvalho, Nuno A. Silva, Armando N. Pinto, Nelson J. Muga</i>	
Feasibility Analysis of Uplink Quantum Communication with HAP Considering Beam Wandering and Weather Dependence .....	982
<i>Nancy Alshaer, Tawfik Ismail</i>	
Performance Analysis of Passive-Decoy State Quantum Key Distribution.....	986
<i>Matteo Di Giancamillo, Alberto Gatto, Mario Martinelli, Paolo Martelli</i>	
Network Programmability for Smart Factory Mobile Robotics: The SmartEdge Project Approach.....	991
<i>Piero Castoldi, Andrea Sgambelluri, Layal Ismail, Francesco Paolucci, Filippo Cugini, David Bowden</i>	
Complexity and Accuracy Trade-Off for Quality of Transmission Estimation in Wideband Optical Systems.....	996
<i>André Souza, Nelson Costa, João Pedro, João Pires</i>	
Dynamic Traffic Prediction Model Retraining for Autonomous Network Operation .....	1002
<i>Fatemeh Tabatabaeimehr, Luis Velasco, Marc Ruiz, Hamzeh Khalili, Ramon Aparicio-Pardo</i>	
Control and Orchestration Solutions for End-To-End Time Sensitive Services in Future 6G Networks .....	1006
<i>Salvatore Spadaro, Fernando Agraz, Albert Pàges</i>	
Neural Graphs: An Effective Solution for the Resource Allocation in NFV Sites Interconnected by Elastic Optical Networks .....	1010
<i>V. Eramo, F. G. Lavacca, F. Valente, V. Filippetti, A. Rosato, A. Verdone, M. Panella</i>	

Basic Theoretical and Numerical Concepts of Photovoltaics .....	1016
<i>Alexander Quandt</i>	
Perovskite Thin Films for Optoelectronic Devices: Study of Their Stability .....	1020
<i>A. Marjanowska, A. Zawadzka, B. Sahraoui, D. Guichaoua, P. Plóciennik</i>	
Pulsed Ultralong Ultrafast Ring Fiber Oscillators .....	1024
<i>Juan D. Ania Castañón, Inés Cáceres Pablo, Francesca Gallazzi, Pedro Corredera</i>	
Fibre Optical Parametric Amplifiers for Communications .....	1027
<i>Vladimir Gordienko, Chandra Gaur, Florent Bessin, Filipe M. Ferreira, Nick Doran</i>	
Pump RIN to Carrier Phase Noise Transfer in Distributed Fiber Raman System Evaluated Through Carrier FM Noise Spectrum .....	1031
<i>Rongqing Hui, Arin Dutta, Youichi Akasaka</i>	
Optical Phase Conjugation (OPC) in a Silicon -Smectic a Liquid Crystal (SALC) Optical Waveguide .....	1037
<i>B. I. Lembrikov, D. Ianetz, Y. Ben-Ezra</i>	
Enhancing the Performance of Waveguide-Integrated Superconducting Nanowire Single-Photon Detectors Using Subwavelength Grating Metamaterials .....	1044
<i>Alejandro Sánchez-Postigo, Connor Graham-Scott, Carsten Schuck</i>	
Group IV Mid-Infrared Photonic Devices and Applications .....	1048
<i>David J. Rowe, Lauren Reid, Chen Wei, Callum J. Stirling, Colin J. Mitchell, Han Du, Xingzhao Yan, Dehn T. Tran, Yangbo Wu, Mehdi Banakar, Yanli Qi, Ahmed Osman, Ke Li, Jordi Soler Penades, Longqi Zhou, Kristian M. Groom, Jon Heffernan, Callum G. Littlejohns, Milos Nedeljkovic, Goran Z. Mashanovich</i>	
Opto-Electronic Devices Based on Refractory and 2D Materials .....	1052
<i>Ibrahim A. M. Al-Ani, Khalil As'Ham, Sanjida Akter, Salah Abdo, Ziyuan Li, Haroldo T. Hattori</i>	
Design and Optimization of Broadband Optical Duplexer and Triplexer Couplers .....	1056
<i>Ajmal Thottoli, Artem S. Vorobev, Gabriele Biagi, Simone Ladanza, Giovanni Magno, Liam O'Faolain, Marco Grande</i>	
Control of Light in the Non-Adiabatic Regime in Integrated Optical Waveguides .....	1060
<i>Anastasiia Sheveleva, Mathieu Leonardo, Christophe Finot, Pierre Colman</i>	
3D Polymer Based 1×4 Multimode Interference Splitter .....	1063
<i>Stanislava Serecunova, Tomas Mizera, Dana Seyringer, Dusan Pudis, Frantisek Uherek, Heinz Seyringer</i>	
Blue Lasers for Optical Wireless Communications .....	1067
<i>Scott Watson, Stephen P. Najda, Piotr Perlin, Tadek Suski, Lucja Marona, Mike Leszczynski, Szymon Stanczyk, Dario Schiavon, Thomas J. Slight, Anthony E. Kelly</i>	
Multi-User Visible Light Communication and Positioning System Based on Multiplexing Technology .....	1071
<i>Changyuan Yu, Zhongxu Liu, Jing Zhou</i>	
Using Regular Semiconductor Illumination Arrays (Connected Via Power Line Communications) for Visible Light Sensing .....	1075
<i>Erich Leitgeb, Pasha Bekhrad, Kushal Madane</i>	

Enabling High Capacity WDM Transmission Systems for Data Centre and Access Networking Applications.....	1079
<i>M. Troncoso Costas, L. N. Venkatasubramani, A. G. Reza, M. McCarthy, C. Browning, L. P. Barry</i>	
Efficient Workload Consolidation for Composable/Disaggregated Data Centers Considering Migration Cost.....	1080
<i>Chao Guo, Moshe Zukerman</i>	
Data Rate Vs. Maximum Reach in a Data Center Interconnect Scenario Exploiting Wideband InP Mach-Zehnder Modulators.....	1084
<i>Rocco D'Ingillo, Giacomo Borraccini, Emanuele Virgillito, Stefano Straullu, Rocco Siano, Michele Belmonte, Vittorio Curri</i>	
WDM/TDM Over Passive Optical Networks with Cascaded-AWGRs for Data Centers.....	1088
<i>Mohammed Alharthi, Sanaa H. Mohamed, Taisir E. H. El-Gorashi, Jaafar M. H. Elmirghani</i>	
Prisma-V2: Extension to Cloud Overlay Networks.....	1092
<i>Redha A. Alliche, Tiago Da Silva Barros, Ramon Aparicio-Pardo, Lucile Sassatelli</i>	
Low-Cost All-Optical Switching Nodes for Ultra-Dense Optical Metro-Access Networks.....	1096
<i>Samael Sarmiento, José Antonio Lázaro</i>	
A Minimal Idleness Algorithm for Spectrum Assignment on a Single Elastic Link Under Dynamic Traffic.....	1100
<i>H. Waldman, R. C. Bortoletto, V. F. De Souza, R. C. A. Almeida</i>	
Multipath Provisioning for Survivable Elastic Optical Networks with Optimized RSA Ordering Selection.....	1104
<i>H. A. Dinarte, G. W. Teixeira, R. C. Almeida, K. D. R. Assis, H. Waldman, D. A. R. Chaves</i>	
Performance Analysis of Multilayer Optical Networks with Time-Varying Traffic.....	1108
<i>Aleksandra Knapińska, Piotr Lechowicz, Salvatore Spadaro, Krzysztof Walkowiak</i>	
Efficient Dynamic Routing in Elastic Optical Networks Based on Traffic Prediction and Bandwidth Reservation.....	1112
<i>Róza Goscién</i>	
Subwavelength-Engineered Metamaterial Devices for Integrated Photonics.....	1116
<i>P. Cheben, J. H. Schmid, P. Ginel-Moreno, S. Khajavi, R. Korcek, W. Fraser, D. Sirmaci, A. F. Hinesrosa, J. M. Luque-González, D. Pereira-Martín, A. Sánchez-Postigo, A. Hadij-Elhouati, D. Benedikovic, A. Ortega-Moñux, J. G. Wangüemert-Pérez, I. Molina-Fernández, R. Halir, W. N. Ye, D. Melati, C. Alonso-Ramos, D. González-Andrade, L. Vivien, I. Staude, J. Zhang, M. Milanizadeh, D.-X. Xu, Y. Grinberg, R. Cheriton, S. Janz, S. Wang, M. Vachon, M. Dado, R. Fernández De Cabo, A. V. Velasco</i>	
Guided Mode Resonance-Based Transparent Metasurfaces for Selective Multi-Color Reflection.....	1117
<i>G. Magno, M. Grande, B. Dagens, O. Gauthier Lafaye, A. D'Orazio</i>	
Silicon Optomechanical Membrane Waveguides Based on Subwavelength Engineering of Photons and Phonons.....	1121
<i>Paula Nuño Ruano, Jianhao Zhang, Xavier Le Roux, Daniele Melati, David González-Andrade, Eric Cassan, Delphine Marris-Morini, Laurent Vivien, Norberto Daniel Lanzillotti-Kimura, Carlos Alonso-Ramos</i>	

Surface States in Topologically Trivial and Non-Trivial Photonic Crystals .....	1125
<i>Anna C. Tasolamprou, Maria Kafesaki, Costas M. Soukoulis, Eleftherios N. Economou, Thomas Koschny</i>	
Refractive Index Sensing Using a Photonic Crystal Hybrid External Cavity Laser .....	1129
<i>Liam O'Faolain, Taynara Oliveira, F. Atar, Y. Arafat, Marco Grande, Simone Ladanza, B. Corbett</i>	
Waveguide Amplifiers and Lasers Based on FASnI <sub>3</sub> Perovskite Thin Films.....	1133
<i>Isaac Suárez, Hamid Pashai Adl, Vladimir S. Chirvony, Jesús Sánchez-Díaz, Rafael S. Sánchez, Iván Mora-Seró, Juan P. Martínez-Pastor</i>	
High Efficiency and High-Speed Silicon Optical Modulators.....	1137
<i>D. J. Thomson, W. Zhang, M. Ebert, K. Li, B. Chen, S. Liu, W. Cao, F. Meng, X. Yan, H. Du, M. Banakar, D. T. Tran, C. G. Littlejohns, G. T. Reed</i>	
Coupled Aperture VCSELs Suitable for 100 GHz Intensity Modulation .....	1141
<i>M. Lindemann, N. C. Gerhardt, M. R. Hofmann, N. Ledentsov, V. A. Shchukin, N. N. Ledentsov, O. Yu. Makarov, L. Chorchos, J. P. Turkiewicz</i>	
Exploring Kerr Frequency Comb Generation with Yttria Stabilized Zirconia (YSZ) Crystalline Microcavities .....	1145
<i>Guoping Lin</i>	
Intra-Satellite Optical Wireless Communications in Relevant Environments .....	1149
<i>L. Gilli, G. Cossu, N. Vincenti, F. Bresciani, E. Pifferi, V. Schena, E. Ciaramella</i>	
Design Challenges in High-Throughput WDM-FSO Systems for Satellite Communications .....	1153
<i>G. Cossu, V. Spirito, M. P. Ninos, E. Ciaramella</i>	
Sigma-Delta Modulation for Enhanced Underwater Optical Wireless Communication Systems .....	1157
<i>João H. Araújo, Henrique J. Rocha, Joana S. Tavares, Henrique M. Salgado</i>	
Integrated Optical Phased Arrays for on-Chip Communication .....	1161
<i>M. Khalid, G. Calò, G. Bellanca, J. Nanni, M. Barbiroli, F. Fuschini, V. Tralli, D. Bertozzi, V. Petruzzelli</i>	
Reflective Type Multi-Nanolayer Electro-Optical Modulator for Free Space Chip-to-Chip Optical Interconnection: Electromagnetic Modelling by the Method of Single Expression .....	1165
<i>Hovik V. Baghdasaryan, Tamara M. Knyazyan, Tamara T. Hovhannisyanyan, Gurgun R. Mardoyan, Tigran Baghdasaryan, Erich Leitgeb, Marian Marciniak</i>	
Optimization of Ultra-Broadband Optical Wavelength Conversion in Nonlinear Multi-Modal Silicon-On-Insulator Waveguides.....	1169
<i>Tasnad Kernetzky, Norbert Hanik, Yizhao Jia, Ulrike Höfler, Ronald Freund, Colja Schubert, Isaac Sackey, Gregor Ronniger, Lars Zimmermann</i>	
Mode Vector Modulation: A Review .....	1175
<i>Ioannis Roudas, Jaroslaw Kwapisz, Eric Fink</i>	
Resilient Control-Plane Design for T-SDN Based Optical Transport Networks .....	1179
<i>Shabnam Sultana, Ronald Romero Reyes, Khai Tuan Nguyen, Thomas Bauschert</i>	
A Flexible Forecasting Platform Enabling Zero Touch Networking and Digital Twinning .....	1183
<i>Luca Valcarengi, Piero Castoldi, Andrea Sgambelluri, Emilio Paolini, Alessandro Pacini</i>	

Fault Monitoring in Passive Optical Networks Using Machine Learning Techniques .....	1187
<i>Khouloud Abdelli, Carsten Tropschug, Helmut Griesser, Stephan Pachnicke</i>	
Proactive Spectrum Defragmentation Leveraging Spectrum Occupancy State Information.....	1192
<i>Ehsan Etezadi, Carlos Natalino, Renzo Diaz, Anders Lindgren, Stefan Melin, Lena Wosinska, Paolo Monti, Marija Furdek</i>	
Enhancing Inter-Data Centre Link Security with Spectral Polarisation Shuffling and Phase Encoding.....	1196
<i>Marcelo Pereira Nogueira, Nairton José Badue, Luiz Henrique Bonani, Ivan Aldaya, Marcelo Luís Francisco Abbade</i>	
New Opportunities Open by Advances in Table-Top, High-Power, and Broadband Terahertz Sources .....	1200
<i>Samira Mansourzadeh, Tim Vogel, Celia Millon, Mohsen Khalili, Robin Löscher, Clara J. Saraceno</i>	
Conformal Leaky-Wave Antennas for Terahertz Networks.....	1203
<i>Hichem Guerboukha, Rabi Shrestha, Joshua Neronha, Zhaoji Fang, Daniel M. Mittleman</i>	
Plasmonic Antennas for the Reception of Millimeter and THz Waves.....	1207
<i>Jasmin Smajic, Hande Ibili, Tobias Blatter, Michael Baumann, Boris Vukovic, Juerg Leuthold</i>	
High Output Power Broadband 1.55 Mm Waveguide-Integrated Terahertz MUTC-Photodiodes .....	1211
<i>Ezgi Abacioglu, Marcel Grzeslo, Tom Neerfeld, José Luis Fernández Estévez, Andreas Stöhr</i>	
New ICT Devices Enabled by Organic Electro-Optic Polymers.....	1215
<i>Naoya Wada, Takahiro Kaji, Toshiki Yamada, Akira Otomo</i>	
Stable Latency (Hollow Core) Optical Fibres .....	1219
<i>Radan Slavik, Zitong Feng, Ian Davidson, Francesco Poletti, D. J. Richardson</i>	
Hollow-Core-Fibre Microreactors for Photocatalysis .....	1222
<i>T. Lawson, A. S. Gentleman, E. Miele, M. H. Frosz, E. Reisner, T. G. Euser</i>	
Second Harmonic Generation with Giant Angular and Spectral Acceptance .....	1223
<i>Jacopo Parravicini, Ludovica Falsi, Fabrizio Di Mei, Luca Tartara, Aharon J. Agranat, Eugenio Delre</i>	

**Author Index**