

**INTERNATIONAL CONFERENCE ON OPTICS, PHOTONICS & PHOTOSCIENCES
ADVANCE PROGRAM**

TUESDAY 14

08:00	ACCREDITATION	
09:15	INAUGURATION	
	VEDADO HALL	
09:30	<p>PL-1 -SPECTRAL INTENSITY OPTICAL COHERENCE TOMOGRAPHY Tomohiro Shirai^a, Piotr Ryczkowski^b, Goëry Genty^b, and Ari T. Friberg^{*c} ^aNational Institute of Advanced Industrial Science and Technology (AIST), Japan ^bTampere University of Technology, ^cInstitute of Photonics, University of Eastern Finland (*ICO Appointment)</p>	HOTEL NACIONAL DE CUBA
10:15	<p>PL-2- RECENT ADVANCES IN OPTICAL FIBRE BASED SPR SENSORS Mohamad Daia Baiad², Mathieu Gagne¹ and Raman Kashyap^{1,2} The Fabulas Laboratory, Department of Engineering Physics¹, Department of Electrical Engineering², Polytechnique Montreal, Montreal, CANADA</p>	
11:00	COFFEE BREAK	
11:15	<p>PL-3- TRANSFORMING WATER INTO FUEL USING SUNLIGHT Elena Vigil Solar Energy Cathedra – Physics Faculty – Institute of Materials Science and Technology (IMRE), Universidad de La Habana, Cuba</p>	
12:00	<p>PL-4- NEW DEVELOPMENTS AND NOVEL APPLICATIONS IN CONFINED OPTICAL GEOMETRIES: PLANAR WAVEGUIDES AND FIBERS G. Marowsky, Laser-Laboratorium Göttingen, Germany</p>	
12:45	<p>PL-5-HOLOGRAPHY IN ART: SAILING ON UNKNOWN WATERS Reima Nurmikko, Holographic Artist, Vainamoisenk, Finland</p>	
13:30	LUNCH/ LA ROCA RESTAURANT	
16:00	APERTURE OF INTERNATIONAL EXHIBIT <i>IMAGES IN THE SCIENCES AND THE ARTS</i> & WELCOME COCKTAIL	

WEDNESDAY 15

	VEDADO HALL	SANCTI SPIRITUS HALL
09:00	<p>IL-1-ELECTRON HOLOGRAPHIC INTERFEROMETRY: MEASURING INTO THE NANO WORLD Fernando Mendoza Santoyo^{1,2}, Jesus Cantu Valle¹, John Eder Sanchez¹, Arturo Ponce Pedraza¹ and Jose Miguel Yacaman¹ ¹Centro de Investigaciones en Optica, A.C.Leon, Guanajuato, México, ²Physics and Astronomy Department, University of Texas at San Antonio, Texas, USA</p>	<p>IL-2- CORRELATION BETWEEN GROUP DELAY VELOCITY AND SPACE-AVERAGED ENERGY TRANSPORT VELOCITY IN FINITE PHOTONIC STRUCTURES M. de Dios –Leyva, Department of Theoretical Physics, Faculty of Physics, University of Havana, Cuba</p>
9:35	<p>IL-3-LASER-BASED TECHNIQUES AND 3D IMAGING SYSTEM FOR MATERIAL CHARACTERIZATION, CLEANING AND DOCUMENTATION OF CULTURAL HERITAGE OBJECTS Gabriel M. Bilmes^{*1,2}, Mercedes Morita¹ ¹Laboratorio de Ablación, Limpieza y Restauración con Láser, Centro de Investigaciones Ópticas (CIOP) - CONICET La Plata-CIC. ²Facultad de Ingeniería, Universidad Nacional de La Plata</p>	<p>IL-4-THE RISING ROLE OF PHOTONICS IN TODAY'S DATA CENTRES Ivan Glesk^{*a}, Alan Davidson^b, Arjan Buisc^{a,b} Department of Electronic and Electrical Engineering, Faculty of Engineering, University of Strathclyde, 204 George Street, Glasgow, G1 1XW, United Kingdom; ^cDepartment of Biomedical Engineering, Faculty of Engineering, University of Strathclyde, 106 Rottenrow, Glasgow, G1 1XW, United Kingdom.</p>
10:10	<p>IL-5-MICROTOPOGRAPHIC CHARACTERIZATION OF ARQUEOLOGICAL CERAMICS Manuel F. M. Costa¹, Wagner Magalhaes², Márcia Angelina Alves² ¹Centro de Física, Universidade do Minho, Portugal ²Museu de Arqueologia e Etnologia, Universidade de S. Paulo, Brazil</p>	<p>IL 6-RANDOM LASERS: FROM BASICS TO APPLICATIONS Anderson S. L. Gomes, Physics Department, UFPE, Brazil.</p>
10:45	<p>IL-7-LASER TECHNIQUES IN ARTWORKS CONSERVATION IN ST.PETERSBURG, RUSSIA Vadim Parfenov. St. Petersburg State Electrotechnical University, St.Petersburg, Russia,</p>	<p>IL-8-INTEGRATED OPTICAL COMBS: TOWARDS SINGLE PHOTONS APPLICATIONS Piotr Roztockia, Christian Reimer^{*a}, Lucia Caspania, Matteo Clericia,^b Marcello Ferreraa,^b Michael Kues^a, Marco Pecciantia^c, Alessia Pasquazia^c, Luca Razzaria, Brent E. Littled, Sai T. Chue, David J. Mossa,f, Roberto Morandotti^a ^aINRS-EMT, Québec, Canada; ^bSchool of Engineering and Physical Sciences, Heriot-Watt University, SUPA, Edinburgh, UK; ^cDepartment of Physics and Astronomy, University of Sussex, Falmer, Brighton, UK; ^dXi'an Institute of Optics and Precision Mechanics of CAS, Xi'an, China; ^eCity University of Hong Kong, Department of Physics and Material Science, Hong Kong, China; ^fSchool of Electrical and Computer Engineering, RMIT University, Melbourne, Australia;</p>
11:20	<p>IL-9- DIGITAL IMAGE PROCESSING ALGORITHMS FOR SMART VIDEO SURVEILLANCE Edel Garcia-Reyes Centro de Aplicaciones de Tecnologías de Avanzada (CENATAV), La Habana, Cuba.</p>	<p>IL-10-DEVELOPING THE INTEGRATED OPTICAL TECHNOLOGY FOR THE QUANTUM INTERNET Peter G.R. Smith, Southampton University, United Kingdom</p>
11:55	COFFEE BREAK	

<p>12:10</p>	<p>OP-1-LIBS TECHNIQUE APPLIED TO THE QUALITATIVE DETERMINATION OF TOBACCO F. C. Alvira^{*a}, L. Ponce Cabrera^c, T. Flores Reyes^c, G. M. Bilmes^{ab}, A) <i>Centro de Investigaciones Ópticas, La Plata, Argentina.</i> B) <i>Facultad de Ingeniería Universidad Nacional de La Plata, Argentina.</i> C) <i>Centro de Investigación Aplicada y Tecnología Avanzada (IPN UNIDAD ALTAMIRA), México.</i></p>	<p>OP-2- A NOVEL TWO STATE OBSERVATION IN THE INSTABILITY INDUCED SUPERCONTINUUM GENERATION IN EXPONENTIAL SATURABLE NONLINEAR RESPONSE K. Nithyanandan[*] and K. Porsezian Pondicherry University, Puducherry, India.</p>
<p>12:35</p>	<p>OP-3- COMPENSATION OF PHASE ABERRATION IN DIGITAL HOLOGRAPHY MICROSCOPY Palacios G., Palacios F., Jorge Ricardo, Rafael F. Mut, Arias Y. <i>Department of Physics, Universidad de Oriente, Santiago de Cuba, Cuba,</i> Muramatsu M. <i>Department of General Physics, Universidade de São Paulo, São Paulo, Brazil,</i> Monroy F. A. <i>Department of Physics, Universidad Nacional de Colombia, Bogotá, Colombia.</i></p>	<p>OP-4- OPTO-ELECTROCHEMISTRY K.Habib Materials Science and Photo-Electronics Lab., IRE Program, EBR Center, Kuwait</p>
<p>13:00</p>	<p>OP-5- SIGNAL AND IMAGE ALIGNMENT DURING THE APPLICATION OF FUNCTIONAL DATA ANALYSIS. PRACTICAL EXAMPLES OF CHEMOMETRICS AND BIOMETRICS. Francisco José Silva Mata^{1*}, Dania P.-Munoz¹, Stefano Berretti, Victor Mendiola-Lau, Isneri Talavera¹, Noslen Hernández¹, Yoanna Martínez-Díaz¹, Angel G. Augier². ¹ Centro de Aplicaciones de Tecnologías de Avanzada (CENATAV), La Habana, Cuba. ² Universidad de La Habana</p>	<p>OP-6-STUDY OF HIGH HARMONICS GENERATION (HHG) EMPLOYING FIELD ENHANCEMENT BY MEAN OF METALLIC NANOSTRUCTURES Neyra E.^{a*}, Videla F^a., Torchia G^a. ^aCentro de Investigaciones Ópticas, CONICET-CIC. Argentina</p>

13:25	<p>OP-7- SIMPLE GEOMETRIC GENERAL CODES ON COMPUTER-GENERATED HOLOGRAPHIC ENGRAVINGS Ángel G. Augier*¹, Héctor Rabal², Raúl B. Sánchez³ ^{1,3} Universidad de la Habana ² Centro de Investigaciones Ópticas (CONICET La Plata-CIC) and UID OPTIMO, Departamento de Ciencias Básicas. Facultad de Ingeniería. Universidad Nacional de la Plata. Argentina.</p>	<p>OP-8- SEMICLASSICAL MODELLING OF FINITE-PULSE EXCITATION EFFECTS ON THE PHOTOINDUCED MOLECULAR DYNAMICS VIA INITIAL CONDITION FILTERING: COMPARISON WITH QUANTUM WAVEPACKET PROPAGATION A.Martínez-Mesa*,¹, P. Saalfrank² ¹ Departamento de Física Teórica, Universidad de la Habana ² Institut für Chemie, Universität Potsdam,</p>
13:50	<p>OP-9- SPECKLE PATTERNS DURING THE SPREADING OF LUNG SURFACTANT (II) Llovera-González, J.J.*,^a Moreno-Yeras, A.^a Cruz-Arencia^a, Serra-Toledo, R^a J.D. Martínez-Muñoz, D.^b Justo Ferreira, M. ShinNishitani, W.^b Barros de Almeida, A.^b Alencar, A.^b Muramatsu, M^c ^aDept. of Physics, Instituto Superior Politécnico "José Antonio Echeverría" Cujae, Calle 114 # 11901 Marianao, La Habana CP 19390, Cuba. ^bLaboratory of Microrheology and Molecular Physiology (lab M²), Dept. of Physics, Sao Paulo University, Rua do Matão Travessa RNro. 187 Cidade Universitária, Sao Paulo CPE 05508-090 ^cLaboratory of Optics, Dept. of Physics, Sao Paulo University, Rua do Matão Travessa R Nro. 187 Cidade Universitária, Sao Paulo CPE 05508-090</p>	<p>OP-10- RELAXATION DYNAMICS IN QUANTUM DISSIPATIVE SYSTEMS: THE MICROSCOPIC EFFECT OF INTRAMOLECULAR VIBRATIONAL ENERGY REDISTRIBUTION L. Uranga-Piña¹, J. C. Tremblay² ¹ Departamento de Física Teórica, Universidad de la Habana ² Institut für Chemie und Biochemie, Freie Universität Berlin</p>
14:15	LUNCH/ LA ROCA RESTAURANT	

THURSDAY 16

	VEDADO HALL	SANCTI SPIRITUS HALL
09:00	<p>IL-11- PLASMONIC HIGH EFFICIENCY NONLINEAR SOLAR CELLS Jean-Michel Nunzi, Department of Physics, Department of Chemistry Quenn's University, Canada</p>	<p>IL -12- COHERENCE AND POLARIZATION STOKES PARAMETERS IN RANDOM ELECTROMAGNETIC OPTICS Tero Setälä, Jani Tervo, Jari Turunen, and Ari T. Friberg*. Institute of Photonics, University of Eastern Finland, Joensuu, Finland, *corresponding author,</p>
9:35	<p>IL-13- OPTICAL TRAPPING WITH STRUCTURED LIGHT Karen Volke-Sepúlveda Instituto de Física, Universidad Nacional Autónoma de México, México D.F, México</p>	<p>IL-14- HIGH ENERGY NON-COHERENT LIGHT PULSES: A REAL ALTERNATIVE TO LASER PROCESSING? Luis V. Ponce <i>Centro de Investigación Aplicada y Tecnología Avanzada (IPN UNIDAD ALTAMIRA), México.</i></p>
10:10	<p>IL-15- PROBING OF POLARIZATION AND COHERENCE IN OPTICAL NEAR FIELDS L.-P. Leppänen^a, T. Hassinen^b, S. Popov^b, A. T. Friberg^a, and T. Setälä*^a ^aInstitute of Photonics, University of Eastern Finland, Joensuu, Finland, ^bOptics and Photonics Department, Royal Institute of Technology (KTH), Stockholm, Sweden.</p>	<p>IL-16- PHOTON ECHOES: FROM PHYSICS TO QUANTUM MEMORIES Jean-Pierre GALAUP, Lab. Aimé Cotton, CNRS, Paris, France</p>
10:45	<p>IL-17- WAVEFRONT METROLOGY FOR OPTICS AND LASER BEAM CHARACTERIZATION Klaus Mann Laser-Laboratorium Göttingen, Göttingen, Germany</p>	<p>IL-18- SPATIOTEMPORAL CHAOS AND ORDER IN FIBER LASERS Stefan Wabnitz, UNIBS, Italy</p>
11:20	COFFEE BREAK	

11.35	<p>IL-19- THE ROLE OF THE SOLAR RADIATION IN THE ENERGY OWN-SUPPLY OF A TERRITORY Luis Berriz, CUBASOLAR, Cuba</p>	<p>IL-20-CALCULATED EXCITON BINDING AND TOPOLOGY OF OPTICALLY ACTIVE MOLECULES AND MOLECULAR CLUSTERS Luis A. Montero-Cabrera^{*a}, Ana Lilian Montero-Alejo^a, José Manuel García de la Vega^b, Eduardo Menéndez-Proupin^b, Alán Aspuru-Guzik^c, Edward Pyzer-Knapp^c ^aLaboratorio de Química Computacional y Teórica, Facultad de Química, Universidad de La Habana, Cuba; ^b Departamento de Química – Física Aplicada, Universidad Autónoma de Madrid, España; ^c Department of Chemistry and Chemical Biology, Harvard University, Cambridge, USA</p>
12.10	<p>IL-21- A COMPARISON BETWEEN TWO STOPPING CRITERION FOR THE MEAN SHIFT ITERATIVE ALGORITHM. APPLICATION TO THE IMAGE SEGMENTATION Roberto Rodriguez Morales Digital Signal Processing Group, Institute of Cybernetics, Mathematics & Physics (ICIMAF), Havana, Cuba</p>	<p>IL-22- PULSED LASER TECHNIQUES TO PRODUCE NANOPARTICLES AND PHOTOACOUSTIC CHARACTERIZATION Mayo Villagrán Muniz^{*1}, Citlali Sánchez Aké¹, Tupak García Fernández², Crescencio García Segundo¹, M. A. Valverde-Alva¹, Francisco Tenopala¹, Adriana Canales¹, Jimena Martínez de León¹, Beatriz de la Mora¹, Francisco Álvarez del Castillo Manzanos¹ ¹Centro de Ciencias Aplicadas y Desarrollo Tecnológico, Universidad Nacional Autónoma de México, México D.F, México, ²Universidad Autónoma de la Ciudad de México (UACM), México D.F, México</p>
12:45	<p>OP-11- LIGHT AND HABITABILITY IN AQUATIC ENVIRONMENTS Rolando Cardenas^{*a}, Dailé Avila-Alonso^a, Jessica Alvarez-Salgueiro^a, Roberto González-De Zayas^b ^aPlanetary Science Laboratory, Department of Physics, Universidad Central “Marta Abreu” de Las Villas, Santa Clara, Cuba; ^bCentre for Research of Coastal Ecosystems, Cayo Coco, Cuba</p>	<p>OP-12-LASER ABLATION RATES CHARACTERIZATION OF GALVANIZED STEEL PLATES Moreno J.C.^{a*}, Orzi D. J. O.^a, Alvira F. C.^a and Bilmes G. M.^{a,b}, ^aLaboratorio de Ablación, limpieza y Restauración con Láser, Centro de Investigaciones Ópticas (CONICET-La Plata-CIC). ^b Facultad de Ingeniería, Universidad Nacional de La Plata. Buenos Aires, Argentina</p>
13.10	<p>OP-13- METHOD DETERMINING THE SUPERFICIAL RUGGEDNESS BASED ON THE SPECKLE PATTERN DESCRIPTORS OF TEXTURE ANALYSIS A. Pino^{*a}, J. Pladellores^b ^a Universidad Tecnológica de Panamá, ^b Universitat Politècnica de Catalunya</p>	<p>OP-14-USING TECHNOLOGY AS PEDAGOGICAL TOOLS Anderson S. L. Gomes, Physics Department, UFPE, Brazil.</p>
13:35	LUNCH/ LA ROCA RESTAURANT	

	FRIDAY 17	
	VEDADO HALL	GLOSSARY
09:00	<p>PL-6- LASERS IN REGENERATIVE MEDICINE A. Heisterkamp^{1,2,3}, T. Ehmke⁴, J. Krawinkel⁴, M.L. Torres^{1,3}, S. Kalies^{2,3}, M. Schomaker², D. Heinemann^{2,3}, H. Meyer^{2,3,5}, T. Ripken^{2,3}</p> <p>¹<i>Institute of Quantum Optics, Leibniz University Hannover, Welfengarten 1, 30167 Hannover, Germany</i></p> <p>²<i>Laser Zentrum Hannover, Biomedical Optics Department, Hollerithallee 8, D-30419 Hannover, Germany</i></p> <p>³<i>Cluster of Excellence REBIRTH, D-30625 Hannover, Germany</i></p> <p>⁴<i>Institute of Applied Optics, Friedrich-Schiller-University Jena, D-07743 Jena, Germany</i></p> <p>⁵<i>Hannover Medical School, HTTG, Carl-Neuberg-Str. 1, D-30625 Hannover, Germany</i></p>	<p>PL - Plenary Lecture (40 min+5 discussion) IL - Invited Lecture (30 min+ 5 min) OP - Oral presentation (20 min+5 min)</p>
9:45	<p>IL-23- SLOW LIGHT ENHANCED NONLINEAR OPTICS IN SILICON PHOTONIC CRYSTAL WAVEGUIDES David Moss RMIT University, Melbourne, Australia</p>	
10:20	COFFEE BREAK	
10:35	POSTERS PRESENTATIONS	
13:00	CONCLUSION OF EVENT	
14:00	LUNCH and FAREWELL PARTY Swiming Pool, Flamingo Hotel	