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Fourth International Conference on Applications of Optics and Photonics

Manuel F. M. Costa

Editor

31 May – 4 June 2019

Lisbon, Portugal

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Published by

SPIE

Volume 11207

Proceedings of SPIE 0277-786X, V. 11207

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Fourth International Conference on Applications of Optics and Photonics, edited by
Manuel F. M. Costa, Proc. of SPIE Vol. 11207, 1120701 · © 2019 SPIE
CCC code: 0277-786X/19/\$21 · doi: 10.1117/12.2553703

Proc. of SPIE Vol. 11207 1120701-1

PROCEEDINGS OF SPIE

Volume 11207

Proceedings of SPIE 0277-786X, V. 11207

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Author(s), "Title of Paper," in *Fourth International Conference on Applications of Optics and Photonics*, edited by Manuel F. M. Costa, Proceedings of SPIE Vol. 11207 (SPIE, Bellingham, WA, 2019) Seven-digit Article CID Number.

ISSN: 0277-786X
ISSN: 1996-756X (electronic)

ISBN: 9781510631632
ISBN: 9781510631649 (electronic)

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA
Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445

SPIE.org

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Contents

xi	<i>Authors</i>
xv	<i>Conference Committees</i>
xxi	<i>Introduction</i>

FOURTH INTERNATIONAL CONFERENCE ON APPLICATIONS OF OPTICS AND PHOTONICS

11207 02	Symmetries in optical wavefields (Keynote Paper) [11207-3]
11207 03	Three-dimensional surface reconstruction for evaluation of wrinkling on textile fabrics [11207-7]
11207 04	Ray tracing in stressed lenses in dynamical-optical systems [11207-10]
11207 05	Control of population inversion and coherence generation in Rb and Cs atoms [11207-12]
11207 06	Assessment of the accommodative facility training with flippers between sessions [11207-16]
11207 07	Cross-correlation of distributed fiber optic strain map for structural elements diagnosis [11207-21]
11207 08	Visual search in three-dimensional non-medical images: visual-motor performance of radiologists [11207-24]
11207 09	Developing tunable optical analogues using nematic liquid crystals [11207-27]
11207 0A	A simulation analysis for dimensioning of an amorphous silicon planar waveguide structure suitable to be used as a surface plasmon resonance biosensor (Invited Paper) [11207-28]
11207 0B	Weighted average of the Gouy phase shift for paraxial surface plasmon polaritons packets in lossy media [11207-30]
11207 0C	Bi-directional communication between infrastructures and vehicles through visible light [11207-31]
11207 0D	Bi-directional VLC LED-assisted navigation system for large indoor environments [11207-32]
11207 0E	Hyperspectral quantitative phase imaging using lens-in-lens common-path interferometer [11207-34]
11207 0F	Spectral dependence of aerosol light absorption over Camagüey obtained from an integrating sphere spectral system [11207-35]

- 11207 OG **Spike-free pulse generation in semiconductor injection seeding laser** [11207-36]
- 11207 OH **Up/down link data transmission for indoor navigation based on visible light communication** [11207-37]
- 11207 OI **A proposal for parametrical characterization of induced electric fields in materials** [11207-39]
- 11207 OJ **Simulation analysis of a thin film semiconductor MMI 3dB splitter operating in the visible range** [11207-40]
- 11207 OK **White-light interferometer with tunable lens** [11207-41]
- 11207 OL **Few-cycle, CEP stable, high power mid-infrared laser system** [11207-46]
- 11207 OM **Effect of hepatic vein on gold nanoparticle-mediated-hyperthermia in liver cancer (Invited Paper)** [11207-48]
- 11207 ON **Numerical modelling for a 3 μm OPCPA laser pumped at 1 μm** [11207-53]
- 11207 OO **GaN-based distributed feedback laser diodes for optical communications** [11207-54]
- 11207 OP **The development of an optical design tool for atmospheric dispersion correction** [11207-55]
- 11207 OQ **Paraxial propagation and kurtosis of fields generated by pseudo-Schell vortex sources** [11207-56]
- 11207 OR **The impact of keratoconus apex's localization on eye aberrations** [11207-57]
- 11207 OS **Core-shell magnetic-plasmonic nanoparticles enclosed in a biocompatible dehydropeptide-based hydrogel containing lysine** [11207-59]
- 11207 OT **Electric-field effect on the optical activity of helical semiconductor nanoribbons** [11207-62]
- 11207 OU **Atmospheric dispersion correction: model requirements and impact on radial velocity measurements** [11207-65]
- 11207 OV **ESPRESSO Coudé-Train: ESO's VLT working as 16-metre telescope (Invited Paper)** [11207-68]
- 11207 OW **Fabrication of periodic structures in optical fibers by femtosecond laser micromachining for sensing applications (Best Student Paper Award)** [11207-69]
- 11207 OX **Graphene oxide as a tunable platform for microsphere-based optical fiber sensors** [11207-71]
- 11207 OY **Limitation of tables indicating the relation between age and reading addition for presbyopia correction** [11207-79]
- 11207 OZ **Fast optical coherence tomography image enhancement using deep learning for smart laser surgery: preliminary study in bone tissue** [11207-80]

- 11207 10 **Simulating N-body systems for alternative theories of gravity using solvers from nonlocal optics** [11207-81]
- 11207 11 **Enhancing nanoplasmonic sensing with metallic nanowires: from D-type to suspended core fibres** [11207-82]
- 11207 12 **Femtosecond laser micromachining of Fabry-Pérot interferometers in fused silica for refractive index sensing** [11207-84]
- 11207 13 **High-performance solver of the multidimensional generalized nonlinear Schrödinger equation with coupled fields** [11207-86]
- 11207 14 **Smartphone viewing distance during active or passive tasks and relation to heterophoria** [11207-88]
- 11207 15 **Laser speckle rheology for evaluating mechanical properties of biomaterials: a pilot study** [11207-89]
- 11207 16 **Using FVSQ to identify functional indicators of visual problems among older people residing in nursing homes: a study in Santiago de Compostela** [11207-90]
- 11207 17 **Fluids of light in atomic systems: from superfluidity to quantum simulations** [11207-91]
- 11207 18 **A hardware-independent solution for high-performance simulations of the Maxwell-Bloch system** [11207-93]
- 11207 19 **Exploring dissipative optical solitons controlling gain and loss in atomic systems** [11207-94]
- 11207 1A **Analysis of the relationship of the central tear meniscus area with the tear film symptomatology and stability** [11207-95]
- 11207 1B **Meibomian gland loss area and its relationship with age and ocular surface disease index** [11207-96]
- 11207 1C **Relationship between visual therapy vectograms and accommodative parameters in young healthy subjects** [11207-97]
- 11207 1D **Evaluation of the relationship between symptomatic assessment, corneal staining and tear meniscus by image analysis** [11207-98]
- 11207 1E **Determination of the optical properties in transparent conductive electrodes based on an indium-tin oxide coating using the IAD method** [11207-101]
- 11207 1F **Assessment of Van Herick technique by using ImageJ software** [11207-111]
- 11207 1G **On the behavior of vector light needles using modulation functions with topological charge** [11207-113]
- 11207 1H **On how thick diffusers can contribute to the design of optical security systems** [11207-114]

- 11207 1I **Enhanced temperature sensing with Vernier effect on fiber probe based on multimode Fabry-Perot interferometer (Best Student Paper Award)** [11207-117]
- 11207 1J **Spectral characteristics of optical waveguides fabricated in glass by femtosecond laser direct writing** [11207-118]
- 11207 1K **Quantitative imaging of advanced nanostructured materials with scattering-type scanning near field optical microscopy** [11207-119]
- 11207 1L **The influence of coloured lighting on ocular amplitude of accommodation** [11207-120]
- 11207 1M **Compensation effect between corneal and internal ocular aberrations during a computer task** [11207-122]
- 11207 1N **Influence of pupil function in pseudophakia** [11207-124]
- 11207 1O **Development of NiFe₂O₄/Au nanoparticles covered with lipid bilayers for applications in combined cancer therapy** [11207-126]
- 11207 1P **Evaluation of the optical properties of two different types of soft contact lenses: hydrogel and silicone-hydrogel** [11207-128]
- 11207 1Q **Variations of the optical properties of two types of contact lenses with dehydration** [11207-130]
- 11207 1R **Development of drug-loaded magneto-sensitive liposomes investigated by fluorescence techniques** [11207-132]
- 11207 1S **Temperature dependence of the drying process in polymer solutions observed by dynamic speckle detection** [11207-134]
- 11207 1T **Quantum fluid equations for atomic gases** [11207-135]
- 11207 1U **Hilight: a new simulation platform for advanced photonics** [11207-136]
- 11207 1V **Analysis of Fizeau wedge with a non-air gap by plane wave expansion** [11207-144]
- 11207 1W **Simultaneous measurement of refractive index and temperature using a double antiresonant hollow core fiber** [11207-145]
- 11207 1X **Optical properties of carbon dots in solvents with different polarity** [11207-146]
- 11207 1Y **Astigmatism correction in direct ophthalmoscopy** [11207-148]
- 11207 1Z **VEGA laser facility beamlines management for pump-probe experiments** [11207-151]
- 11207 20 **Photo-induced increase of electron transfer efficiency of QDs based hybrid structures** [11207-152]

- 11207 21 **A compact optical polarimeter for portable telescopes used for teaching astronomy**
[11207-159]
- 11207 22 **Unscrambling complex sample composition, variability and multi-scale interference in optical spectroscopy** [11207-166]
- 11207 23 **Photorefractive properties of lithium niobate crystals studied by Raman spectroscopy**
[11207-167]
- 11207 24 **Functional metamaterials for optical sensing of hydrogen (Invited Paper)** [11207-170]
- 11207 25 **Application of a novel LIBS prototype as an analytical grade tool for Li quantification in pegmatite samples** [11207-173]
- 11207 26 **Simulating particle influence on silicon nitride strip waveguide single-mode parameters**
[11207-175]
- 11207 27 **3D prototyping of a fiber Bragg grating vibration sensor for power transformers** [11207-182]
- 11207 28 **Modification of multiphoton emission properties of single quantum dot due to the long-range coupling with plasmon nanoparticles in thin-film hybrid material** [11207-183]
- 11207 29 **Collective modes of self-assembled supercluster metamaterials: towards label-free sensing**
[11207-184]
- 11207 2A **Nanophotonic tools based on the conjugates of nanoparticles with the single-domain antibodies for multi-photon micrometastases detection and ultrasensitive biochemical assays (Invited Paper)** [11207-186]
- 11207 2B **The crucial role of surface ligands on the properties of thin CdSe/ZnS/CdS/ZnS QD-films for QDLEDs** [11207-187]
- 11207 2C **Polariton-assisted emission of strongly coupled organic dye excitons in a tunable optical microcavity** [11207-188]
- 11207 2D **Engineering of fluorescent biomaging tools for cancer cell targeting based on polyelectrolyte microcapsules encoded with quantum dots (Best Student Paper Award)** [11207-189]
- 11207 2E **Electrodynamics model of a hydrogen sensor based on a special photonic crystal fiber taper coated with a nano-scale palladium film** [11207-190]
- 11207 2F **In line Fabry-Perot cavities manufactured by electric arc fusion of NIR-laser micro-drilled optical fiber flat tips** [11207-196]
- 11207 2G **Assessment of light's dazzling effect on the EEG signal of subjects performing tasks that require concentration** [11207-197]
- 11207 2H **Reliability of ridge waveguide distributed feedback lasers for communications applications: from device specification and failure analysis to life-time calculation (Invited Paper)**
[11207-198]

- 11207 2I **Fundamentals of neutron waveguides: a proposal for slow neutron beams confinement and applications (Keynote Paper)** [11207-200]
- 11207 2J **Efficient and stable holographic gratings stored in an environmentally friendly photopolymer** [11207-202]
- 11207 2K **Photocatalytic and smart asphalt mixtures: a brief overview** [11207-204]
- 11207 2L **Tunable focalizers: phase conjugate pairs (Keynote Paper)** [11207-205]
- 11207 2M **Synthesis and optical properties of Sc_2O_3 nanoparticles doped with lanthanide ions** [11207-208]
- 11207 2N **Development of a compact and portable SHG FROG** [11207-210]
- 11207 2O **In-plane wavelength multiplexing of fibre Bragg gratings in a multicore optical fibre** [11207-211]
- 11207 2P **Measurement of the refractive index of glass by optical metrology** [11207-215]
- 11207 2Q **The LiDAR hop-on-hop-off route: visiting the LiDARs past, present, and future landscapes (Invited Paper)** [11207-217]
- 11207 2R **Monitoring of Mn ions incorporation into quantum dots by EPR and luminescence spectroscopy** [11207-218]
- 11207 2S **Optimization of interrogation methods for sensors based on optical microbubble resonators** [11207-221]
- 11207 2T **Plasma control by pattern recognition in laser induced breakdown spectroscopy** [11207-222]
- 11207 2U **Study on creating an aspheric primary mirror of a large telescope using spherical mirror segments** [11207-228]
- 11207 2V **Luminescent materials based on anisometric lanthanide complexes** [11207-234]
- 11207 2W **Cross-validation of EEG data for cognitive workload evaluation using an eye-tracker in imaging system tasks** [11207-235]
- 11207 2X **Electrophoretic light scattering for study mixed saliva studies** [11207-236]
- 11207 2Y **The study of the self-organized blood serum films for medical diagnostics of human immunity** [11207-237]
- 11207 2Z **Hardware-software design for structural analysis of biological fluids** [11207-238]
- 11207 30 **Single shot plenoptic optical imaging inspection of a head-up display: projection distance, astigmatism, field curvature, and distortions** [11207-242]

11207 31 **Axions: search for dark matter using ultra-intense lasers (Plenary Paper)** [11207-253]

11207 32 **Development and application of laser hologram production techniques for the teaching of physics and the public awareness of science** [11207-254]

Authors

Numbers in the index correspond to the last two digits of the seven-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first five digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Abreu, Manuel Alder, 0V, 2W
Acosta, Eva, 1Y
Afa, Iduabo J., 05
Aguilar, Gerardo, 24
Ahmadi, Kavan, 1H
Aillerie, Michel, 23
Ajates, J., 1Z
Alexandrov, Alexey E., 2B
Almeida, André L., 1U
Álvarez, Mariela L., 2J
Álvarez-Estrada, Ramón F., 2I
Alves, Frauke, 2A, 2D
Alves, Joana, 0L, 0N
Alves, Ruben, 1U
Amorim, Vítor A., 0W, 12, 1J
André, Paulo, 2N
Andriksone, Viktorija, 08
Antoniak, Magda A., 2M
Antuñña, Juan Carlos, 0F
Anwasia, Benjamin, 05
Apolinario, Arlete, 24
Araujo, João Pedro, 24
Arefina, Irina A., 1X
Arines, Justo, 1Y
Aubert, Thierry, 23
Ávila, Gerardo, 0P, 0U, 0V
Babajanyan, Narine, 23
Baimuratov, Anvar S., 0T
Baptista, António M. G., 1N
Baptista, Jose Manuel, 11, 24
Baranov, Alexander V., 0T, 1X
Baranov, Maksim, 2Y
Barja, Boris, 0F
Barroso, Raquel, 0F
Bartelt, Hartmut, 11, 2O
Baryshnikova, Maria, 2D
Baty, Daniel, 2A
Baumgart, Marcus, 26
Bayhaqi, Yakub A., 0Z
Becker, Martin, 11
Bertolami, O., 10
Bierlich, Jörg, 1W
Blagoeva, B., 1S
Boi, Stefania, 1K
Bret, Boris P. J., 30
Buchberger, Anton, 26
C. Martins, Rui, 22, 25, 2T
Cabral, Alexandre, 0P, 0U, 0V, 2P
Cachorro, Victoria, 0F
Calo-Santiago, Rosa, 06, 16, 1A, 1C
Cantú, Horacio I., 2H
Cardona, Juan de la Cruz, 1E, 1P, 1Q
Cardoso, Beatriz D., 1R
Carneiro, J. O., 2K
Carnicer, Artur, 1G, 1H
Castanheira, Elisabete M. S., 0S, 1O, 1R
Cattin, Philippe C., 0Z
Chames, Patrick, 2A
Cherevkov, Sergei A., 1X
Chibaca, José Caiongo, 32
Ciminello, M., 07
Coelho, L., 2S
Conceição, Victor, 2W
Cortes, Emiliano, 29
Costa, João, 0A
Costa, João, 1U
Costa, M. F., 2K
Coutinho, Paulo J. G., 0S, 1O, 1R
Crespo, Helder, 32
Danielyan, Anush, 23
de Frutos, Ángel, 0F
de O. Mendes, António, 03
del Mar Pérez, Maria, 15, 1E, 1P, 1Q
Dellith, Jan, 11
Deneva, Margarita, 1V
Dias, Cátia, 25
Docherty, Kevin E., 0O
dos Santos, P. S. S., 2S
Dovzhenko, Dmitriy, 2C
Duarte, Moisés A. S., 30
Dubavik, Aliaksei, 1X
Eberhard, Peter, 04
Edel, Joshua B., 29
Erni, Daniel, 0M
Estevan, Rene, 0F
Fajardo, Marta, 2N
Fantoni, Alessandro, 0A, 0D, 0J
Fedorov, Anatoly V., 0T, 1X
Fernandes, Miguel, 0A
Ferreira, Flávio P., 30
Ferreira, Hugo A., 2G
Ferreira, Marta S., 1W
Ferreira, Miguel F. S., 25, 2T
Ferreira, Paula M. T., 0S
Ferreira, Tiago D., 09, 10, 13, 17, 18, 19, 1T, 1U, 24
Ferreiro Figueiras, Dolores Purificación, 16, 1B, 1D, 1F
Fiadeiro, Paulo T., 03, 1N

Figueira, Gonçalo, 0L, 0N
 Figueira, P., 0U
 Fonseca, Elsa S. R., 1N
 Forté, Paulo M. F., 30
 Franco, Sandra, 1L, 1M
 Frazão, Orlando, 0X, 1I, 24, 27
 Freitas, E., 2K
 G. de Sande, Juan Carlos, 0Q
 G. Ramírez, Manuel, 2J
 G. Ruiz, Francisco, 1E
 Galletti, M., 0L
 Galyametdinov, S. Yuiriy G., 2R, 2V
 García, E., 1Z
 García-Montero, Silvia, 16, 1C, 1D, 1F
 Garcia-Queiruga, Jacobo, 1A, 1B, 1F
 García-Resúa, Carlos, 06, 1A, 1B
 Ghinea, R., 1P, 1Q
 Giannini, Vincenzo, 29
 Gigirey, Luz M., 16
 Giraldez, Maria J., 06, 1A, 1C
 Giuliano, Giovanni, 0O, 2H
 Godoy, Andrés, 1E
 Gomes, André D., 1I
 Gomes, C., 10
 Gomes, Jessica, 1M
 Gomes, Miguel, 1U
 Gomes, N., 0L
 Gomes, Renato, 1N
 Gómez-Sarabia, Cristina M., 2L
 Gonçalves, Andreia, 1M
 González-Méijome, José M., 30
 Gori, Franco, 0Q
 Grzanka, Szymon, 0O
 Grzelczak, Marek, 28
 Grześ, P., 0G
 Guerreiro, Ariel, 09, 10, 11, 13, 17, 18, 19, 1T, 1U, 24
 Guimarães, Diana, 25, 2T
 Gun'ko, Yuri K., 20
 Gwyn, Steffan, 0O
 Hahn, Luzia, 04
 Hariton, V., 0L
 Hernández, I., 1Z
 Hierro-Rodriguez, Aurelio, 24
 Hristu, Radu, 1K
 Hssain, Ala, 1Y
 Idrisov, Ravil, 2O
 Ikaunieks, Gatis, 0Y
 Ionescu, Ana M., 1E, 1P, 1Q
 Ishii, Satoshi, 1K
 J. dos Santos Silva, Manuel, 03
 Jacob, Annu, 2U
 Jahns, J., 02
 Jakobson, Liva, 14
 Jalali, Mandana, 0M
 James, Melvin K., 2U
 João, Celso Paiva, 0L, 0N, 2N
 Jorge, Pedro A. S., 0W, 24, 25, 2S, 2T
 Juvells, Ignasi, 1G, 1H
 Karyakin, M. E., 2V
 Kassaliete, Evita, 0Y
 Kelly, Anthony E., 0O
 Knyazev, A. A., 2V
 Kobelke, Jens, 1W
 Kokanyan, Edvard, 23
 Kokanyan, Ninel, 23
 Kolesova, Ekaterina P., 20
 Koliyadu, Jayanath, 2N
 Kostritskii, Sergey, 23
 Krivenkov, Victor, 28
 Krumina, Gunta, 08, 0R, 0Y, 14
 Kryukova, Irina, 2C
 Kučera, Jonatan, 0K
 Künzel, Swen, 2N
 L. Miguel, Rui A., 03
 Landi, S., Jr., 2K
 Lapaev, D. V., 2V
 Latifi, Hamid, 1I
 Lauri, Alberto, 29
 Leite, Inês, 2P
 Leonov, Mikhail Yu., 0T
 Leszczynski, Mike, 0O
 Liduma, Sanita, 0R
 Lima, Alexandre, 25
 Linhares, Cassiano, 27
 Linhares, João, 1L
 Lobkov, V. S., 2V
 Lopes, Armandina, 24
 López, S., 1P, 1Q
 Lourenço, Paulo, 0J
 Louro, P., 0C, 0D, 0H
 M. Lucas, José, 03
 Machikhin, Alexander S., 0E
 Madureira, Inês S., 1U
 Maia, João M., 0W, 12, 1J
 Maier, Stefan A., 29
 Maluenda, David, 1G
 Manjavacas, A., 0B
 Marques, Paulo V. S., 0W, 12, 1J, 27
 Martínez-Guardiola, Francisco J., 2J
 Martínez-Herrero, Rosario, 0B, 0I, 0Q, 1G
 Martins, José A., 0S
 Maslov, Vladimir G., 20
 McKee, Andrew, 2H
 Mégevand, Denis, 0V
 Mejías, G., 0I
 Mendes, Hélder, 27
 Méndez, C., 1Z
 Mendonça, José Tito, 31
 Mendonça, Pedro, 2G, 2W
 Mertin, Paul, 0M
 Michalska, M., 0G
 Minkovich, Vladimir P., 2E
 Mochalov, Konstantin, 2C
 Mogo, Sandra, 0F
 Molina de la Peña, Ignacio, 2I
 Monteiro, Catarina S., 0X, 27
 Monteiro, Raphael, 0F
 Morales-Vidal, Marta, 2J
 Moreira, Raquel, 1L

Nabiev, Igor, 28, 2A, 2C, 2D
Najda, Stephen P., 0O
Navarini, Alexander, 0Z
Nazarova, D., 1S
Nedelchev, L., 1S
Nenchev, Marin, 1V
Nepomnyashchaya, Elina, 2Z, 2Y
Nespereira, Marta, 2F
Nifontova, Galina, 2D
Nóbrega dos Santos, Diego, 11
Nunes-Pereira, Eduardo J., 2Q, 30
Nyk, Marcin, 2M
Ojeda-Castañeda, Jorge, 2L
Olivar, M., 1Z
Orlova, Anna O., 20
P. Coelho, João M., 0V, 2F, 2G
Padilla, Maria L., 2I
Panke, Karola, 08, 0Y, 14
Parihar, Padmakar, 2U
Pascual, Inmaculada, 2J
Pastorino, Laura, 1K
Pavliček, Pavel, 0K
Peixoto, H., 2Q
Pena-Verdeal, Hugo, 06, 1A, 1B, 1C, 1D
Pepe, Francesco, 0V
Pereira, André A. M., 1U
Pereira, Daniela S. M., 1R
Pérez, J., 0I
Perezziabova, Tatiana P., 0T
Perlin, Piotr, 0O
Pinto, João L., 1W
Piquero, Gemma, 0Q
Pires, Hugo, 0L, 0N
Pisonero, J. D., 1Z
Pitura, Reinis, 08
Pladere, Tatjana, 08
Polo, J., 0B
Polshchikova, Olga V., 0E
Pozhar, Vitold V., 0E
Pozo, Antonio Manuel, 15
Pribošek, Jaka, 26
Punin Dorrio, Eva, 06, 1F
Quiterio, Paula Virginia, 24
Rafailov, Edik, 0O
Rakovich, Aliksandra, 29
Rakovich, Yury, 28, 2C
Ramos-Gomes, Fernanda, 2A, 2D
Raposo, Maria, 0X
Rebordão, José, 2F
Rennings, Andreas, 0M
Ribeiro, Ana Filipa, 2N
Ribeiro, Paulo, 0X
Ribeiro, Ricardo, 25
Rio, Irina S. R., 1O
Riva, Marco, 0V
Rocha Segundo, I., 2K
Rodrigues, Ana Rita O., 1O, 1R
Rodrigues, Pedro, 24
Rodríguez, Noel, 1E
Rodríguez-Águila, Ana Belén, 15, 1E, 1P, 1Q

Rogach, Andrey L., 1X
Roso, L., 1Z
Rothhardt, Manfred, 1I, 2O
Router, Georg, 0Z
Ruiz-López, Javier, 15, 1P, 1Q
Rukhlenko, Ivan D., 0T
Sagdeev, Dmitriy O., 2R
Sagredo, J. L., 1Z
Samokhvalov, Pavel S., 28, 2A, 2B
Sánchez, J., 0I
Sanchez-Iglesias, Ana, 28
Santarsiero, Massimo, 0Q
Santos, J., 2Q
Santos, João, 2G
Santos, Jose Luis, 24
Santos, Nuno C., 0V
Savchenko, Ekaterina, 2X, 2Y, 2Z
Serra, Pedro, 1N
Shamilov, Radik R., 2R
Shilov, A. V., 2E
Silva, Nuno A., 09, 10, 13, 17, 18, 19, 1T, 1U, 24
Silva, Susana O., 0X, 24, 27
Silveira Moraes, Suellen, 24
Singulani, Anderson, 26
Sirvent, Daniel, 2J
Slight, Thomas J., 0O
Song, Young Min, 1K
Sotskaya, L. I., 2E
Sotsky, A. B., 2E
Sousa, Marco A., 30
Stanciu, George A., 1K
Stanciu, Stefan G., 1K
Stanczyk, Szymon, 0O
Stepanidenko, Evgeniia A., 1X
Stoykova, Elena, 1S, 1V
Sukhanov, Andrey A., 2R
Sukhanova, Alyona, 2A, 2D
Svede, Aiga, 0Y, 14
Świdorski, J., 0G
Talaveron, A., 1P, 1Q
Tarifa-Bonilla, José David, 15
Tavares, S. M. O., 27
Teixeira, J., 2Q
Teplakov, Nikita V., 0T
Topasna, Daniela M., 21
Topasna, Gregory A., 21
Toral-López, Alejandro, 1E
Tortschanoff, Andreas, 26
Tranca, Denis E., 1K
Trancon, Angel Sanchez, 1N
Ushakova, Elena V., 1X
Varela, O., 1Z
Vaskan, Ivan, 2C
Vázquez-Sánchez, Covadonga, 16, 1C, 1D
Velichko, Elena N., 2X, 2Z
Velina, Mara, 08
Velleman, Leonora, 29
Veloso, Sérgio R. S., 0S
Vieira, M. A., 0C, 0D, 0H
Vieira, Manuela, 0A, 0C, 0D, 0H, 0J

Vieira, P., 0C, 0D
Viola, Shaun, 0O
Viveiros, Duarte, 0W, 12, 1J, 27
Vlasova, Alina G., 0E
Voronkova, Violeta K., 2R
Vygranenko, Yury, 0A
Watson, Scott, 0O
Wawrzyńczyk, Dominika, 2M
Wehbe, B., 0P, 0U
Wondraczek, Katrin, 1W
Wu, Aiguo, 1K
Xiao, Xiaofei, 29
Xiong, Yuan, 1X
Yadav, Amit, 0O
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Yebra, Ana, 15
Yebra-Pimentel, Eva, 1B, 1D, 1F
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Introduction

The Portuguese Society for Optics and Photonics (SPOF - Sociedade Portuguesa para a Investigação e Desenvolvimento em Óptica e Fotónica) successfully organized its Fourth International Conference on Applications of Optics and Photonics (AOP 2019) on 31 May–4 June 2019 at the University of Lisbon in the Portuguese capital of Lisbon.

Since 2011 the Portuguese Society for Optics and Photonics has celebrated optics and photonics and their remarkable contribution to the development of our societies and humankind by organizing the AOP international conferences. Our conferences are designed to foster the establishment of the widest range of cooperation projects and relationships with colleagues and institutions from all around the world while increasing the external visibility of Portugal's optics and photonics research.

8 plenary lectures and 24 keynote lectures covering all fields of optics and photonics delivered by a remarkable selection of world renowned scientists, set the quality level of excellence of an exciting scientific program with 232 presentations that gave a very good overview of the state of the art in optics and photonics research across the world pointing out perspectives of future developments.

The participation of students at AOP2019 was very important, as it was in the previous editions of the conference. More than one third of the 204 participants, which came from 31 countries, were students. Illustrating the vitality and growth potential of the research in optics and photonics in Portugal, over 44% of the Portuguese participants were highly committed and enthusiastic students. The support of the International Commission for Optics to the conference helped the participation of sixteen students. Several prizes were awarded to students.

The SPIE Best Student Paper were award to:

- 1st prize - Galina Nifontova, "Engineering of fluorescent biomaging tools for cancer cell targeting based on polyelectrolyte microcapsules encoded with quantum dots";
- 2nd prize - Duarte Viveiros, "Fabrication of periodic structures in optical fibers by femtosecond laser micromachining for sensing applications";
- 3rd prize - André Gomes, "Enhanced Temperature Sensing with Vernier Effect on Fiber Probe based on Multimode Fabry-Perot Interferometer".

To Catarina Monteiro, Universidade do Porto, (Portugal) "3D Prototyping of a Fiber Bragg Grating Vibration Sensor for Power Transformers", was awarded the Best Student Poster on Optical Communications and Sensors by OSA's Student Chapter of the University of Aveiro (Portugal) and SPOF (Portugal).

The 2016 and 2017 prizes of SPOF's Best PhD Thesis in Portugal in Optics and Photonics were awarded to Celso Manuel de Figueiredo Paiva João, Instituto Superior Técnico, Universidade de Lisboa (Portugal), "Diode-pumped solid-state lasers for optical parametric amplification pumping"; and to Ana Rita da Silva Rodrigues Ribeiro, Faculdade de Ciências da Universidade do Porto (Portugal) "Optical fiber tools for single cell trapping and manipulation", respectively.

The next edition of the AOP conference will be held 6–10 September 2021, at the University of Trás-os-Montes e Alto Douro in Vila Real in the north of Portugal. We are looking forward to welcome you all there!

Manuel F. M. Costa