



AOP 2024

The 6th International Conference on Application of
Optics and Photonics

July 16 to 19, 2024

University of Aveiro, Aveiro, Portugal

Detailed Scientific Program

ORGANIZATION



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AOP24 General Program

	16 July 2024 <i>Tuesday</i>	17 July 2024 <i>Wednesday</i>	18 July 2024 <i>Thursday</i>	19 July 2024 <i>Friday</i>
08:15 - 08:45		Registration	Registration	Registration
08:45 - 09:45		Plenary session 3	Plenary session 4	Plenary session 5
09:45 - 11:00		Parallel Sessions 2	Parallel Sessions 5	Parallel Sessions 8
11:00 - 11:30	Registration	Coffee-break	Coffee-break	Coffee-break
11:30 - 12:30		Parallel Sessions 3	Parallel Sessions 6	Parallel Sessions 9
12:30 - 14:00		Lunch	Lunch	Awards & Closing ceremony farewell
14:00 - 15:00	Opening ceremony	Special Session & Roundtable - Optics and Photonics	Parallel Sessions 7	
15:00 - 16:00	Plenary sessions 1 & 2		Social Program - bus tour to the beaches of Barra and Costa Nova and guided tour to the Vista Alegre Museum	
16:00 - 16:30	Coffee-break	Coffee-break + Poster Session		
16:30 - 17:00				
17:00 - 17:30	Parallel Sessions 1	Parallel Sessions 4		
17:30 - 18:00				
18:00 - 18:30	Social Program - Welcome Reception	Conference Dinner		
18:30 - 19:00				
19:00 - 19:30				
19:30 - 20:00	SPOF' General Assembly			
20:00 - 20:30				
20:30 - 21:00				
21:00 - 21:30		Social Program - Walking tour around Aveiro center		
21:30 - 22:00				
22:00 - 22:30				

Plenary Sessions

Tuesday, July 16, 15:00- 15:45	Plenary PL1 Chair: Rogério Nogueira	Optical Communication in Very Long Space Links	Peter Andrekson Room A
Tuesday, July 16, 15:45- 16:30	Plenary PL2 Chair: Humberto Michinel	Varifocal System: Basics and Nonconventional Applications	Jorge Ojeda Castañeda Room A
Wednesday, July 17, 8:45 - 9h45	Plenary PL3 Chair: Orlando Frazão and Joana Vieira	Understanding the Ocean Using Submarine Optical Fibre Cables	Miguel González Herráez Room A
Thursday, July 18, 8:45 - 9h45	Plenary PL4 Chair: Paulo Antunes and Margarida Facão	Quantum Key Distribution	Armando Nolasco Pinto Room A
Friday, July 19, 8:45 - 9h45	Plenary PL5 Chair: Humberto Michinel	Turbulence Impacted Wavefront Corrections Without Conventional Adaptive Optics	C S Narayanmurthy Room A

Date and time	Parallel Session	Duration	Parallel Session Thematic	Chairs
Tuesday, July 16, 17h00 - 18h30	Parallel Session 1.1	1h30	Energy, Sustainability and Smart Cities I	Chair: Micael Nascimento and Marta Ferreira
	Parallel Session 1.2	1h30	Lasers and Nonlinear Optics I	Chair: Rogério Nogueira and Margarida Facão
	Parallel Session 1.3	1h30	Optical Metrology and Image Processing	Chair: Carlos Marques and Diana Guimarães
Wednesday, July 17, 9h45 - 11h00	Parallel Session 2.1	1h15	Industrial Applications I	Chair: Luis Rino and Eric Rosas
	Parallel Session 2.2	1h15	Biomedical I	Chair: Susana Novais and Sónia Pereira
	Parallel Session 2.3	1h15	Nano-Photonics and Optoelectronics I	Chair: Paulo Ribeiro and Nélia Alberto
Wednesday, July 17, 11h30 - 12h30	Parallel Session 3.1	1h	Energy, Sustainability and Smart Cities II	Chair: Manuela Vieira and António Baptista
	Parallel Session 3.2	1h	Optical Communications I	Chair: Sandra Franco and Carlos Marques
	Parallel Session 3.3	1h	Quantum Optics I	Chair: Margarida Facão and Gil Fernandes
Wednesday, July 17, 17h30 - 19h00	Parallel Session 4.1	1h30	Education and Outreach	Chair: João Lemos Pinto and Manuel Filipe Costa
	Parallel Session 4.2	1h30	Space and Astronomy	Chair: Carlos Marques and Paulo Tavares
	Parallel Session 4.3	1h30	Optical Fibers, Sensors and Applications I	Chair: Orlando Frazão and Susana Silva
Thursday, July 18, 9h45 - 11h00	Parallel Session 5.1	1h15	Materials I	Chair: Sérgio Veloso and Sónia Pereira
	Parallel Session 5.2	1h15	Optical Fibers, Sensors and Applications II	Chair: Susana Novais and Joel Borges
	Parallel Session 5.3	1h15	Industrial Applications II	Chair: Paulo Antunes and Marta Ferreira
Thursday, July 18, 11h30 - 12h30	Parallel Session 6.1	1h	Biomedical II	Chair: Claver Pinheiro and João Leça
	Parallel Session 6.2	1h	Optical Communications II	Chair: João Lemos Pinto and Ana Maria Rocha
	Parallel Session 6.3	1h	Optical Design and visual sciences	Chair: Sandra Franco and António Baptista
Thursday, July 18, 14h00 - 15h00	Parallel Session 7.1	1h30	Materials II	Chair: Sara Fateixa and Marco Peres
	Parallel Session 7.2	1h30	Nano-Photonics and Optoelectronics II	Chair: Cátia Leitão and Médéric Loyez
	Parallel Session 7.3	1h30	Lasers and Nonlinear Optics II	Chair: Maria Inês Carvalho and Orlando Lima
Friday, July 19, 9h45 - 11h00	Parallel Session 8.1	1h15	Theoretical and Computational Optics	Chair: Nuno Silva and Cátia Leitão
	Parallel Session 8.2	1h15	Materials III	Chair: Luis Rino and Iran Rocha Segundo
	Parallel Session 8.3	1h15	Nano-Photonics and Optoelectronics III	Chair: Alessandro Fantoni and Pedro Jorge
Friday, July 19, 11h30 - 12h30	Parallel Session 9.1	1h	Biomedical III	Chair: Nélia Alberto and Hypolito Kalinowski
	Parallel Session 9.2	1h	Quantum Optics II	Chair: Armando Nolasco Pinto and Paulo Antunes
	Parallel Session 9.3	1h	BioNano & Medicine	Chair: Cátia Leitão and Pedro Jorge

AOP2024 - Detailed Program

Tuesday, July 16				
14:00 - 15:00	Opening ceremony	Prof. Dr. Artur Silva, Vice-Rector for Research, Innovation and 3rd Cycle, University of Aveiro Prof. Dr. Vitor Amaral, Vice Director of the Physics Department, University of Aveiro Prof. Dr. Humberto Michinel, Secretary General of the International Commission for Optics Dr. Gilles Pauliat, Past-President of the European Optical Society Dr. Eric Rosas, Secretary of the Iberoamerican Optics Network Prof. Dr. José António de Carvalho Paixão, President of the Portuguese Physics Society Prof. Dr. José Fernando Mendes, Director of the i3N Aveiro Prof. Dr. Manuel Filipe Costa, Chairperson, President of the Portuguese Society for Optics and Photonics, SPOF		
	Room A			
15:00- 15:45	Plenary PL1 Chair: Rogério Nogueira	Optical Communication in Very Long Space Links		Peter Andrekson Room A
15:45- 16:30	Plenary PL2 Chair: Humberto Michinel	Varifocal System: Basics and Nonconventional Applications		Jorge Ojeda Castañeda Room A
16:30 - 17:00		Coffee-Break		
17:00 - 18:30		Paralell Session 1.1 - Energy, Sustainability and Smart Cities I		
		Chair: Micael Nascimento and Marta Ferreira		
	# Title	Author	presentation type	
	15664	Implementation of Alternative Organic Anodes Based on Processable Graphene Derivatives and Applied to Solar Cells	Alvaro Guerra-Him	invited (15+5 min)
	15418	Revolutionizing Water Management: The Impact of Optical Fiber Sensors on Reducing Water Loss in Distribution and Agriculture	Tiago Neves	invited (15+5 min)
	15234	The Role of Optical Structures in Cu(In,Ga)Se2 Ultrathin Solar Cells	Pedro M. P. Salomé	invited (15+5 min)
	14910	Enhancing Airport Navigation Using Visible Light Communication	Manuela Vieira	12+3 min
	14911	Enhancing Urban Traffic Management with Visible Light Communication and Reinforcement Learning	Gonçalo Galvão	12+3 min
		Paralell Session 1.2 -Lasers and Nonlinear Optics I		
		Chair: Rogério Nogueira and Margarida Facão		
	# Title	Author	presentation type	
	15490	2D Quantum Droplets with Large Angular Momenta	Humberto Michinel	keynote (25+5 min)
	15286	Role of Modulation Instability in Numerical Analysis	Shalva Amiranashvili	invited (15+5 min)
	15215	Solitonic Light Bursts and Momentum Supercontinuum Generation in Nonlinear Time-varying Dielectric Media	Fabio Biancalana	invited (15+5 min)
	14882	Binary Classification of Low-resolution Images Using the Collective Modes of a Two Dimensional Array of Photonic Crystal Nanolasers	Cristina Masoller	invited (15+5 min)
		Paralell Session 1.3 - Optical Metrology and Image Processing		
		Chair: Carlos Marques and Diana Guimarães		
	# Title	Author	presentation type	
	15493	Questioned Document Examination Using Optical Coherence Tomography	Manuel J. Marques	keynote (25+5 min)
	15228	Enhancing Spectral Imaging Data Quality with Multiple Exposure Fusion Techniques	Joana Teixeira	12+3 min
	15258	Use of Optical Techniques for Surface Analysis of Rock Art Engravings from the UNESCO Heritage Site of Valcamonica	Micaela G. Coronel	12+3 min
	15665	Evaluation of Deformation in Aluminum Plate Under Laser Thermal Stress Using Shearography Technique	Kenia-María R. Camaño	invited (15+5 min)
18:30 - 19:30		Welcome Reception		

Wednesday, July 17 (morning)					
08:15 - 08:45		Registration			
08:45- 09:45	Plenary PL3 Chair: Orlando Frazão and Joana Vieira	Understanding the Ocean Using Submarine Optical Fibre Cables		Miguel González Herráez Room A	
09:45 - 11:00		Paralell Session 2.1 - Industrial Applications I Chair: Luis Rino and Eric Rosas			
	#	Title	Author	presentation type	
	15367	Optical Sensorization for the Monitorization of Composite Parts on Manufacturing, Assembly, Integration and Testing Phases	Paulo Antunes	invited (15+5 min)	
	15032	Optics and Photonics in Wind Industry: Challenges and Opportunities	Tiago Paixão	invited (15+5 min)	
	15789	Multimodal Spectral Imaging for Industrial Applications	Pedro Jorge	invited (15+5 min)	
	14971	A LiDAR Based Obstacle Detection Framework for Railway	Francisco Afonso	12+3 min	
		Paralell Session 2.2 - Biomedical and Medical Applications of Optics & Photonics I Chair: Susana Novais and Sónia Pereira			
	#	Title	Author	presentation type	
	13367	Low-cost Plasmonic Probes for Single-molecule Detection	Nunzio Cennamo	keynote (25+5 min)	
	15343	Non-intrusive Monitoring of Vital Signs in the Lower Limbs Using Optical Sensors	Joana R. Simões	12+3 min	
	12231	Synchrotron Radiation Fourier Transform Infrared Spectroscopical Analysis of Biomolecules in MRC-5 Fibroblast Cells Treated With Biomass-derived Carbon Dots	Marijana Petković	12+3 min	
		Paralell Session 2.3 - Nano-Photonics and Optoelectronics I Chair: Paulo Ribeiro and Nélia Alberto			
	#	Title	Author	presentation type	
	15264	All-optical Techniques for In-fiber Excitation and Interrogation of Acoustic Resonances	Martina Delgado-Pinar	keynote (25+5 min)	
	15397	Electrically Pumped Flipped-cavity NanoLEDs on InP Membrane Platform	Ekaterina D. Malysheva	12+3 min	
	15483	D-Shaped Photonic Crystal Fiber SPR Sensor for Oil Humidity Monitoring	Amanda F. Romeiro	12+3 min	
	15654	Does Size Matter? Assessing Size-Dependent Performance of Gold Nanoparticles in Plasmonic Optical Fiber Sensors	Gil C. Tavares	12+3 min	
	11:00 - 11:30		Coffee-Break		
11:30 - 12:30		Paralell Session 3.1 - Energy, Sustainability and Smart Cities II Chair: Manuela Vieira and António Baptista			
	#	Title	Author	presentation type	
	13187	Strategic Investigations for Soil Analysis and Monitoring Using Laser-Induced Breakdown Spectroscopy	Haider M. Al-Juboori	keynote (25+5 min)	
	15400	Detection of Contaminants in Wood Waste Using Hyperspectral Imaging, X-Ray Fluorescence and Laser-Induced Breakdown Spectroscopy	Diana Capela	12+3 min	
	15401	Unlocking the Value of Li Deposits Using Spectroscopic Techniques: Overview and Future Directions	Diana Guimarães	12+3 min	
		Paralell Session 3.2 - Optical Communications I Chair: Sandra Franco and Carlos Marques			
	#	Title	Author	presentation type	
	12180	WDM C-Band Four Channel Using Cascaded Multimode Interference on SiN Strip Waveguide Structure	Dror Malka	invited (15+5 min)	
	15201	Efficient Generation of Two Coherent Spectral Lines Using Two Mutually Injection Locked DFB Lasers	Leonardo Rama	12+3 min	
	15326	Electrically Tunable Free Space Lithium Niobate Optical Filters	Mojdeh Vakili	12+3 min	
		Paralell Session 3.3 - Quantum Optics I Chair: Margarida Facção and Gil Fernandes			
	#	Title	Author	presentation type	
	15320	Impact of Fast Power Fluctuations Caused by Atmospheric Turbulence on Polarization Measurements	Sara Mantey	12+3 min	
	15368	Link Analysis for Satellite-Based Quantum Key Distribution	Marilene Costa	12+3 min	
	14974	Penrose Scattering in Quantum Vacuum	José T. Mendonça	12+3 min	
	15288	Searching for Bias in Commercial Quantum Random Number Generators	Maurício J. Ferreira	12+3 min	
	12:30 - 14:00		Lunch		

Wednesday, July 17 (afternoon)						
14:00 - 16:00	Special Session & Roundtable - Optics and Photonics - Portugal Chair: Manuel Filipe Costa Room A	Title Visual Optics and Ophthalmic Instrumentation Research Lab Optical Sensors and Photonic Integrated Circuits at Instituto de Telecomunicações CTS-ISEL: Photonics and Optoelectronic Devices for Cyber-physical-systems at the ISEL Pole of the Center of Technology and System Optics & Photonics @ Laboratory for Instrumentation, Biomedical Engineering and Radiation Physics (LIBPhys) Nova Pole Research Topics at the i3N Aveiro hub INESC-TEC, Universidade do Porto Advanced Monitoring and Structural Integrity at INEGI Optics and Lasers @ IBEB CICECO, Universidade de Aveiro High peak and average power near and mid-IR lasers via ultrafast OPCPA. The Laboratory of Intense Lasers Ultrafast Bio- and Nanophotonics Group at INL The Institute of Physics and Aerospace Sciences of the University of Vigo at Ourense (Spain)	Presenter Sandra Franco Rogério Nogueira Manuela Vieira Paulo Ribeiro José Fernando Mendes Pedro Jorge Paulo Tavares Tânia Ferreira-Gonçalves Maria Rute André Hugo Pires Jana Nieder Humberto Michinel	Instituion CFUM&UP UM IT ISEL UNOVA i3N-UA INESC-TEC UP INEGI-UP IBEB-UL CICECO-UA IST-UL INL IPAS-UVIGO		
		16:00 - 17:30		Poster Session and Coffee-Break		
		17:30 - 19:00	Paralell Session 4.1 - Optics and Photonics Education and Outreach Chair: João Lemos Pinto and Manuel Filipe Costa Room A			
#	Title		Author	presentation type		
15158	An Easily Usable Device for Enhancing Geometrical Optics Instruction		Chien-Heng Chou	keynote (25+5 min)		
15595	Hands-on Optics: In and Out		José B. V. Dorrio	keynote (25+5 min)		
15613	Art and Science at Formal and Non-formal Spaces		Mikiya Muramatsu	keynote (25+5 min)		
Paralell Session 4.2 - Optical Instrumentation for Space and Astronomy Chair: Carlos Marques and Paulo Tavares Room B						
#	Title		Author	presentation type		
15669	Optical Sensors For Resident Space Object Surveys		Miguel Bergano	keynote (25+5 min)		
15341	Drone-suspended Quantum Gradiometer for Detection of Unexploded Ordnance and Geo-prospecting		Ruggero Giampaoli	invited (15+5 min)		
15208	Some Approaches for Llight and Color on the Surface of Mars		Manuel Melgosa	invited (15+5 min)		
12437	Emulation and Testbed Prototyping of Laser Beam Propagation Characteristics Through Atmospheric Turbulence for Optical Satellite Feeder Links		Haider M. Al-Juboori	12+3 min		
Paralell Session 4.3 - Optical Fibers, Sensors and Applications I Chair: Orlando Frazão and Susana Silva Room C						
#	Title		Author	presentation type		
15656	Optical Frequency Combs in Distributed Optical Fiber Sensing		Vicente Durán	keynote (25+5 min)		
15519	From Fibre Design to Fibre sensor: Preparation Methods as Key Factor for High-quality Coupled-core-fibre Sensors		Florian Lindner	12+3 min		
15325	A Comparative Study of Surface Plasmon and Tamm Plasmon Polaritons for Hydrogen Sensing		Miguel A. S. Almeida	12+3 min		
15599	Coil-shaped Optical Fiber Sensor for Compression Measurements		Amanda F. Romeiro	12+3 min		
15619	Monitoring Reinforced Concrete Structures Using Iron Thin-Film Coated Optical Fibre Sensors		Pedro M. Silva	12+3 min		
19:00 - 20:30	SPOF' General Assembly			Room A		
19:30 - 21:30	Social Program					

Thursday, July 18 (morning)				
08:15 - 08:45		Registration		
08:45- 09:45	Plenary PL4 Chair: Paulo Antunes and Margarida Facão	Quantum Key Distribution	Armando Nolasco Pinto Room A	
09:45 - 11:00	Paralell Session 5.1 - Materials Processing and Characterization I			Room A
	Chair: Sérgio Veloso and Sónia Pereira			
	#	Title	Author	presentation type
	15627	Exploring New Approaches to Fabricate 2D Layered Materials Supported Gold Nanoparticles for Optical Biosensing	Sara Fateixa	invited (15+5 min)
	15313	Optical Spectroscopic Insights into III-nitrides: Rare-earth Implanted Nanowires for Light-emitters and Scandium-alloyed Films for Ferroelectrics	José P. S. Cardoso	invited (15+5 min)
	15674	NIR Triggered Elastic Liposome Containing Magneto-plasmonic Nanoparticles for Treatment of Skin Cancer	Ana R. O. Rodrigues	invited (15+5 min)
	15270	Optical Characterisation of Phase Change Materials Leakage in Coaxial Fibres after Cutting	Nathalia Hammes	12+3 min
	Paralell Session 5.2 - Optical Fibers, Sensors and Applications II			Room B
	Chair: Susana Novais and Joel Borges			
	#	Title	Author	presentation type
	14021	High Aspect-ratio Au@Ag Plasmonic Nanorods on Optical Fibers for Remote Glyphosate Detection	Paulo S. Santos	invited (15+5 min)
	15318	Advancements in Graphene Oxide: Deposition Techniques, Sensing Applications, and Optical Fiber Integrator	Catarina Monteiro	invited (15+5 min)
	15620	Exploring the Refractive Index Sensitivity of Gold-Coated Optical Fiber Tips: The Influence of Key Parameters	Ana S. Assunção	12+3 min
	15370	Wrapping Optical Fibers in a Helical Shape and Exploring its Sensing Opportunities Through Fiber Bragg Grating and Multimode Interferomete	João Preizal	12+3 min
	Paralell Session 5.3 - Industrial Applications II			Room C
	Chair: Paulo Antunes and Marta Ferreira			
	#	Title	Author	presentation type
	15662	An Industry View of Automotive Lamps Engineering	Daniel C Trigo	invited (15+5 min)
15081	Automation Technologies to Scale PIC Testing from Lab to Fab	Santo Neglia	invited (15+5 min)	
15221	Fiber Optic Monitoring Solution for Predictive Maintenance of Pantographs and Overhead Powerlines	Francisco Araújo	invited (15+5 min)	
12360	Artificial Intelligence-enhanced Colorimetric Assessment of Self-cleaning Road Marking Paints	Orlando Lima Jr.	12+3 min	
11:00 - 11:30		Coffee-Break		
11:30 - 12:30	Paralell Session 6.1 - Biomedical and Medical Applications of Optics & Photonics II			Room A
	Chair: Claver Pinheiro and João Leça			
	#	Title	Author	presentation type
	15596	Plasmonic Tilted Fiber Bragg Gratings: from Refractometers to Biosensors	Médéric Loyez	invited (15+5 min)
	15459	New Strategies for Multimodal Cancer Therapy Based on Plasmonic Lipogels	Sérgio R.S. Veloso	invited (15+5 min)
	15245	Development and Validation of a Pulse Wave Velocity Monitoring Device	Camilo A. R. Díaz	12+3 min
	Paralell Session 6.2 - Optical Communications II			Room B
	Chair: João Lemos Pinto and Ana Maria Rocha			
	#	Title	Author	presentation type
	15115	Experimental Study of the Spatial and Temporal Coherence of a Semiconductor Laser with Optical Feedback	María D. Gijón	12+3 min
	13934	Modelling Investigation of Atmospheric Turbulence-induced Beam Deviation for LEO/GEO FSO Communication Link	Haider M. Al-Juboori	12+3 min
	15764	Passive imbalance fabrication effect on a linearly driven MZM in an oDAC-based PAM-4 Transmitter	Adebayo E. Abejide	12+3 min
	15394	Beaconless Self-alignment Method for Indoor Optical Wireless Communications	André C. Campos	12+3 min
	Paralell Session 6.3 - Optical Design Illumination and Visual Sciences			Room C
	Chair: Sandra Franco and António Baptista			
	#	Title	Author	presentation type
	15591	Spectral Corrections in Solid-state Lighting Measurements	Eric Rosas	invited (15+5 min)
	14913	Unlocking Traffic Control: Exploring Intersection Dynamics with Visible Light Communication	Manuel A. Vieira	12+3 min
15354	The Critical Role of Exam Room Lighting in Presbyopia Correction	Karola Panke	invited (15+5 min)	
12:30 - 14:00		Lunch		

Thursday, July 18 (afternoon)

Paralell Session 7.1- Materials Processing and Characterization II

Room A

Chair: Sara Fateixa and Marco Peres

#	Title	Author	presentation type
15355	UV-Vis-NIR Persistent Luminescence in Germanate-based Materials	Joana Rodrigues	keynote (25+5 min)
15392	Development of Multifunctional Liposomes Containing Magnetic/Gold Nanoparticles	Fabio A. C. Lopes	12+3 min
15334	High Reflectivity Band Distributed Bragg Reflector Based on Silicon-rich SiNx-SiOy at 80°C Plasma-enhanced Chemical Vapour Deposition	Irene R. Lamoso	12+3 min
15651	Refractive Index Analysis of Planar Interfaces by Prism Coupling Technique	Alessandro Fantoni	12+3 min
15456	Highly Efficient Deep Red-emitting Mn4+ Phosphors for Enhanced Plant Growth and Advanced Optical Thermometry	Sudipta Som	12+3 min

Paralell Session 7.2 - Nano-Photonics and Optoelectronics II

Room B

Chair: Cátia Leitão and Médéric Loyez

#	Title	Author	presentation type
15521	Structuring Light with Optical Metasurfaces	Marco Piccardo	keynote (25+5 min)
15092	Fully Connected Feedforward Neural Network for the Prediction of Amorphous Silicon Grating Couplers Efficiency	Daniel Almeida	12+3 min
15322	Manipulation of Microparticles in Optofluidic Devices Fabricated by Femtosecond Laser Micromachining	Carolina Cameira	12+3 min
12303	Smartphone Interrogation of Narrow Bragg Gratings in G.652 Fibre	Hypolito J. Kalinowski	12+3 min
12940	Study of Photoelectric Effect in Gallium Oxide-based Sensors	Marina Sparvoli	12+3 min

Paralell Session 7.3 - Lasers and Nonlinear Optics II

Room C

Chair: Maria Inês Carvalho and Orlando Lima

#	Title	Author	presentation type
15363	Multidisciplinary Applications for High Power Laser Pulses: an Update of the L2I Facility	Hugo Pires	keynote (25+5 min)
15112	Abrupt Transition to Coherent Emission in a Semiconductor Laser with Optical Feedback	María D. Gijón	12+3 min
15139	Yb:YAG Fibre Laser Applied to the Conservation of Built Heritage: Preliminary Results on the Removal of Black Crusts from Granite	Mateo E. Bonifacino	12+3 min
15324	Quartic Soliton Solutions of a Mode-locked Laser Distributed Model with Normal Fourth-Order Dispersion	Diogo Malheiro	12+3 min
15240	Unlocking New Dynamics in Paraxial Fluids of Light with an Optical Feedback Loop	Tiago D. Ferreira	12+3 min

15:00 - 19:30

Social Program

19:30 - 22:30

Conference Dinner

Friday, July 19 (morning)				
08:15 - 08:45		Registration		
08:45- 09:45	Plenary PL5 Chair: Humberto Michinel		C S Narayanmurthy Room A	
09:45 - 11:00	Paralell Session 8.1 - Theoretical and Computational Optics			Room A
	Chair: Nuno Silva and Cátia Leitão			
	#	Title	Author	presentation type
	15602	Numerical Evaluation of Strain Transfer Model for Steel-reinforced Optical Fiber Cable Embedded in a Cylindrical Concrete Beam with Two Void Inclusions	Mira Kabbara	12+3 min
	15382	Towards All-optical Extreme Learning Machines	Vicente Rocha	12+3 min
	15338	Accelerating Spectral Imaging with Optical Computing: A Fourier-Based Feature Extraction Approach	Tomás Lopes	12+3 min
	15396	Mixed Reality Meets Spectroscopy: Interactive 3D Visualization of Spectral Signatures	Rafael Cavaco	12+3 min
	15349	Numerical Analysis of the Impact of Printing Angle on the Performance of 3D-printed Optical Components	Ana M. Almeida	12+3 min
	Paralell Session 8.2 - Materials Processing and Characterization III			Room B
	Chair: Luis Rino and Iran Rocha Segundo			
	#	Title	Author	presentation type
	15584	Modifying Optical Properties of β-Ga ₂ O ₃ by Ion Implantation and Irradiation	Marco Peres	keynote (25+5 min)
	15347	Studies on Characterization of pH-Dependent Synthesis of Zn ₂ GeO ₄ :Mn Persistent Luminescence Nanomaterials, Morphology, Optical Properties and SARS-CoV-2 Protein Surface Modification.	Piotr Kuich	12+3 min
	15351	Optical, Morphological, Chemical, Structural, and Photocatalytic Effects of Iron Modified Nano-TiO ₂	Élida M. Margalho	12+3 min
	15379	Nanoparticles Enhanced Laser Induced Breakdown Spectroscopy of Gemstones	Haider M. Al-Juboori	12+3 min
	Paralell Session 8.3 - Nano-Photonics and Optoelectronics III			Room C
	Chair: Alessandro Fantoni and Pedro Jorge			
	#	Title	Author	presentation type
	12494	Towards Cost-effective Interrogation Techniques to Monitoring Metropolitan Optical Fiber Networks: The GT_OnE Approach	Camilo A. R. Díaz	invited (15+5 min)
	15477	Exploring the Localized Surface Plasmon Resonance Phenomenon in Au-Ag Nanoparticles Embedded in an Oxide Thin Film	Joel Borges	invited (15+5 min)
	13933	Low Noise White Light Interferometry with Broad Cavity Interrogation Band and Fast Sampling	Paulo Robalinho	12+3 min
	15386	Comparative Analysis of Ethanol Gas Sensors Based on Bloch Surface Wave and Surface Plasmon Resonance	João P. M. Carvalho	12+3 min
11:00 - 11:30		Coffee-Break		
11:30 - 12:30	Paralell Session 9.1 - Biomedical and Medical Applications of Optics & Photonics III			Room A
	Chair: Nélia Alberto and Hypolito Kalinowski			
	#	Title	Author	presentation type
	12510	POF Sensor for Dynamic Physiological Evaluation in a Dog-Assisted ASD Therapy: A Case Study	Maria Gaitán-Padilla	12+3 min
	15660	Muscle Activity Detection Using Photoplethysmography and Machine Learning Algorithms	Camilo A. R. Díaz	12+3 min
	15287	Thermal Blood Flowmeter Based on Cascaded Fabry-Pérot Interferometers Improved by Enhanced Harmonic Vernier Effect	Ruirong Gong	12+3 min
	Paralell Session 9.2 - Quantum Optics II			Room B
	Chair: Armando Nolasco Pinto and Paulo Antunes			
	#	Title	Author	presentation type
	15628	Continuous Variables Quantum Cryptographic Systems – Development, Deployment and Accreditation	Daniel Pereira	invited (15+5 min)
	15233	An FPGA-based Physical Layer for a CV-QKD System	Margarida Almeida	12+3 min
	15365	High-performing Synchronization Techniques for Quantum Key Distribution Systems	Alexandra Felisberto	12+3 min
	15376	Quantum Technology Pathways for Paraxial Fluids of Light	Nuno A. Silva	12+3 min
	Paralell Session 9.3 - BioNano & Medicine			Room A
	Chair: Cátia Leitão and Pedro Jorge			
	#	Title	Author	presentation type
	15790	Intracellular Nanothermometers. From Florescent Proteins to Quantum Sensing Probes	Jana Nieder	keynote (25+5 min)
	15655	Optical Fibre Sensors for the Evaluation of Vital Signs in a Smart Seat	Ana Mourão	12+3 min
	15791	Development of all-polymer interferometric biosensors for label-free detection	Tiago Magalhães	12+3 min
12:30 - 13:30		Awards and Closing Ceremony		
		Farewell		

There is no specific template for the Posters. The advisable poster size is A0 Format [841 x 1189 Width x Height (in mm) / 33.1 x 46.8 Width x Height (in inches)]

Poster Session			July 17, 16:00-17:30	
	#	Title	Presenting Author	
Poster 1	15202	An Affordable Optical Detection Scheme for LSPR Sensors	Alessandro Fantoni	
Poster 2	15181	Color Picker System for Point-of-care Colorimetric Devices	Alessandro Fantoni	
Poster 3	15377	Low Cost Vector Mode Direct Write Lithography for Optical Waveguide Fabrication	Alessandro Fantoni	
Poster 4	15659	Chitosan-coated Optical Fiber Sensor for the Detection of Bisphenol A	Ana I. Freitas	
Poster 5	15592	Optical Study of Gallium Oxide Thin Films Deposited by RF-sputtering	Ana S. Sousa	
Poster 6	15371	Accommodative and Binocular Predictors for Ocular Symptoms	António M. G. Baptista	
Poster 7	15353	Influence of Anterior Keratometry and Axial Length Repeatability in Intraocular Lens Power Calculation – A Bibliographic and Simulation Study	António M. G. Baptista	
Poster 8	15603	pH Sensors Based on PAni-coated Specialty Optical Fibers	Armando Rodriguez	
Poster 9	12442	Photoinduced Birefringence in Azopolymers Measured at 1550 nm	Beatriz G. Soares	
Poster 10	15315	Distributed Acoustic Sensing on SAGRES Submarine Cable	Catarina Monteiro	
Poster 11	15615	Use of Laser Technology for the Postural Classification of Bedridden People	David S. Canzobre	
Poster 12	15650	Reflection Fiber Loop Mirrors for the Measurement of Strain and Temperature	Diogo A. Azevedo	
Poster 13	15618	Ion-implanted β -Ga2O3 Microtubes & Nanomembranes for Photonic Applications	Duarte M. Esteves	
Poster 14	14542	Electric Power Generation from Solar Irradiation by Using Multiplexed Holographic Lenses and a Hybrid Photovoltaic Thermal System	Eder M. Alfaro	
Poster 15	15663	Low-cost Prototype for Real-time Analysis of Liquid Crystal-based Optical Sensors	Francisco Gameiro	
Poster 16	15300	High Photoinduced Birefringence in Thermally Treated Layers of the Azopolymer PAZO with Significantly Changed Absorbance Spectrum	Georgi Mateev	
Poster 17	15336	Mobile System to Detect Plastic Particles in Critical Scenarios: Potential Approach for Attachment in UAVs	Guilherme Pereira	
Poster 18	15239	Independent Dynamic Bandwidth Allocation Algorithms' Co-existing in Virtual Passive Optical Networks and Their Progression to Coherent PON	Gulmina Malik	
Poster 19	15621	FBG-based Torque and RPM Sensor Embedded in a 3D-printed Structure for Aerospace Applications	Gustavo Saturno	
Poster 20	15352	Advanced Algorithms for Optimization of QKD Encoding Subsystems	Hugo F. Costa	
Poster 21	15342	Development of an Experimental System for Nonlinear Material Study and Characterization	Hugo Pires	
Poster 22	15327	OPCPA Optimization for Ultrafast Near-infrared Lasers	Hugo Pires	
Poster 23	15332	Ultrafast Lasers Towards TRIR Spectroscopy	Hugo Pires	
Poster 24	13927	Optical Properties of N-doped Graphene and Carbon Nitride Quantum Dots	I-Ming Hung	
Poster 25	12234	Ultrafast Laser-assisted Production of Nano-and Micro-plastics and Their Interaction With Cells	Iva Popović	
Poster 26	11850	Non-destructive Gratings Recorded in Bi2TeO5 Photorefractive Crystals	Ivan de Oliveira	
Poster 27	15230	The Link Between Ocular High-order Aberrations and Accommodative Disorders	Jessica Gomes	
Poster 28	15294	Optimization of an Acousto-Optic Modulation System for Laser Power Stabilization	Jhonathan Barrios	
Poster 29	15302	Raman-based DTS for Forest Fire Detection Using Existing Telecommunications Fiber Networks	Joana Vieira	
Poster 30	15625	Volatile Organic Compounds Sensor Based on Chitosan-coated Multimode Interferometer	João M. Leça	
Poster 31	15323	Development and Characterization of Fiber Optic Sensors for Radiation Detection	João P. Silva	
Poster 32	12901	Design and Characterization of a Compact Extended Cavity Laser Diode with Applications in High-resolution Spectroscopy and Absorption-based Laser Sensors	Juan C. A. Navarro	
Poster 33	13236	Low-cost Laser Frequency Stabilization Using Analog Multiplier Integrated Circuit and Piezo-Modulation Mirror	Juan C. A. Navarro	
Poster 34	14368	Colour Image Encryption System Based on a Nonlinear Joint Transform Correlator in the Fractional Fourier Domain	Juan M. Vilardy	
Poster 35	14622	Simultaneous Authentication of Three Users or Images Using an Image Encryption System Based on a Nonlinear Joint Transform Correlator in the Fourier Domain	Juan M. Vilardy	

Poster Session			July 17, 16:00-17:30		
Poster 36	15359	Comparative Analysis of Physiological Vergence Angle Calculations From Objective Measurements of Vergence			Karola Panke
Poster 37	15644	Non-intrusive and Low Visual Impact Relative-displacement Sensors Based on Fiber Bragg Gratings for Structural Health Monitoring Applications			Luís Pereira
Poster 38	12232	Synergistic Effect of Near Infrared Light and Ag-based Metal-organic Frameworks, Loaded with Sulphur or Nitrogen Carbon Dots, on Wound Healing			Maja D. Nešić
Poster 39	15549	Lighting Preferences of Iberian Sausages for Spanish Observers			Manuel Melgosa
Poster 40	15321	Liquid Crystal-based Immunosensor for the Optical Detection of Cortisol			Maria S. Soares
Poster 41	15498	Enhancing Cross-Correlation Techniques for Distributed Fibre Optic Sensors: A Study on Fitting Methods and Spectrum Window Analysis			Mariana Santos
Poster 42	15624	Enzymatic Plasmonic Optical Fiber Biosensor for Uric Acid Detection			Mariana Sebastião
Poster 43	15237	Colorimetric assay for magnesium detection envisioning heart failure management at point-of-care			Miguel Vidal
Poster 44	12233	Biomolecular Changes in A2780 Ovarian Cancer Cells Induced by a Photoactive System Based on Carbon Dots Loaded With Ru Complex			Milutin Stepić
Poster 45	15200	Optical Fiber Sensor for Voice Assessment			Nélia Alberto
Poster 46	15657	Fiber Optic Sensor for Arterial Pulse Wave Analysis on the Carotid Artery			Nicole Teixeira
Poster 47	15182	Development of a High-precision, Portable and Automated Mobile Laser Scanner for the Recording and Digitation of Texture and Micro-marks in Archaeological and Heritage Stone			Pablo Pardiñas
Poster 48	15653	Azobenzene-based Customized Surfaces: A New Approach Towards the Development of Orbital Angular Momentum Devices			Paulo A Ribeiro
Poster 49	15209	Microdisplacement SMF-sensor Based on Ultrafast Laser-assisted Etching Method			Rosa A. Perez-Herrera
Poster 50	15231	Polarization-controllable Multiwavelength L-band Fiber Optic Ring Cavity Laser			Rosa A. Perez-Herrera
Poster 51	15213	Frequency Stabilization of an Extended-cavity Diode Laser Using Polarization Spectroscopy			Rafael Sarmiento
Poster 52	15053	Development of Test Methodologies for Characterising Light Guides for Use in Automotive Interiors			Rita Moreira
Poster 53	12656	Design of Optical System Components for Small-UAV LiDAR Applications			Rodrigo Rendeiro
Poster 54	12657	Vegetation Health Evaluation Using Cost-effective Aerial Reflectance Measurements			Rodrigo Rendeiro
Poster 55	15241	Optical Deflectometry-Based Surface Inspection System For Combustion Device Covers			Rodrigo Rito
Poster 56	15380	Accommodative Response and Ocular Aberrations Among University Students			Sandra Franco
Poster 57	15661	Impact of Virtual Reality on the Visual System			Sandra Franco
Poster 58	15187	Ocular Aberrations Modulate the Accommodative Response Estimated Across Different Refractive Errors			Sandra Franco
Poster 59	15372	Fabrication and Characterization of a Refractometric Sensor Based on Optical Fibers Coated with Oxidized Graphenes			Sindi D. H. Piñeres
Poster 60	15242	Excitation of Localized Surface Optical Plasmon Resonances LSPR in PMMA Capillary Fibers Coated with Ag Nanoparticles for Sensing Applications			Sindi D. H. Piñeres
Poster 61	15586	Optical Characterization of Transition-metal Activated Microwave-assisted Hydrothermal Synthesized Zn2GeO4 Nanorods			Sónia O. Pereira
Poster 62	15083	Liner Cavity Fiber Laser Configurations for Refractive Index Measurements			Susana Silva
Poster 63	15295	Plasmonic Immunosensors Based on Spoon-shaped Waveguides for Fast and On-site Ultra-low Detection of Ochratoxin A in Coffee Samples			Thais A. Silva
Poster 64	15652	Optical Fiber Sensing Design to Simultaneously Monitor Relative Humidity and Temperature			Tiago Amaral
Poster 65	15340	Design and Fabrication of Asymmetric Mach-Zehnder Interferometers Based on EpoClad and EpoCore Strip Waveguides			Tiago E. C. Magalhães
Poster 66	14284	Accelerometers Based on Fiber Bragg Gratings for Wind Turbine Blades Structural Health Monitoring			Yannis Magalhães