

2018

OPAL

First International Conference on Optics,
Photonics and Lasers

Conference Programme

9-11 May 2018

Castelldefels, Barcelona,
Spain



Message from Chairman

On behalf of Organizing Committee I would like to welcome you to the 1st International Conference on Optics, Photonics and Lasers (OPAL' 2018), in Barcelona, Castelldefels, Spain. The 1st inauguration conference is a forum for presentation, discussion, exchange of information and latest research and development results in both theoretical and experimental research in optics and their related fields. It brings together researchers, developers, and practitioners from diverse fields including international scientists and engineers from academia, research institutes, and companies to present and discuss the latest results in the mentioned field.

The OPAL conference is focusing any significant breakthrough and innovation in Optics, Photonics and Lasers, and its applications with broadest concept. During three busy, packed and highly charged days, we will cover every important sector within the optics, offering attendees plenty of opportunities for networking and to meet many other researchers within the Optical Community.

The conference is organized by the International Frequency Sensor Association (IFSA) with media partners Institute of Physics (IOP), UK and MDPI journal *Photonics* (ISSN 2304-6732), Switzerland, in technical cooperation with IFSA Publishing S.L., Spain.

We trust that you will find OPAL' 2018 conference professionally rewarding and stimulating as well as enjoyable. Welcome to OPAL' 2018 !

Prof., Dr. Sergey Y. Yurish
OPAL' 2018 Conference Chairman

Registration

The Registration Desk is open (1st floor, near the conference room 'CALMA 1')

- Wednesday, 9 May, from 8:30 to 18:00
- Thursday, 10 May, from 8:30 to 14:30
- Friday, 11 May, from 9:00 to 12:00

Language

The official language of the Conference is English. There will be no simultaneous interpretation.

Insurance and Liability

The conference organizers do not accept responsibility for any individual, medical, travel or personal insurance policies as necessary.

Conference Identification Tag

The Organizing Committee request that you wear your identification tag at all times during the conference. Your conference identification tag will serve as your admission to all conference paper presentation sessions.

Coffee/Tea Refreshment

Coffee/tea will be served at the times indicated in the programme.

Special Issue of Sensors & Transducers journal

Selected papers from the conference will be published by IFSA Publishing in a special issue of open access *Sensors & Transducers* journal (ISSN: 2306-8515, e-ISSN 1726-5479) in both: print and electronic formats. All authors of selected papers will be invited by the editor-in-chief of *Sensors & Transducers* journal after the conference to submit their extended papers. The publication in *Sensors & Transducers* will be free of charge for OPAL' 2018 conference participants. Submission deadline is 5 July 2018. The special issue will be published at the end of August 2018.

Selected and related high quality extended papers will be published in Springer journal *Lasers in Manufacturing and Materials Processing* (ISSN 2196-7229, e-ISSN 2196-7237).

'Advances in Optics: Reviews' Book Series

The limited number of full-page papers published in the *Sensors & Transducers* journal will be selected by the journal's Editorial Board to extend for book chapters for the '*Advances in Optics: Reviews*', Vol. 4 Book Series. This open access book will be published at the beginning of 2019. The first three volumes devoted to optics, photonics and lasers were published in 2018 and have accepted by all Optical Community with a great enthusiasm.

Organizing Committee

Chairman

Prof., Dr. Sergey Y. Yurish (*IFSA, Spain*)

Advisory Chairmen

Dr. Qiang Wu (*Northumbria University, Newcastle Upon Tyne, UK*)

Prof., Dr. Mahmoud Daoudi (*National Center for Nuclear Sciences and Technologies, Tunisia*)

Conference and Publication Manager

Mrs. Tetyana Zakharchenko (*IFSA Publishing, S.L., Spain*)

Conference web site:

<http://www.opal-conference.com/>

Sponsors and Media Partners:



Keynote Speaker 1



Prof. Zhigang Chen
*Nankai University, China,
San Francisco State University
CA, USA*

Photonic Graphene: Novel Topological Phenomena

Abstract

Photonic graphene, the photonic analog of graphene constructed with waveguide arrays arranged in honeycomb lattice (HCL) geometry, has provided a powerful platform to emulate graphene physics while discovering new phenomena that would otherwise be inaccessible in real graphene. In recent studies, artificial HCLs have been successfully employed to investigate a variety of phenomena, including strong sublattice symmetry breaking, strain-induced pseudomagnetic fields, synthetic spin-orbit coupling, pseudospin angular momentum, Berry curvature effects and photonic topologically protected edge states. In this talk, I will discuss some of our recent work on novel topological phenomena in photonic graphene, and in particular, the pseudospin-mediated vortex generation and topological charge flipping, the Aharonov-Bohm-like interferences, and valley Bloch oscillations and Landau-Zener tunneling in photonic graphene that illustrates the important influence of the lattice geometry and spatial embedding of sublattices on the non-adiabatic wavepacket dynamics at Dirac points.

Short Biography:

Zhigang Chen earned his Ph.D. from Bryn Mawr College in 1995. After two years of postdoctoral work, he was promoted to the rank of Senior Research Staff Member at Princeton University before joining the faculty at San Francisco State University. He has published over 300 papers in top-rated journals and conference proceedings including the Nature and Science family of journals. His work received numerous citations with an h-index of 45 (according to ISI Web of Sci.), and was featured frequently in science magazines and news media. Dr. Chen received the Chinese Distinguished Oversea Young Scholar Award in 2004 and the 1000 Talents Plan Professorship in 2015. He was elected as a Fellow of the Optical Society of America in 2009 and a Fellow of the American Physical Society in 2015. Dr. Chen serves as an Editor for Optics Letters, Scientific Reports, Science Bulletin, and Advances in Physics X, and as a Program/General Chair for CLEO-Fundamental Science in 2016/18.

Keynote Speaker 2



Dr. Qiang Wu
*Northumbria University,
Newcastle Upon Tyne, UK*

Fibre Optic Interferometers–Towards a New Generation of Photonic Sensors

Abstract

Optical fibre interferometers are instruments that can make very precise measurements of objects using the interference pattern of two waves of light, which are one of the promising candidates for next generation of photonics sensors for applications in military navigation and tactical surveillance, security, environmental and structural health monitoring and life health/medical diagnostics. A Singlemode-multimode-singlemode (SMS) fibre structure is a typical type of fibre interferometer, where a short length of multimode fibre (MMF) is fusion spliced between two singlemode fibres. The SMS fibre structure is sensitive to a number of physical parameters, which can be used as sensors and couplers. Tapered SMS structures have proved to be able to improve sensitivity significantly and have been applied in new applications including bio- and chemical sensing.

Short Biography:

Dr. Wu is an Associate Professor with Faculty of Engineering and Environment, Northumbria University, Newcastle Upon Tyne, United Kingdom. His research interests include optical fiber interferometers for novel fiber optical couplers and sensors, nanofiber, microsphere sensors for bio-chemical sensing, the design and fabrication of fiber Bragg grating devices and their applications for sensing, nonlinear fibre optics and surface plasmon resonant. Dr. Wu has over 200 publications in the area of photonics. He is an Editorial Board Member of Scientific Reports (Nature Group) and an Associate Editor for IEEE Sensors Journal, a Committee Member of Holography and Optical Information Processing Committee, The Chinese Optical Society.

Keynote Speaker 3



Dr. Patryk Urban

*Ericsson Research, Ericsson AB,
Sweden*

Fiber Monitoring in Future Optical Access Networks

Abstract

Optical access networks must evolve to meet future communication requirements. This includes support for 5G mobile networks, where the very last connectivity segment to a simple antenna unit is analogue in nature. This would potentially need to be extended to several kilometers to centralize the critical radio access network resources, and this calls for high network reliability based on efficient monitoring of physical links. While link monitoring possibilities in baseband transmission have been extensively studied, the analogue radio over fiber transmission brings opportunities for application of novel and potentially more efficient monitoring techniques.

Short Biography:

Patryk J. Urban received his M.Sc. degree in optical telecommunications from the Szczecin University of Technology, Poland, 2004, his Ph.D. degree in optical access networks from the Eindhoven University of Technology, The Netherlands, 2009, and his habilitation degree in telecommunications from the Warsaw University of Technology, Poland, 2017. After his Ph.D and Fellowship at CNIT, Italy, he joined Ericsson Research, Sweden, 2010, and currently is a Senior Research Engineer leading activities and project teams focused on future optical access network technologies incl. radio-over-fiber and fixed access, and fiber-optic network maintenance aspects. He is a founder and chairperson of the IEEE Photonics Sweden Chapter; a (co-)author of nearly 100 publications, holds 45 active granted patents. He has been active in FSAN and ITU SG15/Q2 and participated in several external research collaboration projects within EU and beyond.

Keynote Speaker 4



Prof. Olga Korotkova
University of Miami,
FL USA

Structured Light Coherence

Abstract

Optical sources carrying spatially structured coherence states can lead to beams with highly controllable average intensity distribution, spectrum, scintillations, etc. In particular, the sources with suitably designed coherence states can radiate fields exhibiting a variety of average intensity profiles: flat structured centers, concentric rings, cusping, arbitrary angular distribution, Cartesian or polar arrays, on-and off-center spikes and transverse acceleration. In the electromagnetic domain structured correlations between the electric field components in the source plane result in changes of polarization state along the propagation path. Such intensity and polarization patterns are structure-invariant throughout the far field in vacuum and robust on propagation in random linear media, e.g. atmospheric or oceanic turbulence. The beams with structured coherence can be realized with the help of the spatial light modulators or deformable mirrors.

Short Biography:

Olga Korotkova specializes on stochastic optical fields with applications to communications, imaging and sensing optical systems operating in natural random media such as turbulent atmosphere and oceans. She published two monographs and more than 160 peer-review papers on these subjects. Olga Korotkova received her BS in Applied Mathematics from the Samara State University, Russia, in 1999 and her MS and PhD in Mathematics from the University of Central Florida, USA, in 2002 and 2003, respectively. She is currently an Associate Professor of Physics at the University of Miami, FL, USA where she leads a research group in theoretical and experimental classical statistical optics.

Programme at Glance

Day 1: 9 May 2018, Wednesday

Time / Room	Room CALMA 1	Room CALMA 2
8:30-9:00	Registration (8:30 to 18:00)	
9:00-9:15	Opening Session & Housekeeping	
9:15-10:00	Keynote Speaker 1	
10:00-10:45	Keynote Speaker 2	
10:45-11:00	<i>Coffee Break</i>	
11:00-13:30	Plenary Session 1 (<i>Invited Talks</i>)	
13:30-14:30	<i>Poster Session I</i> & <i>Lunch on your own</i>	
	<i>Parallel Sessions:</i>	
14:30-16:10	Special Session: <i>Optical Sensors & Instrumentation I</i>	Special Session: <i>Lasers & its Applications I</i>
16:10-16:30	<i>Coffee Break</i>	
16:30-18:10	Special Session: <i>Optical Sensors & Instrumentation II</i>	Special Session: <i>Lasers & its Applications II</i>

Day 2: 10 May 2018, Thursday

Time / Room	Room CALMA 1	Room CALMA 2
8:30-9:00	Registration (8:30 to 14:30)	
9:00-9:15	Housekeeping	
9:15-10:00	Keynote Speaker 3	
10:00-10:45	Keynote Speaker 4	
10:45-11:00	<i>Coffee Break</i>	
11:00-13:00	Plenary Session II (<i>Invited Speakers</i>)	
13:00-14:00	<i>Poster Session II & Lunch on your own</i>	
	<i>Parallel Sessions:</i>	
14:00-16:00	Session: <i>Photonics</i>	Session: <i>Holography</i>
18:00-23:00	* <i>Torres Winery Tour & Gala Dinner</i>	

*Gala Dinner, Excursion & Wine Degustation: Excursion in famous, awards winner Torres Winery with a wine degustation and gala dinner in restaurant Mas Rabell, which situated in the heart of the Penedès wine region, 7 km from the winery in Pacs del Penedès, near the village of Sant Martí Sarroca. A bus will departure from the SB BCN Events Hotel at 18:00 and return to the same hotel at 24:00 approximately.

Day 3: 11 May 2018, Friday

Time / Room	Room CALMA 1	Room CALMA 2
9:00-9:30	Registration (9:00 to 12:00)	
	<i>Parallel Sessions:</i>	
9:30-11:10	Session: <i>Optical Materials</i>	Session: <i>Applied Optics & Optical Devices I</i>
11:10-12:00	<i>Coffee Break & Poster Session III</i>	
12:00-13:40	Session: <i>Simulation & Optical Computing</i>	Session: <i>Applied Optics & Optical Devices II</i>
13:40-14:00	<i>Closing Remarks (Room CALMA 1)</i>	

Technical Conference Programme

Day 1

9 May 2018, Wednesday

Plenary Session I (Invited Speakers):

Chairman: Prof. Zhigang Chen (*Nankai University, China
and San Francisco State University, USA*)

- 1. Novel nanophotonics with nanocup arrays — extraordinary optical transmission without holes**
Rana Biswas and Akshit Peer (*USA*)

2. Rare earth-activated 1D photonic microcavities fabricated by RF sputtering

Alessandro Chiasera, Cesare Meroni, Stefano Varas, Francesco Scotognella, Yann Boucher, Anna Lukowiak, Davor Ristic, Giorgio Speranza, Lidia Zur, Stefano Taccheo, Roberta Ramponi, Giancarlo Righini and Maurizio (*Italy, France, Poland, Croatia, UK*)

3. Nonlinear Electrodynamics and Optics of Graphene

Sergey Mikhailov and Nadja Savostianova (*Germany*)

4. Optical forces on a nonlinear optical Rayleigh particle immersed in a nonlinear optical liquid

Bing Gu, Liping Gong, Guanghao Rui, Yiping Cui, Zhuqing Zhu and Qiwen Zhan (*China, USA*)

5. Optical Beam Control for Jitter and Wavefront Aberrations

Brij Agrawal (*USA*)

**Special Session (Room CALMA 1):
*Optical and Fiber Optical Sensors & Instrumentation I***

Chairman: Yuliya Semenova (*Dublin Institute of Technology, Ireland*)

1. Sensing with Whispering Gallery Mode Optical Fiber Microresonators (invited talk)

Yuliya Semenova (*Ireland*)

2. Rare-earth doped optical fibers in a Fabry-Perot microcavity for sensor applications

F. Lahoz, I. R. Martin, K. Soler-Carracedo, J. M. Cáceres, J. Gil-Rostra, F. Yubero and A. R. Gonzalez-Elipe (*Spain*)

3. Highly sensitive bend sensor based on an integrated fiber collimator

Xizhen Xu, Jun He, Changrui Liao, Ying Wang and Yiping Wang (*China*)

4. Femtosecond laser microprinting of microfiber Bragg grating sensor

Changrui Liao, Jia Wang, Ying Wang, Jun He and Yiping Wang (*China*)

- 5. Linear electro optic effect: an alternative method for replacing mechanical phase modulation to improve speed and precision of absolute distance measurement using multi-wavelength interferometry**

Sucheta Sharma, Peter Eiswirt and Jürgen Petter (*Germany*)

**Special Session (Room CALMA 1):
Optical and Fiber Optical Sensors & Instrumentation II**

Chairman: Yuliya Semenova (*Dublin Institute of Technology, Ireland*)

- 1. Improving sensitivity of fiber SPR sensor with a polymer optical fiber**
Ying Wang, Shaoqing Cao, Yu Shao, Changrui Liao, Jun He and Yiping Wang (*China*)
- 2. Magento-optic property measurement of thermally-treated P3HT:PCBM in the near infrared wavelength region**
Yudeuk Kim, Jae Young Jo and Kyong Hon Kim (*South Korea*)
- 3. Nano-sensor development for internal pH measurements within Marine organisms**
Nadiyah Aldaleeli and Peter Dunstan (*UK*)
- 4. Investigating the detection of lipids gel/fluid phase transition by change of scattering light and coupling factor into optical microresonators**
Bruno Beche, Qingyue Li, Veronique Vie, Lucas Garnier, Herve Lhermite, Claire Bourlieu-Lacanal, Alain Moréac, Denis Morineau, Aziz Ghoufi, Didier Dupont and Etienne Gaviot (*France*)
- 5. Tapered fiber loop sensitized by micro-deformation**
Luis Fernando Enriquez-Gomez, J. Ascencion Guerrero-Viramontes, Daniel Toral-Acosta, Cesar Adrian Ocon-Diaz, Guillermo Salceda-Delgado and Alejandro Martinez-Rios (*Mexico*)

**Special Session (Room CALMA 2):
*Lasers & its Applications I***

Chairman: Jinghua Sun (*Dongguan University of Technology, China*)

- 1. Towards deep UV femtosecond optical frequency combs based on high repetition rate high average power femtosecond Yb: fiber lasers** (invited talk)

Jinghua Sun, Kexiong Sun, Zhaiqiong Zhang, Jie Zhang, Jifen Sun, Zhifang Lin, Jie Li, Lu Jin and Derryck T. Reid (*China, UK*)

- 2. Rational-harmonically mode-locked fiber ring laser driven by regenerated subharmonic clock**

Joji Maeda, Kai Sakuma, Shunta Kato and K. I. Amila Sampath (*Japan*)

- 3. New ultrashort OPCPA petawatt class beamline for Vulcan laser facility**

Marco Galimberti, Alexis Boyle, Ian Musgrave, Pedro Oliveira, Dave Pepler, Waseem Shaikh, Trevor Winstone and Cristina Hernandez-Gomez (*UK*)

- 4. 43-fs pulses generated from a blue-diode-pumped Kerr-lens mode-locked Ti:Sapphire laser**

Han Liu, Geyang Wang, Jiangfeng Zhu, Wenlong Tian, Dacheng Zhang, Junli Wang and Zhiyi Wei (*China*)

- 5. Absolute distance measurement based on spectral-domain interferometry with two reference mirrors using the optical comb of a femtosecond pulse laser at long distances**

Jonghan Jin and Jungjae Park (*South Korea*)

**Special Session (Room CALMA 2):
*Lasers & its Applications II***

Chairman: Jinghua Sun (*Dongguan University of Technology, China*)

- 1. Tunable dye lasers pumped by visible diodes**

Olga Burdukova, Vladimir Petukhov and Mikhail Semenov (*Russia*)

2. Optical frequency references for space missions

Jose Sanjuan, Thilo Schuldt, Markus Oswald, Klaus Döringshoff, Martin Gohlke, Klaus Abich, Evgeny Kovalchuk, Achim Peters and Claus Braxmaier (*Germany*)

3. Physical thickness measurement of a flexible substrate using spectral-domain interferometer

Jungjae Park and Jonghan Jin (*South Korea*)

4. Effects of laser parameters on incision depth of bone ablation in laser osteotomy

Gholamreza Shayeganrad, L. Beltran, G. Rauter, P. C. Cattin, A. Zam (*Switzerland*)

5. Spectral and laser properties of CdTe quantum dots

Mashaal Albayyali, Gadah Alfaggy, Saradh Prasad, Mohammad S. Alsali and Vadivel Masilamani (*Saudi Arabia*)

Poster Session I

1st day (13:30-14:30)

1. Complex diffractive optical elements stored in photopolymers

Sergi Gallego Rico, Roberto Fernández, Andrés Márquez, Cristian Neipp, Inmaculada Pascual and Augusto Beléndez (*Spain*)

2. Transmission characteristics of periodically microridged long-period fiber grating based on a photonic crystal fiber

J. C. Shin, J. I. Hwang, S. M. Lee and Y. G. Han (*South Korea*)

3. Trapped modes in a single-particle all-dielectric planar metamaterial

Su Xu, Vyacheslav Khardikov and Vladimir Tuz (*China, Ukraine*)

4. Synthesis and characterization of $Y_3Al_5O_{12}:Ce^{3+}$ nanopowders and transparent coatings prepared by polymer-salt method

Nikolay Nikonorov, Sergey Evstropiev, Leonid Mironov and Ivan Sokolov (*Russia*)

5. Investigation of energy transfer between Rhodamine 6G and Oxzazine 9 dye mixture in new solid matrices of acrylic polymers
Fatemah H. Alkhalas, Tahani A. Alrebdii and V. Masilamani
(*Saudi Arabia*)

6. Effect of Sidewall-slope on Silicon Directional-coupler-type Polarization Beam Splitter with a Bridge Waveguide
Yoochan Kim, Yudeuk Kim, Moon Hyeok Lee, Kyong Hon Kim
and David J. Bang (*South Korea, Germany*)

NOTES

Day 2
10 May 2018, Thursday

Plenary Session II (Invited Speakers):

Chairman: Qiang Wu (*Northumbria University, UK*)

- 1. A road to optical cloaking using transformation media built from photonic crystals**
Elena Semouchkina, Saeid Jamilan and George Semouchkin (*USA*)
- 2. Polarization handling devices based on silicon waveguides**
Kyong Hon Kim, Dong Wook Kim, Yudeuk Kim and Yoohan Kim (*South Korea*)
- 3. Synergistically plasmon-coupling for WGM lasing and SERS sensing of graphene/metal/ZnO microcavities**
Chunxiang Xu, Qiuxiang Zhu, Feifei Qin, Yanjun Liu, Daotong You and Zengliang Shi (*China*)
- 4. Charge carrier transfer in tungsten disulfide - black phosphorus heterostructures**
Dawei He, Jiaqi He, Zhiyi He and Yongsheng Wang (*China*)

Regular Session (Room CALMA 1):

Photonics

Chairman: Patryk Urban (*Ericsson AB, Sweden*)

- 1. On-column vapor sensing with free-space coupled 2D photonic crystal slabs**
Priyanka Biswas, Yonghao Liu, Prithviraj Palit, Weidong Zhou and Yuze Sun (*USA*)
- 2. Embedding the photon with its relativistic mass as a particle into the electromagnetic wave**
Konrad Altmann (*Germany*)

3. **Three and four-modes parametric processes in hexagonally poled nonlinear photonic crystals**
Enrico Brambilla, Ottavia Jedrkiewicz, Katia Gallo, Gintaras Tamošauskas and Alessandra Gatti (*Italy, Sweden, Lithuania*)
4. **Amplification induced electromagnetically by counter-rotating-wave in a three-level Λ -type system**
Xiaohong Li, T. Liu, J.H. Wu, S. He, Q.H. Zhou and K.L. Wang (*China, USA*)
5. **An electro-optic organic waveguide modulator operating in the visible spectral range**
Edgars Nitiss, Janis Busenbergs, Kaspars Pudzs, Andrejs Tokmakovs and Martins Rutkis (*Latvia*)
6. **Spectroscopic features of graphene and graphene oxide**
 Ghada Alfaggy, Mashael Albayyalli, M. Alsalhi, V. Masilamani (*Saudi Arabia*)

Regular Session (Room CALMA 2):

Holography & 1st Applications

Chairman: Olga Korotkova (*University of Miami, USA*)

1. **New nanocomposite gratings for holographic control of slow-neutron beams**
Yasuo Tomita, Akihisa Kageyama, Toshi Aoi, Yuko Iso, Koichi Umemoto, Jürgen Klepp, Christian Pruner and Martin Fally (*Japan, Australia*)
2. **Record and reconstruction of digital holograms of dispersed microparticles**
Marina Dvornichenko and Vladimir Kamenev (*Russia*)
3. **How photopolymers permit to push the limits in the design of volume phase holographic grating for astronomy**
Alessio Zanutta and Andrea Bianco (*Italy*)

- 4. Integral image pick-up based full-color dynamic control holographic display system**
Yanling Piao, Ki-Chul Kwon, Shahinur Md. Alam, Sang-Keun Gil and Nam Kim (*South Korea*)
- 5. Smart optical devices based on photochromic materials**
Luca Oggioni, Giorgio Pariani, Andrea Bianco, Romain Alata and Chiara Bertarelli (*Italy, France*)
- 6. The determination of crack on glass surface by optical voice detector based on digital holography**
Gülhan Ustabaş Kaya and Zehra Saraç (*Turkey*)

Poster Session II

2nd day (13:00-14:00)

- 1. High power gain-switched thulium-doped all-fiber laser and amplifier system operating at a wavelength of 2000 nm**
Pawel Grzes, Maria Michalska, Marcin Mamajek and Jacek Swiderski (*Poland*)
- 2. New fluoride glasses with small additives of the phosphates doped with Nd³⁺ ions for laser applications**
Elena Kolobkova, Ahmed Alkhlef and Nikolay Nikonorov (*Russia*)
- 3. Intensity statistics of the emission or Raman random fiber laser**
Leon Ogorodnikov, Sergei Vergeles and Vladimir Lebedev (*Russia*)
- 4. Holographic lenses stored in biophotopol**
Tomás Lloret, Víctor Navarro-Fuster, Manuel G. Ramírez, Cristian Neipp, Manuel Ortuño, Augusto Beléndez and Inmaculada Pascual (*Spain*)
- 5. Rapid hologram generation utilizing relocated point cloud gridding approach for full-color holographic systems with real 3D objects**
Yu Zhao, Young-Tae Lim, Jae-Min Lee, Seok-Hee Jeon and Nam Kim (*South Korea*)

6. Measurement of the refractive index profile of an optical fiber by Fresnel diffraction

Bleda Segio, Cristian Neipp, Francisco Javier Martínez, Mariela Alvarez, Eva Calzado, Andres Marquez, Jorge Francés and Sergi Gallego (*Spain*)

NOTES

Day3
11 May 2018, Friday

Regular Session (Room CALMA 1):

Optical Materials

Chairman: Elena Semouchkina (*Michigan Technological University, USA*)

- 1. Photochromic materials for rewritable optical elements**
Giorgio Pariani, Luca Oggioni, Andrea Bianco, Chiara Bertarelli and Maurizio Canepa (*Italy*)
- 2. Transparent bactericidal ZnO-CeO₂ coatings**
Sergey Evstropiev, Nikolay Nikonorov, Anna Karavaeva, Konstantin Dukelskii, Kirill Evstropiev and Elena Kolobkova (*Russia*)
- 3. Transparent ceramics for high power Laser emission and supercontinuum generation**
Rémy Boulesteix, Loick Bonnet, Alexandre Maitre and Vincent Couderc (*France*)
- 4. Optical response of thin nanocomposite film with inhomogeneous distribution of inclusions**
Valeri Lozovski and Margarita Razumova (*Ukraine*)
- 5. Optical properties of potassium dihydrogen phosphate under external stresses**
Kausala Mylvaganam and Liangchi Zhang (*Australia*)

Regular Session (Room CALMA 2):

Optical Devices and Applied Optics I

Chairman: Kyong Hon Kim (*Inha University, South Korea*)

- 1. Towards full-field chromatic confocal microscopy**
Tobias Boettcher, Daniel Claus and Wolfgang Osten (*Germany*)

- 2. Molybdenum disulphide (MoS₂) nanosheets functionalized optical fiber SPR sensor for biosensing applications**
Umesh Tiwari, Siddharth Kaushik and Akash Deep (India)
- 3. Towards continuous all-optical waveguide interferometers for matter waves**
Yuri Ovchinnikov, Richard Moore, Alex Bunting, Jan-Ole Riske, Folly Ayi-Yovo, Vera Guarrera and Soliman Edris (UK)
- 4. Digital subcarrier partitioned transmission with dual phase-conjugated coding for PDL and fiber nonlinearity mitigation**
Takahiro Kodama and Masanori Hanawa (Japan)
- 5. Optical pattern recognition using multiple phase-shifted joint transform correlation with log-polar transformation**
M. Nazrul Islam (USA)

**Regular Session (Room CALMA 2):
*Optical Devices and Applied Optics II***

Chairman: Qi Gu (South China Normal University, China)

- 1. Electrooptic silicon-based modulator for short-wave infrared**
Mohamed Said Rouified, Callum Littlejohns, Tina Guo, Wang Wanjun, David Thomson, Graham Reed and Wang Hong (Singapore, UK)
- 2. Drawing optical fibers: elongating bubbles, breaking nanoparticles**
Wilfried Blanc, Manuel Vermillac, François Peters, Courtney Kucera, Matthew A. Tuggle, Thomas W. Hawkins and John Ballato (France, USA)
- 3. Shape memory molding: a new method for fabricating polymer optics**
Weidong Liu and Liangchi Zhang (Australia)
- 4. Extended depth of focus using autofocus in two wavelength contouring for fast inspection of micro parts**
Mostafa Agour, Fabian Thiemicke, Claas Falldorf and Ralf Bergmann (Germany, Egypt)

- 5. The generalized Fibonacci class zone plate**
Tian Xia, Shubo Cheng and Shaohua Tao (China)

Regular Session (Room CALMA 1):

Simulation & Optical Computing

Chairman: Dawei He (*Institute of Optoelectronic Technology, Beijing Jiaotong University, China*)

- 1. Simulation of light scattering from large non-spherical particles by statistic vectorial complex Ray model**
Rui-Ping Yang, Claude RozÉ, Saïd Idlahcen and Kuan Fang Ren (*France*)
- 2. Simulation of the light scattering by solid/hollow cones based on vectorial complex Rays model**
Qingwei Duan, Xiang'E Han and Kuan Fang Ren (*China, France*)
- 3. Non-uniformly spaced optical short pulse generation for optical sampling based on generalized sampling theorem**
Masanori Hanawa, Takahiro Kodama and Tsuyoshi Kaitsuka (*Japan*)
- 4. Noise-induced variance of WLI surface height estimation**
Iliia Kiselev, Michael Drexel and Michael Hauptmannl (*Germany*)
- 5. Speckle contrast calculation and pixel correlation**
Julio Juarez-Ramirez, Beatriz Coyotl-Ocelot, Ruben Ramos-Garcia, Roger Chiu-Zarate, Teresita Spezzia-Mazzocco, Pablo Padilla-Martinez and Julio C Ramirez-San-Juan (*Mexico*)

Poster Session (III)

3rd day (11:10-12:00)

- 1. Beam-splitting module design for solar lighting and solar thermal systems**
An-Chi Wei and Jyh-Rou Sze (*Taiwan*)

- 2. Confocal surface profilometer with gradient-intensity probe beam for in-situ automatic optical inspection**
Jyh-Rou Sze and An-Chi Wei (*Taiwan*)
 - 3. Optical turbidity sensing for insulating liquid in electrical discharge machining**
Juyi Lee and Xing-Yuan Huang (*Taiwan*)
 - 4. Two-colour pyrometer for temperature measurements**
Sandra Pérez, María Carmen Vázquez and Alberto Tapetado (*Spain*)
 - 5. Liquid jet formed by energy concentration of an intense acoustic shockwave**
Juan Pablo Padilla-Martinez, Rafael Zaca-Moran, Juan Castillo-Mixcoatl, Julio Cesar Ramirez-San-Juan, Carla Berrospe-Rodriguez, Placido Zaca-Moran and Ruben Ramos-Garcia (*Mexico*)
 - 6. Generation of tunable ultra-fast pulses in the near infrared**
Coralie Fourcade-Dutin and Damien Bigourd (*France*)
 - 7. Wideband phase refractive indices and group index measurement of liquid samples with low coherent Fabry-Perot interferometry**
David J. Bang, Yudeuk Kim, Yoohan Kim, Myung-Jik Kim and Kyong Hon Kim (*South Korea*)
-

Notes

Sponsored by:

