

# PROCEEDINGS OF SPIE

## **8th Iberoamerican Optics Meeting and 11th Latin American Meeting on Optics, Lasers, and Applications**

**Manuel Filipe P. C. Martins Costa**

*Editor*

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# Contents

xxxi	<i>Conference Committees</i>
xxxvii	<i>Introduction</i>

## Part One

---

### PLENARY SESSION I

---

- 8785 03 **Some considerations on the integration methods for Hartmann and Hartmann-Shack patterns (Plenary Paper)** [8785-118]  
G. Hernández-Gómez, D. Malacara-Doblado, Z. Malacara-Hernández, Ctr. de Investigaciones en Óptica, A.C. (Mexico); R. Díaz-Urbe, Univ. Nacional Autónoma de México (Mexico); D. Malacara Hernández, Ctr. de Investigaciones en Óptica, A.C. (Mexico)

---

### SESSION I

---

- 8785 09 **Spatial measurement of spurious forces with optical tweezers** [8785-538]  
I. Bordeu, Univ. de Concepción (Chile); G. Volpe, Bilkent Univ. (Turkey); J. P. Staforelli, Univ. de Concepción (Chile)
- 8785 0A **Effective medium theory of subwavelength arrays of metallic nanowires: a numerical approach based on modal propagation method** [8785-240]  
A. O. Silva, INESC Porto (Portugal) and Univ. Federal do Pará (Brazil); I. T. Leite, INESC Porto (Portugal) and Univ. do Porto (Portugal); J. M. Teixeira, J. P. Araujo, Univ. do Porto (Portugal); J. C. W. A. Costa, Univ. Federal do Pará (Brazil); M. T. R. Giralardi, Instituto Militar de Engenharia (Brazil); P. A. S. Jorge, INESC Porto (Portugal); A. Guerreiro, INESC Porto (Portugal) and Univ. do Porto (Portugal)

---

### SESSION II

---

- 8785 0G **End-side-pumped Nd:YAG solar laser with four Fresnel lenses** [8785-260]  
B. Galinhas, D. Liang, Univ. Nova de Lisboa (Portugal)

---

### SESSION III

---

- 8785 0J **Space optical navigation techniques: an overview (Invited Paper)** [8785-247]  
J. M. Rebordão, Univ. de Lisboa (Portugal)

8785 0L **Optical design of a Coudé-Train for a stable and efficient simultaneous feeding of the ESPRESSO spectrograph from the four VLT telescopes** [8785-287]  
A. Cabral, J. Coelho, M. Abreu, Univ. de Lisboa (Portugal); M. Monteiro, Univ. do Porto (Portugal); R. Gomes, P. Santos, A. Oliveira, Univ. de Lisboa (Portugal); G. Ávila, B.-A. Delabre, European Southern Observatory (Germany); D. Mégevand, Observatoire de l'Univ. de Genève (Switzerland); F. Zerbi, INAF - Osservatorio Astronomico di Brera (Italy); P. Di Marcantonio, INAF - Osservatorio Astronomico di Trieste (Italy); C. Lovis, Observatoire de l'Univ. de Genève (Switzerland); N. C. Santos, Univ. do Porto (Portugal)

8785 0M **Installation of a variable-angle spectrometer system for monitoring diffuse and global solar radiation** [8785-152]  
O. Ormachea, A. Abrahamse, N. Tolavi, F. Romero, O. Urquidi, Univ. Privada Boliviana (Bolivia); J. M. Pearce, Michigan Technological Univ. (United States); R. Andrews, Queen's Univ. (Canada)

---

#### SESSION IV

---

8785 0S **Observation of Zeeman shift in the rubidium D<sub>2</sub> line using an optical nanofiber in vapor** [8785-500]  
A. Watkins, Univ. College Cork (Ireland); V. B. Tiwari, Ctr. for Advanced Technology (India); J. M. Ward, K. Deasy, Okinawa Institute of Science and Technology (Japan); S. Nic Chormaic, Univ. College Cork (Ireland), Okinawa Institute of Science and Technology (Japan), and Univ. of KwaZulu-Natal (South Africa)

---

#### SESSION V

---

8785 0T **Generation of ultrabroadband energetic laser pulses by noncollinear optical parametric chirped pulse amplification (Invited Paper)** [8785-648]  
G. Figueira, Univ. Técnica de Lisboa (Portugal); T. Imran, Univ. Técnica de Lisboa (Portugal) and King Saud Univ. (Saudi Arabia); C. P. João, H. Pires, L. Cardoso, Univ. Técnica de Lisboa (Portugal)

8785 0W **Core-doped Nd:YAG disk solar laser uniformly pumped by six Fresnel lenses** [8785-682]  
D. Garcia, D. Liang, J. Almeida, Univ. Nova de Lisboa (Portugal)

---

#### SESSION VI

---

8785 0Y **Different applications of liquid crystal panels (Invited Paper)** [8785-640]  
A. Lizana, A. Peinado, C. Ramírez, Univ. Autònoma de Barcelona (Spain); J. L. Martínez, Univ. Autònoma de Barcelona (Spain) and Univ. Miguel Hernández de Elche (Spain); A. Hussain, M. Sohail, Univ. Autònoma de Barcelona (Spain) and Pakistan Institute of Engineering and Applied Sciences (Pakistan); C. Iemmi, Univ. de Buenos Aires (Argentina); A. Márquez, Univ. de Alicante (Spain); I. Moreno, Univ. Miguel Hernández de Elche (Spain); M. J. Yzuel, J. Campos, Univ. Autònoma de Barcelona (Spain)

- 8785 11 **Detection of refractive index changes in chemical reactions of fluids within micro channels using digital holographic microscopy** [8785-475]  
A. Nasehi, S. Moradi Mehr, Univ. of Zanjan (Iran, Islamic Republic of); A.-R. Moradi, Univ. of Zanjan (Iran, Islamic Republic of) and Institute for Advanced Studies in Basic Science (Iran, Islamic Republic of)

---

#### SESSION VII

---

- 8785 17 **Optics in gait analysis and anthropometry (Invited Paper)** [8785-472]  
A. A. Silva Moreno, CIATEC, A.C. (Mexico)
- 8785 18 **Side-pumping Nd:YAG solar laser by six Fresnel lenses** [8785-254]  
G. Tomás, D. Liang, J. Almeida, Univ. Nova de Lisboa (Portugal)
- 8785 1B **The validation of the Z-Scan technique for the determination of plasma glucose** [8785-234]  
S. I. Alves, Univ. Federal de São Paulo (Brazil); E. A. O. Silva, Univ. Federal de São Paulo (Brazil) and Fundação do ABC (Brazil); S. S. Costa, Fundação do ABC (Brazil);  
D. R. N. Sonego, M. L. Hallack, O. L. Coppini, F. Rowies, L. A. Azzalis, V. B. C. Junqueira,  
E. C. Pereira, K. C. Rocha, Univ. Federal de São Paulo (Brazil); F. L. A. Fonseca, Univ. Federal de São Paulo (Brazil) and Fundação do ABC (Brazil)

---

#### SESSION VIII

---

- 8785 1D **Development of a portable low-cost LIBS system (Invited Paper)** [8785-157]  
O. Ormachea, O. Urquidi, D. Casazola, Univ. Privada Boliviana (Bolivia)
- 8785 1F **INSCAN PRO: a fast ultraviolet spectrometer design approach** [8785-361]  
B. W. Myer, J. M. Dias, Instituto de Plasmas e Fusão Nuclear (Portugal)
- 8785 1G **Measurement of the roughness surface of the specials papers using the normalized autocorrelation function of the fields of the texture of speckle pattern** [8785-542]  
A. O. Pino, Univ. Tecnológica de Panama (Panama); J. Pladellorens, Univ. Politècnica de Catalunya (Spain)

---

#### SESSION IX

---

- 8785 1K **High resolution optical surface testing using transport of intensity equation** [8785-356]  
P. Soltani, Univ. of Zanjan (Iran, Islamic Republic of); A.-R. Moradi, A. Darudi, Univ. of Zanjan (Iran, Islamic Republic of) and Institute for Advanced Studies in Basic Sciences (Iran, Islamic Republic of); R. Shomali, Univ. of Zanjan (Iran, Islamic Republic of)
- 8785 1M **Degree of polarization as a cross-correlation detector for absolute distance measurement** [8785-561]  
D. Castro Alves, M. Abreu, A. Cabral, J. M. Rebordão, Univ. of Lisbon (Portugal)

- 8785 1N **Micro fluid flow visualization of a circular nozzle by using the Schlieren technique** [8785-276]  
C. Alvarez-Herrera, Univ. Autónoma de Chihuahua (Mexico); D. Moreno-Hernández, Ctr. de Investigaciones en Óptica, A.C. (Mexico); J. G. Murillo-Ramírez, Ctr. de Investigación en Materiales Avanzados, S.C. (Mexico)

---

**POSTER SESSION I**

---

- 8785 1O **Fluorescence support in optical tweezers** [8785-1]  
J. G. Animas, M. Arronte, T. Flores, L. Ponce, Ctr. de Investigación en Ciencia Aplicada y Tecnología Avanzada (Mexico)
- 8785 1P **Grating optical filter for pre-adapted angular selective regulation of directional light transmission** [8785-10]  
R. S. Zakirullin, Orenburg State Univ. (Russian Federation)
- 8785 1Q **Image encryption-decryption system based on gyrator transform and jigsaw transform** [8785-100]  
J. M. Vilardy, Univ. Politècnica de Catalunya (Spain) and Univ. Popular del Cesar (Colombia); C. O. Torres, L. Mattos, Univ. Popular del Cesar (Colombia)
- 8785 1R **Double image encryption method using the Arnold transform in the fractional Hartley domain** [8785-101]  
J. M. Vilardy, Univ. Politècnica de Catalunya (Spain) and Univ. Popular del Cesar (Colombia); C. O. Torres, Univ. Popular del Cesar (Colombia); C. J. Jimenez, Univ. de La Guajira (Colombia)
- 8785 1T **Implementation of a semi-automatic robotic system for alignment in the Ronchi test** [8785-105]  
Y. Maldonado-Pérez, A. Santiago-Alvarado, J. González-García, Univ. Tecnológica de la Mixteca (Mexico); A. Cordero-Dávila, Benemérita Univ. Autónoma de Puebla (Mexico); V. Rybak, Univ. Tecnológica de la Mixteca (Mexico)
- 8785 1U **Weighted average of the Gouy phase shift and their relation with the irradiance moments of a beam** [8785-107]  
R. Martínez-Herrero, Univ. Complutense de Madrid (Spain); A. Manjavacas, Instituto de Química-Física Rocasolano (Spain)
- 8785 1V **Elliptical Bessel-like diffraction pattern produced by circular apertures with different radius** [8785-108]  
E. Andrés-Zárate, Q. Angulo-Córdova, J. A. Hernández-Nolasco, G. Gutiérrez-Tepach, Univ. Juárez Autónoma de Tabasco (Mexico); C. G. Treviño-Palacios, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)
- 8785 1X **Analysis of strawberry ripening by dynamic speckle measurements** [8785-111]  
C. Mulone, Univ. Tecnológica Nacional (Argentina); N. Budini, Univ. Tecnológica Nacional (Argentina) and Instituto de Física del Litoral (Argentina); F. M. Vincitorio, C. Freyre, Univ. Tecnológica Nacional (Argentina); A. J. López Díaz, A. Ramil Rego, Univ. da Coruña (Spain)

- 8785 1Y **Synchronization of optically coupled resonant tunneling diode oscillators** [8785-112]  
B. Romeira, J. M. L. Figueiredo, Univ. do Algarve (Portugal); C. N. Ironside, Univ. of Glasgow (United Kingdom); J. M. Quintana, Instituto de Microelectrónica de Sevilla (Spain)
- 8785 1Z **Analysis and design of a mechanical system to use with the Ronchi and Fizeau tests** [8785-113]  
A. D. Galán-Martínez, A. Santiago-Alvarado, J. González-García, V. M. Cruz-Martínez, Univ. Tecnológica de la Mixteca (Mexico); A. Cordero-Dávila, Benemérita Univ. Autónoma de Puebla (Mexico); F. S. Granados-Agustin, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); C. Robledo-Sánchez, Benemérita Univ. Autónoma de Puebla (Mexico)
- 8785 23 **Modulator for a micro Mach-Zhender spectrometer** [8785-12]  
A. G. Rojas-Hernández, R. Gómez-Fuentes, A. García-Juárez, D. Berman-Mendoza, A. Vera-Marquina, L. A. Garcia-Delgado, A. L. Leal-Cruz, I. E. Zaldivar-Huerta, Univ. de Sonora (Mexico)
- 8785 26 **Determining the virtual surface in the thermal evaporation process of magnesium fluoride from a tungsten boat for different deposition rates, to be used in precision optical components** [8785-122]  
A. Tejada Esteves, G. Gálvez de la Puente, Pontificia Univ. Católica del Perú (Peru)
- 8785 27 **Effects of rotation in the laser-pulse photoassociation in a thermal gas of atoms** [8785-123]  
E. F. de Lima, Univ. Estadual Paulista (Brazil)
- 8785 2C **Determining the quality of optical fiber splice by fusion by electric arc through spectral image processing** [8785-135]  
F. Vega, C. Torres, L. Diaz, L. Mattos, Univ. Popular del Cesar (Colombia)
- 8785 2D **Simple method of fabrication tapered fiber** [8785-137]  
F. Vega, C. Torres, L. Diaz, L. Mattos, Univ. Popular del Cesar (Colombia)
- 8785 2F **System for measuring the angular response of radiometers** [8785-14]  
L. A. Berni, W. A. Vilela, A. F. Beloto, F. O. de Sena, Instituto Nacional de Pesquisas Espaciais (Brazil)
- 8785 2G **Light pollution and solid-state lighting: reducing the carbon dioxide footprint is not enough** [8785-140]  
S. Bará, Univ. de Santiago de Compostela (Spain)
- 8785 2J **Experimental method to characterize a liquid-crystal variable retarder and its application in a Stokes polarimeter.** [8785-149]  
J. M. López-Téllez, N. C. Bruce, Univ. Nacional Autónoma de México (Mexico)
- 8785 2L **Detection of wavelengths in the visible range using fiber optic sensors** [8785-156]  
L. Díaz, Y. Morales, L. Mattos, C. O. Torres, Univ. Popular del Cesar (Colombia)

- 8785 2M **Holographic interferometry as a method to detect welding failures on ribbed iron structures** [8785-160]  
F. M. Vincitorio, Univ. Tecnológica Nacional (Argentina); N. Budini, Univ. Tecnológica Nacional (Argentina) and Instituto de Física del Litoral (Argentina); C. Mulone, C. Freyre, M. Spector, Univ. Tecnológica Nacional (Argentina); A. J. López Díaz, A. Ramil Rego, A. Yañez Casal, Univ. da Coruña (Spain)
- 8785 2N **Holographic recording in photorefractive Bi<sub>2</sub>TeO<sub>5</sub> crystals at high intensity** [8785-164]  
I. de Oliveira, Univ. Estadual de Campinas (Brazil); J. F. Carvalho, Z. V. Fabris, Univ. Federal de Goiás (Brazil); J. Frejlich, Univ. Estadual de Campinas (Brazil)
- 8785 2O **Homogeneous polarized light by non-quadrature amplitude modulation** [8785-168]  
G.-P. Lemus-Alonso, C. Meneses-Fabian, R. Kantun-Montiel, U. Rivera-Ortega, F.-A. Lara-Cortes, R. Juarez-Salazar, C. Robledo-Sánchez, Benemérita Univ. Autónoma de Puebla (Mexico)
- 8785 2P **Polarized light by quadrature amplitude modulation** [8785-169]  
R. Kantun-Montiel, C. Meneses-Fabian, U. Rivera-Ortega, G.-P. Lemus-Alonso, E. Barojas-Gutierrez, R. Pastrana-Sanchez, Benemérita Univ. Autónoma de Puebla (Mexico)
- 8785 2R **Packaging and testing of fiber Bragg gratings for use as strain sensor in rock specimens** [8785-171]  
A. Castro-Caicedo, P. Torres, Univ. Nacional de Colombia (Colombia); R. Lain, Univ. Politécnica de Madrid (Spain)
- 8785 2S **Tridimensional ablation region in femtosecond laser micromachining with diffractive lenses** [8785-175]  
S. Torres-Peiró, J. González-Ausejo, O. Mendoza-Yero, G. Mínguez-Vega, J. Lancis, Univ. Jaume I (Spain)
- 8785 2U **On-axis Dammann lenses and femtosecond pulses: triggering non-linear effects** [8785-177]  
J. Pérez-Vizcaíno, O. Mendoza-Yero, Univ. Jaume I (Spain); R. Borrego-Varillas, Univ. de Salamanca (Spain); G. Mínguez-Vega, Univ. Jaume I (Spain); J. R. Vázquez de Aldana, Univ. de Salamanca (Spain); P. Andrés, Univ. de València (Spain); J. Lancis, Univ. Jaume I (Spain)
- 8785 2W **Propagation of Gaussian beams through active layers** [8785-180]  
V. Vázquez, J. C. Fernández, M. T. Garea, Univ. de Buenos Aires (Argentina); C. L. Matteo, L. I. Perez, Univ. de Buenos Aires (Argentina) and Consejo Nacional de Investigaciones Científicas y Técnicas (Argentina); P. A. Sorichetti, Univ. de Buenos Aires (Argentina)
- 8785 2Y **Accuracy of the optical testing of a fast aspheric concave surface through null-screens** [8785-182]  
M. Campos-García, Univ. Nacional Autónoma de México (Mexico); F. Granados-Agustín, E. Percino-Zacarías, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); A. Estrada-Molina, Univ. Nacional Autónoma de México (Mexico); V. I. Moreno-Oliva, Univ. del Istmo (Mexico); A. Santiago-Alvarado, Univ. Tecnológica de la Mixteca (Mexico); M. Avendaño-Alejo, Univ. Nacional Autónoma de México (Mexico)



- 8785 32 **Double-scatter Mueller matrices for vector electromagnetic scattering from single grooves and lines on rough surfaces** [8785-186]  
N. C. Bruce, Univ. Nacional Autónoma de México (Mexico)
- 8785 34 **Tracking of wet foam ageing by means of dynamic laser speckle and computer optical mouse** [8785-188]  
J. Guerrero, A. Plata Planidina, E. Mejía-Ospino, R. Cabanzo, Univ. Industrial de Santander (Colombia)
- 8785 35 **Control of a piezoelectric device and image system acquisition for introducing phase steps in interferential microscope** [8785-189]  
J. Choque A., M. Asmad, V. Sarmiento, G. Baldwin, Pontificia Univ. Católica del Perú (Peru)
- 8785 38 **Metallic coating techniques for fiber Bragg grating sensors** [8785-197]  
T. Grandal, E. Piñero, A. Asensio, F. Rodríguez, Asociación de Investigación Metalúrgica del Noroeste (Spain)
- 8785 39 **Analysis of temporal stability of autostereoscopic 3D displays** [8785-198]  
M. Rubiño, C. Salas, A. M. Pozo, J. J. Castro, F. Pérez-Ocón, Univ. de Granada (Spain)
- 8785 3B **Spectroradiometric characterization of autostereoscopic 3D displays** [8785-201]  
M. Rubiño, C. Salas, A. M. Pozo, J. J. Castro, F. Pérez-Ocón, Univ. de Granada (Spain)
- 8785 3D **Operating principle of a high resolution ultrasonic ranging system based in a phase processing** [8785-204]  
L. X. Chaparro, C. R. Contreras, J. E. Meneses, Univ. Industrial de Santander (Colombia)
- 8785 3H **Fourier transform methods applied to an optical heterodyne profilometer** [8785-218]  
A. Beltrán-González, G. García-Torales, Univ. de Guadalajara (Mexico);  
G. Martínez-Ponce, Ctr. de Investigaciones en Óptica, A.C. (Mexico)
- 8785 3J **Joint transform correlator-based encryption system using the Fresnel transform and nonlinear filtering** [8785-22]  
J. M. Vilardy, M. S. Millán, E. Pérez-Cabré, Univ. Politècnica de Catalunya (Spain)
- 8785 3O **Static and dynamic amplitude modulation of light in a twisted nematic liquid crystal display** [8785-23]  
J. M. Vilardy, M. S. Millán, E. Pérez-Cabré, Univ. Politècnica de Catalunya (Spain)
- 8785 3Q **Nonlinear optical study of p-bromo-benzylidene aniline-substituted** [8785-233]  
A. K. C. A. Reis, D. R. Paiva, M. M. Reginato, S. I. Alves, Univ. Federal de São Paulo (Brazil)
- 8785 3S **Measurement of the dispersion in special optical fibers** [8785-239]  
G. Beltrán Pérez, T. J. Cerdá Astorga, I. Armas Rivera, J. I. Vazquez Lozano,  
J. Castillo Mixcóatl, S. Muñoz Aguirre, Benemérita Univ. Autónoma de Puebla (Mexico)
- 8785 3T **Reflectance of interurban-road pavements from radar-based measurements** [8785-24]  
P. Fernandez, A. Peña-García, Univ. of Granada (Spain); D. Poyatos-Martínez,  
D. Escot-Bocanegra, National Institute for Aerospace Technology (Spain);  
A. Fernández-Oliveras, Univ. of Granada (Spain)

- 8785 3W **Two step parallel phase shifting interferometry using a double cyclic shear interferometer** [8785-249]  
N.-I. Toto-Arellano, Univ. Tecnológica de Tulancingo (Mexico); D.-I. Serrano-García, Utsunomiya Univ. (Japan) and Ctr. de Investigaciones en Óptica, A.C. (Mexico)
- 8785 3Z **Extending temporal coherence in speckle interferometry** [8785-256]  
J. M. Crespo Contiñas, V. Moreno de las Cuevas, M. Gallas Torreira, M. Calizaya Calizaya, Univ. de Santiago de Compostela (Spain)
- 8785 42 **Automatic real-time generalized phase-shifting interferometry to process interferograms with spatio-temporal visibility** [8785-262]  
R. Juárez-Salazar, C. Robledo-Sánchez, C. Meneses-Fabian, G. Rodríguez-Zurita, F. Guerrero Sánchez, A. Barcelata-Pinzon, Benemérita Univ. Autónoma de Puebla (Mexico)
- 8785 43 **Straightforward filtering to phase demodulation by a Fourier normalized-fringe approach** [8785-264]  
R. Juárez-Salazar, C. Robledo-Sánchez, C. Meneses-Fabian, G. Rodríguez-Zurita, F. Guerrero-Sánchez, Benemérita Univ. Autónoma de Puebla (Mexico); J. González-García, Univ. Tecnológica de la Mixteca (Mexico)
- 8785 45 **Laser processing of phenolic wood substitutes** [8785-268]  
F. Quintero, Univ. de Vigo (Spain); A. Riveiro, Ctr. Univ. de la Defensa (Spain); F. Lusquiños, J. Penide, F. Arias-González, J. del Val, R. Comesaña, M. Boutinguiza, J. Pou, Univ. de Vigo (Spain)
- 8785 46 **Processing of pure Ti by rapid prototyping based on laser cladding** [8785-269]  
F. Arias-González, J. del Val, R. Comesaña, F. Lusquiños, F. Quintero, Univ. de Vigo (Spain); A. Riveiro, Ctr. Univ. de la Defensa (Spain); M. Boutinguiza, J. Pou, Univ. de Vigo (Spain)
- 8785 47 **Analysis of the propagation of flat-topped beam in nonlinear optical fiber** [8785-27]  
D. A. Avila, C. O. Torres, Univ. Popular del Cesar (Colombia)
- 8785 4B **Influence of irradiation parameters in nanosecond Nd:YVO<sub>4</sub> laser micro-machining of stainless steel for biomedical applications** [8785-280]  
M. P. Fiorucci, A. J. López, A. Ramil, Univ. da Coruña (Spain)
- 8785 4C **Color dependence with horizontal-viewing angle and colorimetric characterization of two displays using different backlighting** [8785-283]  
J. J. Castro, A. M. Pozo, M. Rubiño, Univ. de Granada (Spain)
- 8785 4D **Experimental characterization of a highly nonlinear fiber** [8785-289]  
A. Supe, Riga Technical Univ. (Latvia); G. Fernandes, N. Muga, A. Pinto, Instituto de Telecomunicações (Portugal); M. Ferreira, Univ. de Aveiro (Portugal)
- 8785 4F **Characterization of the spatial resolution in two-photon spectroscopic techniques used for plasma diagnostics** [8785-292]  
M. García-Lechuga, Univ. de Valladolid (Spain) and Instituto de Óptica "Daza de Valdés" (Spain); L. M. Fuentes, K. Gruetzmacher, C. Perez, M. I. de la Rosa, Univ. de Valladolid (Spain)
- 8785 4G **White light interferometry applied to wavelength calibration of spectrometers** [8785-293]  
H. González-Núñez, R. de la Fuente, Univ. de Santiago de Compostela (Spain)

- 8785 4H **Design of microstructured optical fibers for supercontinuum generation** [8785-295]  
S. M. Rodrigues, M. M. Facção, S. C. Latas, M. F. S. Ferreira, Univ. de Aveiro (Portugal)
- 8785 4I **Four-wave-mixing assisted pulse shaping of femtosecond UV pulses** [8785-298]  
M. Canhota, H. Crespo, Univ. do Porto (Portugal); R. Weigand, Univ. Complutense de Madrid (Spain)
- 8785 4J **Solvent effects on the optical properties of two-level systems with permanent dipole moments** [8785-30]  
A. Mastrodomenico, M. A. Izquierdo, J. L. Paz, Univ. Simón Bolívar (Venezuela); P. Colmenares, Univ. de Los Andes (Venezuela)
- 8785 4M **All-optical phase modulated format conversion for high transmission rates based on fiber nonlinearity** [8785-306]  
V. C. Duarte, M. V. Drummond, R. N. Nogueira, Instituto de Telecomunicações (Portugal)
- 8785 4N **Dynamic demagnetization in magnetic thin films using a new pump-probe system in the 6 femtosecond range** [8785-308]  
C. S. Gonçalves, A. S. Silva, H. Crespo, D. S. Schmool, Univ. do Porto (Portugal)
- 8785 4O **Configurable multipulsing of a MOPA pulsed fiber laser with applications in materials processing** [8785-309]  
P. T. Guerreiro, J. M. Sousa, R. Romero, M. Silva, A. Duarte, J. R. Salcedo, Multiwave Photonics (Portugal)
- 8785 4P **Propagation of the four-wave mixing signal immersed in a thermal bath** [8785-31]  
M. A. Izquierdo, A. Mastrodomenico, J. L. Paz, Univ. Simón Bolívar (Venezuela)

## Part Two

- 8785 4R **Design, performance, and tolerances of an active GRIN laser beam shaper** [8785-313]  
A. I. Gómez-Varela, C. Bao-Varela, M. T. Flores-Arias, Instituto de Ciencia de Materiales de Aragón (Spain) and Univ. de Santiago de Compostela (Spain)
- 8785 4S **Characterization of the thermal refraction in ionic liquids induced by a train of femtosecond laser pulses** [8785-316]  
E. López Lago, Univ. de Santiago de Compostela (Spain); J. A. Nóvoa, Univ. de Vigo (Spain); D. Nóvoa, Ctr. de Láseres Pulsados (Spain); H. Michinel, Univ. de Vigo (Spain); O. Cabeza, Univ. da Coruña (Spain); J. R. Rodríguez, L. M. Varela, Univ. de Santiago de Compostela (Spain)
- 8785 4T **Devil's vortex-lens arrays generating 3D optical vortex structures** [8785-318]  
A. Calabuig, S. Sánchez-Ruiz, L. Martínez-León, E. Tajahuerce, M. Fernández-Alonso, Univ. Jaume I (Spain); W. Furlan, A. Pons-Martí, Univ. de València (Spain)
- 8785 4X **Automation methodology for the development of LPFG using CO<sub>2</sub> laser radiation** [8785-326]  
D. Castro Alves, J. M. P. Coelho, M. Nespereira, F. Monteiro, M. Abreu, J. M. Rebordão, Univ. de Lisboa (Portugal)

- 8785 4Z **Optical fiber tapers produced by near-infrared laser radiation** [8785-333]  
M. Nespereira, J. M. P. Coelho, F. Monteiro, M. Abreu, J. M. Rebordão, Univ. de Lisboa (Portugal)
- 8785 5I **Interferometric beating in digital Fourier transform holography** [8785-337]  
G. N. Oliveira, M. E. de Oliveira, J. Dias, P. A. M. dos Santos, Univ. Federal Fluminense (Brazil)
- 8785 56 **Photorefractive moiré-like patterns with different variation directions for multi-projection in profilometer applications** [8785-346]  
G. N. Oliveira, M. E. de Oliveira, J. Dias, P. A. M. dos Santos, Univ. Federal Fluminense (Brazil)
- 8785 5E **Stabilization and calibration of an ECDL system with a Michelson interferometer** [8785-360]  
I. Outumuro, J. L. Valencia, Lab. Oficial de Metroloxía de Galicia (Spain); J. Diz-Bugarin, Univ. de Vigo (Spain); I. Estevez-Caride, Lab. Oficial de Metroloxía de Galicia (Spain); J. Blanco, B. V. Dorrío, Univ. de Vigo (Spain)
- 8785 5I **Spatial resolution in time domain imaging for different phantom widths using the cumulant expansion solution to the transport equation** [8785-367]  
E. Ortiz-Rascón, N. C. Bruce, A. A. Rodríguez-Rosales, J. Garduño-Mejía, R. Ortega-Martínez, Univ. Nacional Autónoma de México (Mexico)
- 8785 5L **Study of factors affecting the appearance of colors under microscopes** [8785-261]  
R. Zakizadeh, Univ. of Eastern Finland (Finland); J. Martinez-Garcia, K. B. Raja, C. Siakidis, Gjøvik Univ. College (Norway)

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#### SESSION X

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- 8785 5O **Broadband coherent mid-IR supercontinuum generation using highly nonlinear tapered photonic crystal fibers** [8785-524]  
A. Ben Salem, R. Cherif, M. Zghal, SUP'COM (Tunisia) and GreS'Com Lab. (Tunisia)

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#### SESSION XII

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- 8785 5X **Identification of retinal cells in in-vivo high resolution images** [8785-505]  
P. Rangel-Fonseca, Ctr. de Investigaciones en Óptica, A.C. (Mexico); A. Gómez-Vieyra, Univ. Autónoma Metropolitana (Mexico); D. Malacara-Hernández, J. C. Estrada-Rico, G. Henández-Gómez, Ctr. de Investigaciones en Óptica, A.C. (Mexico)
- 8785 5Y **Hartmann and Hartmann-Shack spot identification and centroid evaluation by a new efficient segmentation and thresholding algorithm** [8785-510]  
G. Hernández-Gómez, Z. Malacara-Hernández, D. Malacara-Hernández, Ctr. de Investigaciones en Óptica, A.C. (Mexico); A. Gómez-Vieyra, Univ. Autónoma Metropolitana (Mexico)

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**SESSION XIII**

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- 8785 66 **Optical fiber trap: radiation pressure effect on inorganic and organic micro-particles (Invited Paper)** [8785-432]  
H. H. Cerecedo-Núñez, J. C. Alvarado-Zacarías, P. Padilla-Sosa, Univ. Veracruzana (Mexico); M. A. Basurto-Pensado, Univ. Autónoma del Estado de Morelos (Mexico); M. May-Alarcón, Univ. Autónoma del Carmen (Mexico); R. Ramos-García, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); L. Beltrán-Parrazal, Univ. Veracruzana (Mexico)
- 8785 68 **Evaluation between methods for the color measurement in holograms by using a CMOS- RGB camera and a spectrometer** [8785-550]  
N. Palacios-Ortega, D. Velásquez Prieto, Univ. EAFIT (Colombia)

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**SESSION XIV**

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- 8785 6A **Design of new phase shifting algorithms according to the interferometer sensitivities (Invited Paper)** [8785-321]  
M. Miranda, J. Diz-Bugarín, B. V. Dorrío, J. Blanco, Univ. de Vigo (Spain)

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**SESSION XV**

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- 8785 6J **Design and testing under actual condition of performance of an optical voltage measurement transformer for transmission lines electrical of high voltage** [8785-210]  
N. Gomez, H. Salazar, A. Ciro, Instituto Tecnológico Metropolitano (Colombia)

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**SESSION XVI**

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- 8785 6Q **Curvature phase factor in digital holographic microscopy** [8785-286]  
A. Doblas, E. Sánchez-Ortiga, M. Martínez-Corral, G. Saavedra, P. Andres, Univ. de València (Spain); J. Garcia-Sucerquia, Univ. de València (Spain) and Univ. Nacional de Colombia Sede Medellín (Colombia)
- 8785 6S **Coupling for capturing an displaying hologram systems for real-time digital holographic interferometry** [8785-63]  
R. Porras-Aguilar, W. Zaperty, M. Kujawinska, Warsaw Univ. of Technology (Poland)
- 8785 6U **Morphologic evaluation of thin films by algorithms of optical phase stepping applied to images obtained by interferential microscopy** [8785-232]  
V. Sarmiento, M. Asmad, J. I. Choque, G. Baldwin, Pontificia Univ. Católica del Perú (Peru)

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**SESSION XVII**

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- 8785 6W **Optimization of distributed bolometers coupled to optical antennas in the infrared (Invited Paper)** [8785-652]  
A. Cuadrado, M. Silva-Lopez, Univ. Complutense de Madrid (Spain); F. J. González, Univ. Autónoma de San Luis Potosi (Mexico); J. Alda, Univ. Complutense de Madrid (Spain)

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**SESSION XVIII**

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- 8785 72 **RGB digital lensless holographic microscopy (Invited Paper)** [8785-288]  
J. Garcia-Sucerquia, Univ. Nacional de Colombia Sede Medellín (Colombia)
- 8785 73 **Illumination analysis of the digital pattern recognition system by Bessel masks and one-dimensional signatures** [8785-688]  
S. Solorza, Univ. Autónoma de Baja California (Mexico); J. Álvarez-Borrego, Ctr. de Investigación Científica y de Educación Superior de Ensenada B.C. (Mexico)

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**POSTER SESSION II**

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- 8785 74 **Photon kinetic description of nonlinear cross-phase modulation** [8785-375]  
J. T. Mendonça, Instituto Superior Técnico (Portugal); H. Crespo, Univ. do Porto (Portugal); A. A. Amorim, Univ. do Porto (Portugal) and Instituto Politécnico do Porto (Portugal); L. M. Bernardo, Univ. do Porto (Portugal)
- 8785 75 **Numerical evaluation of the intensity transport equation for well-known wavefronts and intensity distributions** [8785-378]  
M. Campos-García, Univ. Nacional Autónoma de México (Mexico); F. Granados-Agustín, A. Comejo-Rodríguez, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); A. Estrada-Molina, M. Avendaño-Alejo, Univ. Nacional Autónoma de México (Mexico); V. I. Moreno-Oliva, Univ. del Istmo (Mexico)
- 8785 7A **Optical characterization of volcanic ash using diffuse reflection spectroscopy** [8785-393]  
D. K. Bravo, N. Falcón, F. J. Narea, R. A. Muñoz, A. A. Muñoz, Univ. de Carabobo (Venezuela)
- 8785 7B **New formulation of the laws of reflection of light** [8785-394]  
Á. L. Pérez, G. Martínez, M. I. Suero, Univ. de Extremadura (Spain)
- 8785 7F **Symmetries in the frequency space of the four-wave mixing signal** [8785-40]  
J. L. Paz, A. Mastrodomenico, M. A. Izquierdo, Univ. Simón Bolívar (Venezuela)
- 8785 7G **Estimation of hygroscopic power of electrotechnical materials by dynamic speckle technique** [8785-401]  
G. Bertolini, C. I. Cabello, CINDECA (Argentina); R. Arizaga, M. Trivi, Ctr. de Investigaciones Ópticas (Argentina) and Univ. Nacional de la Plata (Argentina); G. Barbera, Univ. Nacional de la Plata (Argentina)
- 8785 7H **Automated coal petrography for macerals characterization using histograms technique** [8785-406]  
J. R. Armenta Mejía, Univ. de La Guajira (Colombia); L. Mattos, C. O. Torres, Univ. Popular del Cesar (Colombia)
- 8785 7K **Design of a control system for interferometric fringe stabilization system with remote access** [8785-412]  
J. Espitia-Gómez, L. Ángel-Toro, D. Velásquez, Univ. EAFIT (Colombia)

- 8785 7T **Spectroscopy and microscopy characterization of spiropyran auto-assemble device** [8785-424]  
A. Orfiz Ramírez, R. Delgado Macuil, P. Zaca Moran, M. Rojas López, Ctr. de Investigación en Biotecnología Aplicada (Mexico)
- 8785 7W **Obtaining circularly polarized highly focused fields: a proposal** [8785-43]  
D. Maluenda, Univ. de Barcelona (Spain); R. Martínez-Herrero, Univ. Complutense de Madrid (Spain); I. Juvells, A. Carnicer, Univ. de Barcelona (Spain)
- 8785 7Y **New method for sub-structured Ronchi rulings generation and his irradiance profile** [8785-431]  
D. Aguirre-Aguirre, F. S. Granados-Agustín, B. Villalobos-Mendoza, R. Izazaga-Pérez, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); M. Campos-García, Univ. Nacional Autónoma de México (Mexico); A. Cornejo-Rodríguez, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)
- 8785 8I **Liquid crystal display for phase shifting** [8785-435]  
B. Villalobos-Mendoza, F. S. Granados-Agustín, D. Aguirre-Aguirre, A. Cornejo-Rodríguez, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)
- 8785 87 **The optical nonlinearity of gold nanoparticles prepared by bioreduction method** [8785-445]  
A. Balbuena Ortega, M. L. Arroyo Carrasco, Benemérita Univ. Autónoma de Puebla (Mexico); V. L. Gayou, A. Orduña Díaz, R. Delgado Macuil, M. Rojas López, Ctr. de Investigación en Biotecnología Aplicada (Mexico)
- 8785 89 **Null Ronchi-Hartmann test for an aspheric concave mirror** [8785-448]  
M. Avendaño-Alejo, G. Santiago-Castillo, M. Campos-García, Univ. Nacional Autónoma de México (Mexico); I. Moreno-Oliva, Univ. del Istmo (Mexico); R. Díaz-Urbe, Univ. Nacional Autónoma de México (Mexico)
- 8785 8A **Optimization of irradiation patterns using light emitting diodes** [8785-449]  
E. Rojas, S. Stolik, J. M. de la Rosa, Instituto Politécnico Nacional (Mexico); M. Pérez Maldonado, Univ. de La Habana (Cuba)
- 8785 8C **Effect of the internal modulation of speckles in displacement measurements in optical vortex metrology** [8785-452]  
D. Gomez-Tejada, Univ. EAFIT (Colombia) and Univ. Nacional de Colombia (Colombia); D. Sierra-Sosa, Univ. EAFIT (Colombia) and Ctr. de Investigaciones Ópticas (Argentina); R. Castañeda, Univ. Nacional de Colombia Sede Medellín (Colombia); L. Angel-Toro, Univ. EAFIT (Colombia)
- 8785 8F **Optical and electrical characterization of CdS-Glycine thin films with ammonia free buffer grown at different temperatures for solar cells applications** [8785-459]  
D. Berman-Mendoza, D. Quiñones-Urías, S. Ferra-González, A. Vera-Marquina, A. Rojas-Hernández, R. Gómez Fuentes, A. García-Juárez, A. L. Leal-Cruz, A. Ramos-Carrasco, Univ. de Sonora (Mexico)
- 8785 8G **Quantum teleportation using bipartite entangled photon-added non-linear coherent states** [8785-46]  
E. Castro, E. J. Páez, C. L. Ladera, A. Zambrano, Univ. Simón Bolívar (Venezuela)

- 8785 8I **Optical stimulated thermoluminescence in silicon rich oxide nanostructured films** [8785-461]  
D. Berman-Mendoza, Univ. de Sonora (Mexico); M. Aceves-Mijares, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); T. Piters, R. García-Gutiérrez, C. F. Ruiz-Valdez, Univ. de Sonora (Mexico); A. Ramos-Carrasco, Ctr. de Investigación en Materiales Avanzados, S.C. (Mexico); L. R. Berriel-Valdos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)
- 8785 8M **Study and characterization of laser spot for plasma generation** [8785-471]  
A. Quiroga, P. Pacheco, R. Sarmiento, F. Racedo, Univ. del Atlantico (Colombia)
- 8785 8P **Testing the AUDI2000 colour-difference formula for solid colours using some visual datasets with usefulness to automotive industry** [8785-479]  
J. Martínez-García, M. Melgosa, L. Gómez-Robledo, Univ. of Granada (Spain); C. Li, Univ. of Science and Technology Liaoning (China); M. Huang, H. Liu, Beijing Institute of Graphic Communication (China); G. Cui, Wenzhou Univ. (China); M. R. Luo, Univ. of Leeds (United Kingdom) and Zhejiang Univ. (China); T. Dauser, AUDI AG (Germany)
- 8785 8Q **Quantum discord of bipartite entangled non-linear coherent states** [8785-48]  
E. Castro, A. Zambrano, C. L. Ladera, R. Gómez, Univ. Simón Bolívar (Venezuela)
- 8785 8U **Quantum discord with weak measurement operators of quasi-Werner states based on bipartite entangled coherent states** [8785-49]  
E. Castro, R. Gómez, C. L. Ladera, A. Zambrano, Univ. Simón Bolívar (Venezuela)
- 8785 8V **Digital image quality measurements by objective and subjective methods from series of parametrically degraded images** [8785-496]  
A. Tachó, C. Mitjà, B. Martínez, J. Escofet, M. Ralló, Univ. Politècnica de Catalunya (Spain)
- 8785 8W **Angular distribution of the averaged luminous intensity of low power LEDs transfer standards** [8785-497]  
J. L. Velázquez, A. Ferrero, Instituto de Óptica "Daza de Valdés" (Spain); M. López, Physikalisch-Technische Bundesanstalt (Germany); A. Pons, A. Villamarín, J. Campos, Instituto de Óptica "Daza de Valdés" (Spain); A. Sperling, Physikalisch-Technische Bundesanstalt (Germany)
- 8785 8X **Automated system for acquisition and image processing for the control and monitoring boned nopal** [8785-5]  
E. Luevano, E. de Posada, M. Arronte, L. Ponce, T. Flores, Ctr. de Investigación en Ciencia Aplicada y Tecnología Avanzada (Mexico)
- 8785 93 **Comparative study on compact planar waveguide based photonic integrated couplers using simple effective index method** [8785-516]  
B. Deka, Girijananda Chowdhury Institute of Management and Technology (India) and Tezpur Univ. (India); A. Dutta, P. P. Sahu, Tezpur Univ. (India)
- 8785 94 **Measurement of the  $r_{63}$  electrooptic constant of a KDP crystal using weak quantum measurement** [8785-52]  
A. Guzmán, C. Ladera, E. Castro, Univ. Simón Bolívar (Venezuela)



- 8785 97 **Study of measurement and calculation of the relative amplitude of accommodation** [8785-525]  
P. Coloma, I. Pascual, D. de Fez, V. Camps, Univ. de Alicante (Spain)
- 8785 9I **Single-layer electroluminescent devices based on fluorene-1H-pyrazolo[3,4-b]quinoxaline co-polymers** [8785-552]  
M. Pokladko-Kowar, Cracow Univ. of Technology (Poland); A. Danel, Ł. Chacaga, Agricultural Univ. of Cracow (Poland)
- 8785 9M **Panoramic fringe projection by using a conical mirror** [8785-57]  
V. H. Flores, Ctr. de Investigaciones en Óptica, A.C. (Mexico); L. Casaletto, K. Genovese, Univ. degli Studi della Basilicata (Italy); J. A. Rayas, A. Martinez, Ctr. de Investigaciones en Óptica, A.C. (Mexico)
- 8785 9S **Optical bandgap enhancement of  $\alpha$ -SiC through hydrogen incorporation and thermal annealing treatments** [8785-584]  
L. M. Montañez, Pontificia Univ. Católica del Perú (Peru); J. A. Guerra, Pontificia Univ. Católica del Perú (Peru) and Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); K. Zegarra, Pontificia Univ. Católica del Perú (Peru); S. Kreppel, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); F. De Zela, Pontificia Univ. Católica del Perú (Peru); A. Winnacker, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); R. Weingärtner, Pontificia Univ. Católica del Perú (Peru) and Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)
- 8785 9Y **Comparative study of Cr:Nd:YAG and Nd:YAG solar laser performances** [8785-597]  
D. Liang, J. Almeida, D. Garcia, Univ. Nova de Lisboa (Portugal)
- 8785 9Z **Top lateral refraction and reflection of polarized light in lenses, coplanar lens system: applications** [8785-598]  
L. J. Miranda Díaz, Ctr. de Aplicaciones Tecnológicas y Desarrollo Nuclear (Cuba)
- 8785 A5 **Non-invasive topographic inspection of wood artwork** [8785-621]  
M. F. M. Costa, Univ. do Minho (Portugal)
- 8785 A7 **Digital holographic interferometry accelerated with GPU: application in mechanical micro-deformation measurement operating at video rate (Best Student Paper Award)** [8785-64]  
N. Múnera Ortiz, C. A. Trujillo, J. García-Sucerquia, Univ. Nacional de Colombia Sede Medellín (Colombia)
- 8785 A9 **Spectrum photoluminescence measuring system of porous silicon samples** [8785-65]  
T. F. Paes, A. F. Beloto, L. A. Berni, L. M. Silva, Instituto Nacional de Pesquisas Espaciais (Brazil)
- 8785 AB **Overall characterization of the polarization structure of radially polarized partially coherent vortex beams** [8785-66]  
R. Martinez-Herrero, F. Prado, Univ. Complutense de Madrid (Spain)
- 8785 AC **Measuring the area of tear film break-up by image analysis software** [8785-679]  
H. Pena-Verdeal, C. García-Resúa, Univ. de Santiago de Compostela (Spain); L. Ramos, Univ. da Coruña (Spain); A. Mosquera, E. Yebra-Pimentel, M. J. Giráldez, Univ. de Santiago de Compostela (Spain)

- 8785 AE **Interobserver and intraobserver repeatability of lipid layer pattern evaluation by two experienced observers** [8785-680]  
C. García-Resúa, H. Pena-Verdeal, Univ. de Santiago de Compostela (Spain); M. Lira, Univ. do Minho (Portugal); M. G. Penedo, Univ. da Coruña (Spain); M. J. Giráldez, E. Yebra-Pimentel, Univ. de Santiago de Compostela (Spain)
- 8785 AI **Variation of spatial soliton in liquid crystals due change of polarization of the incident laser beam** [8785-70]  
A. A. Rodríguez-Rosales, C. J. Román Moreno, R. Ortega-Martínez, Univ. Nacional Autónoma de México (Mexico)
- 8785 AJ **Analysis of the stability of an active mode-locking pulsed laser for ultra-short pulses generation** [8785-71]  
Y. E. Bracamontes Rodríguez, G. Beltrán Pérez, E. Kuzin, J. Castillo Mixcóatl, S. Muñoz Aguirre, Benemérita Univ. Autónoma de Puebla (Mexico)
- 8785 AK **Optimization of a Fabry-Perot Q-switch fiber optic laser** [8785-74]  
I. Armas Rivera, G. Beltrán Pérez, E. Kuzin, J. Castillo Mixcóatl, S. Muñoz Aguirre, Benemérita Univ. Autónoma de Puebla (Mexico)
- 8785 AL **Full model analysis of the four-wave mixing anti-STOKES component growth in the wavelength-division multiplexing solitons systems near the zero-dispersion wavelength** [8785-75]  
L. Mandeng Mandeng, S. Fewo Ibraid, C. Tchawoua, Univ. de Yaoundé 1 (Cameroon)
- 8785 AM **Optical waveguides formed by carbon implantation on SiO<sub>2</sub>** [8785-79]  
E. Flores-Romero, J. M. Zarate-Reyes, H. Silva-Pereyra, A. Oliver, L. Rodríguez-Fernández, Univ. Nacional Autónoma de México (Mexico)
- 8785 AQ **Optical properties of Nd:YAG crystals implanted with Ni and Ti ions** [8785-86]  
G. V. Vázquez, Ctr. de Investigaciones en Óptica, A.C. (Mexico); R. Trejo-Luna, Univ. Nacional Autónoma de México (Mexico); D. Ramírez, Ctr. de Investigaciones en Óptica, A.C. (Mexico); J. Rickards, Univ. Nacional Autónoma de México (Mexico)
- 8785 AR **A 2D continuous wavelet transform method for InSAR phase-maps denoising** [8785-87]  
N. Escalante, J. Villa, I. De la Rosa, C. Olvera-Olvera, D. Alaniz-Lumbreras, O. Gutierrez-Mata, Univ. Autónoma de Zacatecas (Mexico)
- 8785 AT **Band structure of a periodic waveguide that include a dispersive metamaterial** [8785-91]  
A. Mendoza-Suárez, H. Pérez-Aguilar, Univ. Michoacana de San Nicolás de Hidalgo (Mexico)
- 8785 AU **The perfect vortex and its realization by the liquid crystal spatial light modulator** [8785-94]  
C. Rickenstorff, A. S. Ostrovsky, Univ. Autónoma de Puebla (Mexico)
- 8785 AW **Skin-light interaction of three main chromofores in skin affected by Port Wine Stain** [8785-97]  
S. Mújica Ascencio, J. S. Velázquez González, J. A. Álvarez Chávez, Ctr. de Investigación e Innovación Tecnológica (Mexico)

- 8785 AX **Digital controller applied to phase control in photorefractive crystals** [8785-99]  
H. Lorduy G., Univ. Pontificia Bolivariana (Colombia); J. A. Valencia, Servicio Nacional de Aprendizaje (Colombia)
- 8785 AY **Retro-diffusion and transmission of laser radiation to characterize the paper fiber distribution and mass density** [8785-110]  
A. de O. Mendes, P. T. Fiadeiro, A. P. Costa, M. E. Amaral, Univ. da Beira Interior (Portugal); M. N. Belgacem, Institut National Polytechnique de Grenoble (France)
- 8785 AZ **UV-visible transmittance of silicone-hydrogel contact lenses measured with a fiber optic spectrometer** [8785-179]  
R. Fuentes, E. Fernández, I. Pascual, C. García, Univ. de Alicante (Spain)

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#### SESSION XIX

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- 8785 B3 **Study on highly sensitive asymmetric waveguide optical sensor for detection of sucrose concentration based on leaky quasi-modes** [8785-675]  
A. Dutta, B. Deka, P. P. Sahu, Tezpur Univ. (India)
- 8785 B6 **Abel transform inversion using Kalman filter** [8785-154]  
E. González-Ramírez, E. de la Rosa Miranda, J. G. Arceo-Olague, J. J. Villa-Hernández, I. de la Rosa Vargas, T. Saucedo Anaya, Univ. Autónoma de Zacatecas (Mexico); L. R. Berriel-Valdos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); M. A. Araiza-Esquivel, Univ. Autónoma de Zacatecas (Mexico)

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#### SESSION XX

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- 8785 B9 **Remote access to an interferometric fringes stabilization active system via RENATA** [8785-693]  
J. Espitia-Gómez, L. Ángel-Toro, Univ. EAFIT (Colombia)
- 8785 BA **Phase unwrapping using Chebyshev polynomials** [8785-158]  
E. de la Rosa Miranda, E. González-Ramírez, J. G. Arceo-Olague, J. J. Villa-Hernández, I. de la Rosa Vargas, T. Saucedo-Anaya, Univ. Autónoma de Zacatecas (Mexico); L. R. Berriel-Valdos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); N. Escalante, Univ. Autónoma de Zacatecas (Mexico)

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#### SESSION XXI

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- 8785 BD **Optimization of digitization procedures in cultural heritage preservation** [8785-495]  
B. Martínez, C. Mitjà, J. Escofet, Univ. Politècnica de Catalunya (Spain)
- 8785 BF **Laser removal of graffiti from Pink Morelia Quarry** [8785-300]  
J. Penide, F. Quintero, Univ. de Vigo (Spain); A. Riveiro, Ctr. Univ. de la Defensa (Spain); A. Sánchez-Castillo, Univ. Michoacana de San Nicolás de Hidalgo (Mexico); R. Comesaña, J. del Val, F. Lusquiños, J. Pou, Univ. de Vigo (Spain)

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**SESSION XXII**

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- 8785 BH **Fiber specklegram sensors (FSS) for measuring high frequency mechanical perturbations** [8785-250]  
A. Hoyos, Politécnico Colombiano Jaime Isaza Cadavid (Colombia); N. D. Gómez, Instituto Tecnológico Metropolitano (Colombia); J. A. Gómez, Politécnico Colombiano Jaime Isaza Cadavid (Colombia)
- 8785 BI **Single frame method for resolution enhancement of the Fourier fringe analysis method** [8785-553]  
P. J. Tavares, Prudente and Tavares (Portugal); M. A. P. Vaz, Univ. do Porto (Portugal)
- 8785 BL **High accuracy piston and wobble sensor based on heterodyne interferometry** [8785-328]  
C. Silva, A. Cabral, M. Abreu, J. M. Rebordão, D. Castro Alves, Univ. de Lisboa (Portugal)

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**SESSION XXIII**

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- 8785 BP **Spatially inhomogeneous phase-modulating interferometry by non-quadrature amplitude modulation** [8785-167]  
U. Rivera-Ortega, C. Meneses-Fabian, G. Rodriguez-Zurita, Benemérita Univ. Autónoma de Puebla (Mexico)

**Part Three**

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**SESSION XXIV**

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- 8785 BU **Nonequilibrium free diffusion in seed leachate** [8785-604]  
L. Ortiz G., P. Riquelme P., R. Guzmán, Univ. de la Frontera (Chile) and Univ. de Concepción (Chile)
- 8785 BV **Study of the ink-paper interaction by image analysis: surface and bulk inspection** [8785-124]  
P. T. Fiadeiro, A. de O. Mendes, A. M. M. Ramos, S. C. L. de Sousa, Univ. da Beira Interior (Portugal)
- 8785 BW **Sensitivity enhancement of evanescent waveguide optical sensor for detecting adulterant traces in petroleum products using SiON technology** [8785-322]  
A. Dutta, B. Deka, P. P. Sahu, Tezpur Univ. (India)
- 8785 BX **Study on compactness of planar waveguide based integrated optic couplers using tooth shaped grating assisted geometry** [8785-676]  
B. Deka, Girijananda Chowdhury Institute of Management and Technology (India) and Tezpur Univ. (India); A. Dutta, P. P. Sahu, Tezpur Univ. (India)

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## XI SEONS SESSION

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- 8785 BZ **Remote fiber sensors and optical amplification (Invited Paper)** [8785-297]  
M. J. Pontes, Univ. Federal do Espírito Santo (Brazil); T. V. N. Coelho, Univ. Federal de Juiz de Fora (Brazil); J. P. Carvalho, J. L. Santos, A. Guerreiro, INESC Porto (Portugal)
- 8785 C2 **Gain flattening analysis for Raman+EDFA hybrid amplifiers using recycled pump power for WDM systems** [8785-686]  
M. M. Jardim Martini, Ctr. Federal de Educação Tecnológica de Minas Gerais (Brazil); C. E. S. Castellani, M. J. Pontes, M. R. N. Ribeiro, Univ. Federal do Espírito Santo (Brazil); H. J. Kalinowski, Univ. Tecnológica Federal do Paraná (Brazil)
- 8785 C8 **Fabrication of polymer Fabry-Perot fiber sensors using optical fiber microheaters (Invited Paper)** [8785-42]  
M. S. Cano-Velázquez, J. Hernández-Cordero, Univ. Nacional Autónoma de México (Mexico)
- 8785 C9 **Laser processed preforms for microstructured optical fibers** [8785-117]  
M. Becker, Institut für Photonische Technologien e.V. (Germany); M. Werner, O. Fitzau, D. Esser, Fraunhofer-Institut für Lasertechnik (Germany); J. Kobelke, K. Schuster, A. Lorenz, A. Schwuchow, M. Rothhardt, Institut für Photonische Technologien e.V. (Germany); D. Hoffmann, Fraunhofer-Institut für Lasertechnik (Germany); H. Bartelt, Institut für Photonische Technologien e.V. (Germany)
- 8785 CC **Study of temperature sensor fiber with high germanium doped core** [8785-278]  
F. C. Fávero, M. Becker, R. Spittel, M. Rothhardt, J. Kobelke, H. Bartelt, Institut für Photonische Technologien e.V. (Germany)

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## SESSION XXV

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- 8785 CF **Interference with electrons: from thought to real experiments (Invited Paper)** [8785-141]  
G. Matteucci, Univ. degli Studi di Bologna (Italy)
- 8785 CG **Enabling quantum communications through accurate photons polarization control** [8785-305]  
Á. J. Almeida, N. J. Muga, N. A. Silva, Univ. de Aveiro (Portugal) and Instituto de Telecomunicações (Portugal); A. D. Stojanovic, Instituto de Telecomunicações (Portugal); P. S. André, A. N. Pinto, Univ. de Aveiro (Portugal) and Instituto de Telecomunicações (Portugal); J. Mora, J. Capmany, Univ. Politècnica de València (Spain)
- 8785 CI **Pump and filtering optimization in Mamyshev regenerator** [8785-355]  
A. Supe, Riga Technical Univ. (Latvia); G. M. Fernandes, N. J. Muga, A. N. Pinto, Instituto de Telecomunicações (Portugal) and Univ. de Aveiro (Portugal); M. F. S. Ferreira, Univ. de Aveiro (Portugal)

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**SESSION XXVI**

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- 8785 CL **Correlation applied to the recognition of regular geometric figures** [8785-329]  
W. Lasso, Y. Morales, F. Vega, L. Díaz, Univ. Popular del Cesar (Colombia); D. Flórez, Univ. del Zulia (Venezuela); C. Torres, Univ. Popular del Cesar (Colombia)

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**SESSION XXVII**

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- 8785 CO **Ophthalmic compensation of visual ametropia based on a programmable diffractive lens** [8785-150]  
M. S. Millán, E. Pérez-Cabré, L. A. Romero, N. Ramírez, Univ. Politècnica de Catalunya (Spain)
- 8785 CP **Experiment design for through-focus testing of intraocular lenses** [8785-151]  
M. S. Millán, F. Alba-Bueno, F. Vega, Univ. Politècnica de Catalunya (Spain)
- 8785 CS **Development of an optical simulator of the human eye** [8785-284]  
J. M. P. Coelho, Univ. de Lisboa (Portugal); A. Baião, Univ. de Lisboa (Portugal) and Univ. Nova de Lisboa (Portugal); P. Vieira, Univ. Nova de Lisboa (Portugal)

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**SESSION XXVIII**

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- 8785 CU **Laser scanners: from industrial to biomedical applications** [8785-131]  
V.-F. Duma, Aurel Vlaicu Univ. of Arad (Romania)
- 8785 CX **Optical characterization of thermal properties of biological tissue** [8785-215]  
A. Gutierrez-Arroyo, C. Sánchez Pérez, N. Alemán-García, C. Piña-Barba, Univ. Nacional Autónoma de México (Mexico)
- 8785 CY **PIV and digital holography for measuring blood flows and vessel wall dynamics** [8785-311]  
L. Arévalo, E. Roche, V. Palero, M. A. Martínez, M. P. Arroyo, Univ. de Zaragoza (Spain)

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**POSTER SESSION III**

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- 8785 CZ **Power measuring in ophthalmic lenses using lateral amplification** [8785-103]  
P. G. Mendoza-Villegas, G. Trujillo-Schiaffino, D. P. Salas-Peimbert, M. Anguiano-Morales, L. F. Corral-Martinez, Instituto Tecnológico de Chihuahua (Mexico)
- 8785 D0 **Sphere power measuring in ophthalmic lenses by infinite fringe moiré deflectometry** [8785-104]  
J. A. García-Ruelas, G. Trujillo-Schiaffino, D. P. Salas-Peimbert, M. Anguiano-Morales, L. F. Corral-Martinez, Instituto Tecnológico de Chihuahua (Mexico)
- 8785 D1 **Blind restoration of retinal images degraded by space-variant blur with adaptive blur estimation** [8785-126]  
A. G. Marrugo, Univ. Politècnica de Catalunya (Spain) and Univ. Tecnológica de Bolívar (Colombia); M. S. Millán, Univ. Politècnica de Catalunya (Spain); M. Šorel, F. Šroubek, Institute of Information Theory and Automation (Czech Republic)

- 8785 D2 **Detection of fungi colony growth on bones by dynamic speckle** [8785-161]  
F. M. Vincitorio, Univ. Tecnológica Nacional (Argentina); N. Budini, Univ. Tecnológica Nacional (Argentina) and Instituto de Física del Litoral (Argentina); C. Mulone, M. Spector, C. Freyre, Univ. Tecnológica Nacional (Argentina); A. J. López Díaz, A. Ramil, Univ. da Coruña (Spain)
- 8785 D7 **Diffuse reflectance spectroscopy and optical polarization imaging of in-vivo biological tissue** [8785-216]  
A. Mora-Núñez, Univ. de Guadalajara (Mexico); Y. Castillejos, Ctr. de Investigaciones en Óptica, A.C. (Mexico); G. García-Torales, Univ. de Guadalajara (Mexico); G. Martínez-Ponce, Ctr. de Investigaciones en Óptica, A.C. (Mexico)
- 8785 DA **Development of a low cost pupillometer-eyetracker and applications** [8785-26]  
A. Bianchetti, Univ. de Buenos Aires (Argentina); L. I. Perez, S. A. Comastri, Univ. de Buenos Aires (Argentina) and Consejo Nacional de Investigaciones Científicas y Técnicas (Argentina)
- 8785 DB **GUCLF: a new light field face database** [8785-290]  
R. Raghavendra, K. B. Raja, B. Yang, C. Busch, Gjøvik Univ. College (Norway)
- 8785 DE **Optical simulation of laser beam phase-shaping focusing optimization in biological tissues** [8785-319]  
R. Gomes, Univ. de Lisboa (Portugal); P. Vieira, Univ. Nova de Lisboa (Portugal); J. M. P. Coelho, Univ. de Lisboa (Portugal)
- 8785 DF **Parameterization using Fourier series expansion of the diffuse reflectance of human skin to vary the concentration of the melanocytes** [8785-324]  
J. F. Narea, A. A. Muñoz, Univ. de Carabobo (Venezuela); J. Castro, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); R. A. Muñoz, C. E. Villalba, M. F. Martinez, K. D. Bravo, Univ. de Carabobo (Venezuela)
- 8785 DH **Dynamical speckles patterns of action potential transmission effects in squid giant axon membrane** [8785-372]  
J. J. Llovera-González, A. B. Moreno-Yeras, Instituto Superior Politécnico José Antonio Echeverría (Cuba); M. Muramatsu, D. Soga, Univ. de São Paulo (Brazil); R. L. Serra-Toledo, Instituto Superior Politécnico José Antonio Echeverría (Cuba); D. S. F. Magalhães, Hospital de Clínicas da UNICAMP (Brazil)
- 8785 DI **Speckle patterns during the spreading of lung surfactant** [8785-381]  
J. J. Llovera-González, A. B. Moreno-Yeras, Instituto Superior Politécnico José Antonio Echeverría (Cuba); D. M. Martínez-Muñoz, M. Z. J. Ferreira, W. Shin Nishitani, A. B. Almeida, A. M. Alencar, M. Muramatsu, Univ. de São Paulo (Brazil); R. L. Serra-Toledo, Instituto Superior Politécnico José Antonio Echeverría (Cuba)
- 8785 DJ **Parametrization histological grade white adipose tissue of the breast by the cubic spline interpolation** [8785-388]  
L. A. Martínez, Univ. de Carabobo (Venezuela); F. J. Narea, Univ. de Carabobo (Venezuela) and Univ. Central de Venezuela (Venezuela); F. Cedeño, Univ. de Carabobo (Venezuela); A. A. Muñoz, Univ. de Carabobo (Venezuela) and Univ. Central de Venezuela (Venezuela); A. Reigosa, Univ. Central de Venezuela (Venezuela); K. Bravo, Univ. de Carabobo (Venezuela)

- 8785 DN **Experimental investigation of surface tension in Newtonian and non-Newtonian fluids with optical diffractometry** [8785-398]  
M. Zargham, Univ. of Zanjan (Iran, Islamic Republic of); A. Moradi, Univ. of Zanjan (Iran, Islamic Republic of) and Institute for Advanced Studies in Basic Sciences (Iran, Islamic Republic of); A. Najafi, Univ. of Zanjan (Iran, Islamic Republic of)
- 8785 DO **Determination of quality parameters in apple 'Smoothie Golden Delicious' using backscattering laser imaging** [8785-400]  
V. Lafuente, Estación Experimental Aula Dei (Spain) and Univ. de Zaragoza (Spain); J. Val, Estación Experimental Aula Dei (Spain); C. Urzola, I. Negueruela, Univ. de Zaragoza (Spain)
- 8785 DR **Gabor transform applied to superresolution in optical systems** [8785-414]  
C. Jimenez, R. Pérez, Univ. de la Gajira (Colombia); C. O. Torres, Univ. Popular del Cesar (Colombia)
- 8785 DT **Characterization of PET preforms using spectral domain optical coherence tomography** [8785-491]  
H. Hosseiny, INESC TEC (Portugal); M. J. Ferreira, EnerMeter – Sistemas de Medição, Lda (Portugal) and Univ. do Minho (Portugal); T. Martins, EnerMeter – Sistemas de Medição, Lda (Portugal); C. Carmelo Rosa, INESC TEC (Portugal)
- 8785 DU **Low level laser therapy on injured rat muscle: assessment of irradiation parameters (Best Student Paper Award)** [8785-61]  
M. Mantineo, J. P. Pinheiro, A. M. Morgado, Univ. de Coimbra (Portugal)
- 8785 DW **An irradiation system for photodynamic therapy with a fiber-optic sensor for measuring tissue oxygen** [8785-76]  
L. Quintanar, D. Fabila, S. Stolik, J. M. de la Rosa, Instituto Politécnico Nacional (Mexico)
- 8785 DY **Low power laser and LED irradiation effect on proliferation and differentiation of Wistar rats mesenchymal stem cells** [8785-83]  
D. Mancera, E. Solarte, L. Fierro, W. Criollo, Univ. del Valle (Colombia)
- 8785 E0 **Gloss measurements and rugometric inspection in dental biomaterials** [8785-145]  
A. Fernández-Oliveras, Univ. de Granada (Spain); M. F. M. Costa, Univ. do Minho (Portugal); A. Yebra, M. Rubiño, M. M. Pérez, Univ. de Granada (Spain)
- 8785 E1 **Tuning a fast linear camera used within a Talbot bands spectrometer-based optical coherence tomography set-up** [8785-174]  
M. J. Marques, A. Bradu, A. G. Podoleanu, Univ. of Kent (United Kingdom)
- 8785 E2 **Nonlinear correlation by using invariant identity vectors signatures to identify different species of fish** [8785-196]  
C. Fimbres-Castro, Univ. Autónoma de Baja California (Mexico); J. Álvarez-Borrego, Ctr. de Investigación Científica y de Educación Superior de Ensenada B.C. (Mexico)
- 8785 E3 **Laser bioengineering of glass-titanium implants surface** [8785-270]  
F. Lusquiños, F. Arias-González, J. Penide, J. del Val, R. Comesaña, F. Quintero, Univ. de Vigo (Spain); A. Riveiro, Ctr. Univ. de la Defensa (Spain); M. Boutinguiza, Univ. de Vigo (Spain); M. J. Pascual, A. Durán, Instituto de Cerámica y Vidrio (Spain); J. Pou, Univ. de Vigo (Spain)



- 8785 E4 **Artifacts cancellation in Fourier domain optical coherence tomography using balance detection** [8785-407]  
A. Bradu, A. G. Podoleanu, Univ. of Kent (United Kingdom)
- 8785 E8 **A diffuse reflectance spectroscopy system to study biological tissues** [8785-456]  
A. de la Cadena, S. Stolik, J. M. de la Rosa, Instituto Politécnico Nacional (Mexico)
- 8785 E9 **Irradiation system for interstitial photodynamic therapy** [8785-457]  
L. Pacheco, S. Stolik, J. De la Rosa, Instituto Politécnico Nacional (Mexico)
- 8785 EA **Design of matrix irradiation system for external tissue phototherapy with temperature control** [8785-458]  
F. Y. López S., S. Stolik Isakina, J. M. de La Rosa Vázquez, Instituto Politécnico Nacional (Mexico)
- 8785 EF **Determination of optical properties in dental restorative biomaterials using the inverse-adding-doubling method (Best Student Paper Award)** [8785-492]  
A. Fernández-Oliveras, M. Rubiño, M. M. Pérez, Univ. de Granada (Spain)
- 8785 EG **Rugometric and microtopographic non-invasive inspection in dental-resin composites and zirconia ceramics** [8785-51]  
A. Fernández-Oliveras, Univ. de Granada (Spain); M. F. M. Costa, Univ. do Minho (Portugal); O. E. Pecho, M. Rubiño, M. M. Pérez, Univ. de Granada (Spain)
- 8785 EH **Evaluation of metal-polymeric fixed partial prosthesis using optical coherence tomography** [8785-528]  
C. Sinescu, M. L. Negrutiu, Univ. of Medicine and Pharmacy Victor Babes Timisoara (Romania); V. F. Duma, Aurel Vlaicu Univ. of Arad (Romania); C. Marcauteanu, F. I. Topala, M. Rominu, Univ. of Medicine and Pharmacy Victor Babes Timisoara (Romania); A. Bradu, A. G. Podoleanu, Univ. of Kent (United Kingdom)
- 8785 EL **Morphological analysis of *Bacillus polymyxa* colonies: digital image analysis in wide-field microscopy** [8785-574]  
L. M. Guerrero, A. Plata G., G. Rincón C., H. Gutiérrez A., A. Plata, Univ. Industrial de Santander (Colombia)
- 8785 ER **Assessing the optical properties of the healthy and emmetropic eye with accommodation** [8785-638]  
C. M. Oliveira, S. Franco, Univ. do Minho (Portugal)
- 8785 ES **Influence of the thermo-oxidative degradation on the chemical structure of contact lenses** [8785-643]  
M. Lira, C. Alves, G. Botelho, Univ. do Minho (Portugal)
- 8785 ET **Accuracy of two osmometers on standard samples: electrical impedance technique and freezing point depression technique** [8785-677]  
C. García-Resúa, H. Pena-Verdeal, M. Miñones, J. Gilino, M. J. Giraldez, E. Yebra-Pimentel, Univ. de Santiago de Compostela (Spain)

- 8785 EU **Criteria for lipid layer pattern evaluation: Pli-marker database** [8785-678]  
C. García-Resúa, H. Pena-Verdeal, Univ. de Santiago de Compostela (Spain);  
B. Remeseiro, M. G. Penedo, Univ. of A Coruña (Spain); M. J. Giráldez, E. Yebra-Pimentel,  
Univ. de Santiago de Compostela (Spain)
- 8785 EV **Comparison between three methods to value lower tear meniscus measured by image software** [8785-681]  
C. García-Resúa, H. Pena-Verdeal, Univ. de Santiago de Compostela (Spain); M. Lira,  
M. E. R. Oliveira, Univ. do Minho (Portugal); M. J. Giráldez, E. Yebra-Pimentel, Univ. de  
Santiago de Compostela (Spain)

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#### POSTER SESSION XI SEONS

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- 8785 EX **Optical fibre monitoring of Madeira wine *estufagem* process** [8785-142]  
C. Novo, Univ. de Aveiro (Portugal); L. Billo, Instituto de Telecomunicações (Portugal);  
R. Ferreira, Univ. de Aveiro (Portugal); N. Alberto, Instituto de Telecomunicações (Portugal)  
and Univ. de Aveiro (Portugal); P. Antunes, Univ. de Aveiro (Portugal) and Instituto de  
Telecomunicações (Portugal); R. Nogueira, Instituto de Telecomunicações (Portugal);  
J. L. Pinto, Univ. de Aveiro (Portugal) and Instituto de Telecomunicações (Portugal)
- 8785 EY **A long period grating-based platform for the detection of *E. coli* proteins** [8785-200]  
R. B. Queirós, INESC Porto (Portugal), Univ. do Porto (Portugal), and Instituto Politécnico do  
Porto (Portugal); C. Gouveia, INESC Porto (Portugal); J. R. A. Fernandes, Univ. de Trás-os-  
Montes e Alto Douro (Portugal); P. V. S. Marques, INESC Porto (Portugal) and Univ. do Porto  
(Portugal); J. P. Noronha, Univ. Nova de Lisboa (Portugal); M. G. F. Sales, Instituto  
Politécnico do Porto (Portugal); P. A. S. Jorge, INESC Porto (Portugal)
- 8785 F0 **Characterization of a fiber based heralded single photon source at telecom wavelength**  
[8785-303]  
N. A. Silva, A. N. Pinto, Univ. de Aveiro (Portugal) and Instituto de Telecomunicações  
(Portugal)
- 8785 F3 **Wavelength-shift-free Mamyshev regenerator** [8785-348]  
G. M. Fernandes, Instituto de Telecomunicações (Portugal) and Univ. de Aveiro (Portugal);  
B. Tiburcio, Instituto de Telecomunicações (Portugal); N. J. Muga, A. N. Pinto, Instituto de  
Telecomunicações (Portugal) and Univ. de Aveiro (Portugal)
- 8785 F4 **Nonlinear polarizers in low-birefringence optical fibers** [8785-403]  
N. J. Muga, G. M. Fernandes, A. N. Pinto, Instituto de Telecomunicações (Portugal) and  
Univ. de Aveiro (Portugal)
- 8785 F5 **Validation of dose measurements by scintillating fiber optic dosimeters for medical applications** [8785-488]  
A. Correia, INESC Porto (Portugal); R. Pirraco, IPOFG Porto (Portugal); C. C. Rosa, INESC  
Porto (Portugal) and Univ. do Porto (Portugal)
- 8785 F9 **New developments on the design and modeling of fiber optical tweezers** [8785-519]  
R. S. Rodrigues Ribeiro, INESC Porto (Portugal) and Univ. do Porto (Portugal); P. A. S. Jorge,  
Univ. do Porto (Portugal); A. Guerreiro, INESC Porto (Portugal) and Univ. do Porto (Portugal)

- 8785 FA **Design and characterization of a plastic optical fiber pH sensor** [8785-530]  
L. Ferreira, P. Simões, R. S. Carvalho, P. Lopes, M. Ferreira, Univ. de Aveiro (Portugal)
- 8785 FB **Figure-of-eight cavity fiber laser based torsion sensor** [8785-531]  
M. S. Ferreira, J. L. Santos, INESC Porto (Portugal) and Univ. do Porto (Portugal); P. Mergo, Maria Curie-Sklodowska Univ. (Poland); O. Frazão, INESC Porto (Portugal)
- 8785 FC **Characterization of a novel dissolved CO<sub>2</sub> sensor for utilization in environmental monitoring and aquaculture industry** [8785-535]  
K. Balogh, INESC Porto (Portugal) and Univ. of Pécs (Hungary); J. M. Jesus, CIIMAR (Portugal); C. Gouveia, INESC Porto (Portugal) and Univ. da Madeira (Portugal); J. O. Domingues, CIIMAR (Portugal); A. Markovics, Univ. of Pécs (Hungary); J. M. Baptista, Univ. da Madeira (Portugal); B. Kovacs, Univ. of Pécs (Hungary); C. M. Pereira, Univ. do Porto (Portugal); M.-T. Borges, CIIMAR (Portugal) and Univ. do Porto (Portugal); P. A. S. Jorge, INESC Porto (Portugal)
- 8785 FE **High refractive index and temperature sensitivity LPGs for high temperature operation** [8785-551]  
I. M. Nascimento, INESC Porto (Portugal) and Univ. do Porto (Portugal); C. Gouveia, INESC Porto (Portugal) and Univ. da Madeira (Portugal); S. Jana, S. Bera, Central Glass and Ceramic Research Institute (India); J. M. Baptista, INESC Porto (Portugal) and Univ. da Madeira (Portugal); P. Moreira, INESC Porto (Portugal); P. Biwas, S. Bandyopadhyay, Central Glass and Ceramic Research Institute (India); P. A. S. Jorge, INESC Porto (Portugal)
- 8785 FF **Extremely small-core photonic crystal fiber fusion splicing with a single-mode fiber** [8785-559]  
B. D. Tiburcio, Instituto de Telecomunicações (Portugal); G. M. Fernandes, A. N. Pinto, Instituto de Telecomunicações (Portugal) and Univ. de Aveiro (Portugal)
- 8785 FH **Low-cost temperature measurement using LPG and total transmitted power** [8785-564]  
P. Simões, P. Lopes, Univ. de Aveiro (Portugal)
- 8785 FI **Spatial soliton dynamics in cubic-quintic media** [8785-572]  
N. A. Silva, INESC TEC - UOSE (Portugal) and Univ. do Porto (Portugal); M. I. Carvalho, Univ. do Porto (Portugal) and INESC TEC - UTM (Portugal); A. Guerreiro, INESC TEC - UOSE (Portugal) and Univ. do Porto (Portugal)
- 8785 FJ **Lightons: phonons with light** [8785-575]  
N. A. Silva, INESC TEC - UOSE (Portugal) and Univ. do Porto (Portugal); M. I. Carvalho, Univ. do Porto (Portugal) and INESC TEC - UTM (Portugal); A. Guerreiro, INESC TEC - UOSE (Portugal) and Univ. do Porto (Portugal)
- 8785 FK **SPR sensing with bimetallic layers in optical fibers and phase interrogation** [8785-576]  
H. Moayyed, I. T. Leite, L. Coelho, J. L. Santos, INESC Porto (Portugal) and Univ. do Porto (Portugal); D. Viegas, INESC Porto (Portugal) and Cabelte, SA (Portugal)

- 8785 FL **Ag-nanowire metamaterials: spectral reflectance analysis and homogenization models** [8785-581]  
I. T. Leite, INESC TEC (Portugal); A. O. Silva, INESC TEC (Portugal), Applied Electromagnetics Lab. (Brazil), and Univ. Federal do Pará (Brazil); A. Hierro-Rodríguez, INESC TEC (Portugal) and Univ. do Porto (Portugal); C. T. Sousa, M. P. Fernández-García, J. M. Teixeira, J. P. Araujo, Univ. do Porto (Portugal); M. T. Giralddi, Instituto Militar de Engenharia (Brazil); J. W. C. A. Costa, Applied Electromagnetics Lab. (Brazil) and Univ. Federal do Pará (Brazil); D. Viegas, INESC Porto (Portugal) and Cabelte, SA (Portugal); P. A. S. Jorge, INESC Porto (Portugal); A. Guerreiro, INESC Porto (Portugal) and Univ. do Porto (Portugal)
- 8785 FM **Enhancement of refractive index sensitivity of the in-line Mach-Zehnder interferometer through bending** [8785-635]  
C. R. da Silveira, J. W. A. Costa, Univ. Federal do Pará (Brazil); M. T. R. Giralddi, Instituto Militar de Engenharia (Brazil); M. A. R. Franco, Instituto de Estudos Avançados (Brazil); P. A. S. Jorge, INESC Porto (Portugal)
- 8785 FP **Development of an electrical current sensor prototype for applications in high-power lines** [8785-691]  
I. M. Nascimento, INESC Porto (Portugal) and Univ. do Porto (Portugal); A. C. S. Brígida, INESC Porto (Portugal) and Univ. Federal do Pará (Portugal); J. M. Baptista, INESC Porto (Portugal) and Univ. da Madeira (Portugal); J. C. W. A. Costa, Univ. Federal do Pará (Brazil); M. A. G. Martinez, CEFET/RJ (Brazil); P. A. S. Jorge, INESC Porto (Portugal)
- 8785 FQ **Monitoring of non-homogeneous strains in wood glued joints with embedded FBG optical sensors in mode I delamination tests** [8785-694]  
R. S. Maciel, O. Frazão, INESC TEC (Portugal); J. J. L. Morais, Univ. de Trás-os-Montes e Alto Douro (Portugal); J. R. A. Fernandes, INESC TEC (Portugal) and Univ. de Trás-os-Montes e Alto Douro (Portugal)

---

#### SESSION XXIX

---

- 8785 FT **The influence of humidity, temperature, and oral contraceptive in tear** [8785-282]  
R. A. R. C. Sousa, T. L. C. Ribeiro, Clinical Practice (Portugal); S. M. B. Moreira, Escola Secundária Vieira do Minho (Portugal); A. M. G. Baptista, Univ. do Minho (Portugal)
- 8785 FW **The macular photostress test in diabetes, glaucoma, and cataract** [8785-317]  
A. M. G. Baptista, Univ. do Minho (Portugal); R. A. R. C. Sousa, F. A. S. Q. Rocha, P. S. Fernandes, Clinical Practice (Portugal); A. F. Macedo, Univ. do Minho (Portugal)

---

#### SESSION XXX

---

- 8785 G1 **Biospeckle: fractional Fourier transform point of view** [8785-338]  
W. Lasso, Univ. Popular del Cesar (Colombia); E. A. Pérez Calderón, N. P. Castillo Serrano, Univ. del Zulia (Venezuela); L. Díaz M., C. O. Torres, Univ. Popular del Cesar (Colombia)

---

## PLENARY SESSION V

---

- 8785 G2 **A review on self-reference wavefront methods in optical testing (Plenary Paper)** [8785-82]  
A. Cornejo-Rodríguez, F. S. Granados-Agustín, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

---

## SESSION XXXI

---

- 8785 G5 **Emmetropic eyes: objective performance and clinical reference (Invited Paper)** [8785-609]  
E. Tepichín-Rodríguez, A. S. Cruz Felix, E. López-Olazagasti, S. Balderas-Mata, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)
- 8785 G6 **Development of a subjective refraction simulator** [8785-371]  
S. Perches, J. Ares, M. V. Collados, Univ. de Zaragoza (Spain)

---

## SESSION XXXII

---

- 8785 GA **Detection of the effect of nanoparticles on myelin figures growth using a compact digital holographic microscope** [8785-339]  
S. Ebrahimi, P. Soltani, Univ. of Zanjan (Iran, Islamic Republic of); A.-R. Moradi, Univ. of Zanjan (Iran, Islamic Republic of) and Institute for Advanced Studies in Basic Sciences (Iran, Islamic Republic of); L. Tayebi, Oklahoma State Univ. (United States)
- 8785 GB **An ultraviolet intercomparison for medical equipment evaluation** [8785-364]  
A. F. G. Ferreira Jr., R. Leone Filho, M. L. Pereira Filho, IPT - Instituto de Pesquisas Tecnológicas (Brazil)
- 8785 GD **Optical spectroscopy for differentiation of liver tissue under distinct stages of fibrosis: an ex vivo study** [8785-77]  
D. A. Fabila, L. F. Hernández, J. de la Rosa, S. Stolik, Instituto Politécnico Nacional (Mexico); U. D. Arroyo-Camarena, Hospital General de México (Mexico); M. D. López-Vancell, Univ. Nacional Autónoma de México (Mexico); G. Escobedo, Hospital General de México (Mexico)

*Author Index*

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## Introduction

The VIII Reunión Iberoamericana de Óptica / XI Reunión Iberoamericana de Óptica, Láseres y Aplicaciones - VIII Reunião Iberoamericana de Óptica/XI Reunião Iberoamericana de Óptica, Lasers e Aplicações, RIAO/OPTILAS 2013, ran very successfully in an exciting friendly and most pleasant way. Four hundred forty one (441) participants from 39 countries openly shared ideas and experiences discussing the remarkable and exciting developments in the last the three years in Optics in Iberoamerica presented at the conference.

The conference occurred July 22 to 26, 2013 at the University of Porto in Portugal. Twenty one years after the first Iberoamerican Optics Meeting (Reunión Iberoamericana de Óptica - Reunião Iberoamericana de Óptica, RIAO) in Barcelona, the reference meeting of the Iberoamerican Optics community returned to the Iberian Peninsula. It was the greatest of the honors for us, the Portuguese Society for Optics and Photonics (SPOF), to welcome colleagues from all over Iberoamerica and the world to Portugal renewing friendships and growing many more!

The success of the conference was only possible with the active support and commitment of the Red(e) Iberoamericana de Optica, the Spanish Optical Society, SEDOPTICA, the Mexican Academy of Optics, AMO, the Colombian Optics Network, RCO, the Venezuelan Optics Committee, CVO, and many colleagues and institutions from all over Iberoamerica. The endorsement and active support of the most important international scientific optics societies: ICO, SPIE, and OSA, represented at the highest level, and of several major institutions: Photonics21, EOS, LAM, SECPhO, EPIC, and national societies, committees and boards: STO, OPSS, APLO, SPF, FCT, as well as the SPIE and OSA student chapters of the University of Porto and the University of Aveiro, INESC, and the University of Porto was fundamental and much appreciated.

From the 605 works accepted, 581 were effectively presented. 13 high level plenary lectures, 61 key lectures covering all fields of optics and photonics, 135 oral communications and 372 posters were presented and attended by 441 participants, including over 158 students, from 39 countries all over Iberoamerica and the world. Two hundred fifty one (251) full papers were accepted for publication in the proceedings book. Two very interesting special sessions and round tables on "Entrepreneurship in Optics & Photonics" and "Women & Optics" were organized with strong active participation of the audience. These sessions were jointly organized between RIAO/OPTILAS 2013 and ETOP2013. The 12<sup>th</sup> Education and Training in Optics and Photonics Conference was very successfully organized in parallel and in an articulated way with RIAO/OPTILAS 2013. The participation of students (158) and young researchers was very positive and a very good sign of the growth potential of our Iberoamerican O&P research. SPIE

and OSA student prizes were awarded. RIAO/OPTILAS2013 also held the ceremony of the IUPAP Prize 2012 awarded to Nirit Dudovich, Weizmann Institute, Israel for the work "Resolving and manipulating attosecond processes via strong-field light-matter interactions".

The board of the Red(e) Iberoamericana de Optica met during the conference and Prof. Dr. Pedro Andrés Bou was sworn in as the new president. The recent activities of the Red(e) and very positive prospects of evolution were presented during the general assembly of RIAO/OPTILAS.

RIAO/OPTILAS, the reference meeting in optics in Iberoamerica and our main "window" to the world, will keep growing and re-enforce itself. The next edition to be held in Chile in the fall of 2016 will be another great success reflective of the decisive importance of Iberoamerica's contribution to the development of optics and photonics.

Hope to see you all there!

**Manuel Filipe P. C. Martins Costa**