



The 26th Congress of the International Commission for Optics

Venues

Track 1	Somerset 1
Track 2	Somerset 2

Monday, October 21, 2024

7:30 - 17:00	Registration
8:30 - 8:50	Coffee/Tea
8:50 - 9:00	Venue Overview
9:00 - 9:40	<p>Opening Session - Chair: Dr Yaseera Ismail Venue: Somerset 1 and 2</p> <p>Welcome: Dr Yaseera Ismail (Chair of ICO26, Stellenbosch University, South Africa) Address of the President of ICO: Prof John Howell (Chapman University, USA) Stellenbosch University DVC of Research: Prof Sibuy Moyo (Stellenbosch University, South Africa) Academy of Science of South Africa: Prof Himla Soodyall (ASSAf, South Africa) African Laser Centre: Hardus Greyling (CSIR, South Africa)</p>
9:40 - 10:50	<p>Plenary Session-Chair: Dr Yaseera Ismail Venue: Somerset 1 and 2</p>
9:40 - 10:15	<p>Plenary 1: Space-based Quantum Physics Experiments Prof Juan Yin (University of Science and Technology of China, China)</p>
10:15 - 10:50	<p>Plenary 2: Field quantization from the viewpoint of classical optics Prof Gerd Leuchs (OPTICA President, Max-Planck Institute, Germany)</p>
10:50 - 11:20	Coffee/Tea Break
11:00 - 12:30	ICO Executive Committee Meeting

11:20 - 12:35	<p>Theme: Optical Materials and Nanophotonics Chair: Prof Maalik Maaza Venue: Somerset 1</p> <p>11:20-11:45 Prof Crina Cojocaru (Universitat Politècnica de Catalunya, Spain) - Tailoring harmonic generation at the nanoscale in strategic materials for nanophotonics (Invited Talk)</p> <p>11:45-12:10 Prof Mark Tame (Stellenbosch University, South Africa) - Quantum Nanophotonics (Invited talk)</p> <p>12:10-12:30 Prof Yidong Huang (Tsinghua University, China) - Nano-structures Bring New Mechanism of Interaction between Electrons and Photons</p>	<p>Theme: Advances in Optical Imaging and Spectroscopy Chair: Prof Donna Strickland Venue: Somerset 2</p> <p>11:20-11:45 Prof Kaoru Minoshima (University of Electro-Communications, Japan) - Highly functional spectroscopy with versatile optical phase control using optical frequency comb (Invited Talk)</p> <p>11:45-12:10 Prof Frederique Vanholsbeeck (University of Auckland, New Zealand) - Multimodal imaging platform to study cartilage degeneration using compression-based depth-resolved polarisation-sensitive optical coherence tomography and vibrational spectroscopy (Invited Talk)</p> <p>12:10-12:35 Prof Hans-Martin Frey (University of Bern, Switzerland) - Waveguide enhanced rotational alignment in the gas (Invited Talk)</p>
12:35 - 14:00	Lunch	
14:00 - 15:00	<p>Keynote Address - From Nonlinear Optics to High-Intensity Laser Physics 2018 Nobel Laureate Prof Donna Strickland (University of Waterloo, Canada) Venue: Somerset 1 and 2</p>	
15:00 - 15:10	Conference Photo	
15:10 - 15:30	Coffee/Tea Break	
15:30 - 18:00	ICO Bureau Meeting (Venue: Somerset 3)	
15:30 - 17:00	Poster Session	
18:30 - 19:30	<p>Cocktail Welcome Session</p> <p>President of ICO- Prof John Howell ICO26 Co-Chair- Prof Ahmadou Wague</p>	

Tuesday, October 22, 2024

8 : 3 0 - 1 7 : 0 0	Registration	
8 : 3 0 - 9 : 0 0	Coffee/Tea	
9 : 0 0 - 1 0 : 1 0	Plenary Session - Chair: Prof Roberta Ramponi Venue: Somerset 1 and 2	
9 : 0 0 - 9 : 3 5	Plenary 3: How to make photons feel magnetic fields, and implications thereof Prof Mikeal Rechtsman ICO Award 2018 (Penn State University, USA)	
9 : 3 5 - 1 0 : 1 0	Plenary 4: Programmable photonics based on phase-change materials Prof. Carlos Rios Ocampo (ICO-IUPAP Young Scientist in Optics Award 2023) (Maryland Energy Innovation Institute, USA)	
1 0 : 1 0 - 1 0 : 5 0	Panel Session: Sustainable Development Goals facilitated by Prof Malik Maaza (Venue: Somerset 1 and 2)	
1 0 : 5 0 - 1 1 : 1 0	Coffee/Tea Break	
1 1 : 1 0 - 1 2 : 0 0	<p>Theme: Quantum Optics, Atom Optics, and Information Processing Chair: Prof John Howell Venue: Somerset 1</p> <p>11:10-11:35 Prof Humberto Michinel (University of Vigo, Spain) - Liquid Solitons in Quantum and Photonic Devices (Invited talk)</p> <p>11:35-12:00 Prof Roberta Ramponi (Politecnico di Mlian/CNR-IFN) - Laser and Ion beam writing for integrated Quantum Chips in Diamond (Invited talk)</p>	<p>Theme: Advances in Optical Imaging and Spectroscopy Chair: Prof Nathalie Westbrook Venue: Somerset 2</p> <p>11:10-11:35 Prof Neil Hunt (University of York, UK) - High-throughput 2D-IR Spectroscopy Screening - Rapid Access to Biomolecular Structure and Dynamics under Physiological Conditions (Invited Talk)</p> <p>11:35-12:00 Dr Humberto Cabrera (Abdus Salam International Centre for Theoretical Physics, Italy) - LED-based photothermal spectroscopy with simultaneous fluorescence detection (Invited talk)</p>
1 2 : 0 0 - 1 4 : 0 0	Lunch	
1 3 : 3 0 - 1 6 : 3 0	ICO General Assembly (Venue: Somerset 3)	

14:00 - 15:10	<p>Theme: Quantum Optics, Atom Optics, and Information Processing Chair: Prof Francesco Petruccione Venue: Somerset 1</p> <p>14:00-14:25 Prof Yasuhiko Arakawa (University of Tokyo, Japan) - Advances in quantum dot photonics: From the early days to practical applications (Invited talk)</p> <p>14:25-14:50 Prof Yuan Cao (University of Science and Technology of China, China) - Single-photon interference over 8.4 km urban atmosphere (Invited talk)</p> <p>14:50-15:10 Ms Si-Yuan Sun (University of Science and Technology of China, China) - Non-local interference using quantum entanglement: towards optical very long baseline interferometry</p>	<p>Theme: Advances in Optical Imaging and Spectroscopy Chair: Dr Christine Steenkamp Venue: Somerset 2</p> <p>14:00-14:25 Dr Barbara Procacci (University of York, UK) - Ultrafast 2D-IR spectroscopy paves the way to a quantitative view of solvation in transition metal catalysis (Invited Talk)</p> <p>14:25-14:45 Prof Erich Rohwer (Stellenbosch University, South Africa) - Recent developments in time domain ptychography</p> <p>14:45-15:05 Ms Anneke Erasmus (Stellenbosch University, South Africa) - Using Mie theory to measure changes in optically trapped aerosol droplets when changing the incident trapping power</p>
15:10 - 15:30	Coffee/Tea Break	
15:30 - 16:40	<p>Theme: Photonic Devices and Technologies Chair: Prof Gerd Leuchs Venue: Somerset 1</p> <p>15:30-15:55 Dr Ulrike Fuchs (Asphericon, Germany) - Democratization of Laser Technology: A Journey of Unlimited Opportunities (Invited Talk)</p> <p>15:55-16:20 Dr Angela Dudley (University of Witwatersrand, South Africa) - Spatial and Polarisation Control in Optical Fields (Invited Talk)</p> <p>16:20-16:40 Prof Hubertus von Bergmann (Stellenbosch University, South Africa) - Compact Multi-TW Picosecond Mid-IR Laser Systems Based on Large-Aperture High-Pressure CO₂ Amplifiers</p>	<p>Theme: Light-Matter Interactions and Nonlinear Optics Chair: Venue: Somerset 2</p> <p>15:30-15:55 Prof Mohammed Chaker (INRS-Energie Matériaux Télécommunications, Canada) - Smart Materials for Photonics: Vanadium Dioxide (Invited Talk)</p> <p>15:55-16:20 Prof Valdas Pasiskevicius (Royal Institute of Technology, KTH, Sweden) - Recent advances in backward wave optics parametric oscillators (Invited Talk)</p> <p>16:20 -16:40 Prof Changxi Yang (Tsinghua University, China) - Temporal and spatiotemporal dissipated solitons in mode-locked fiber lasers</p>
17:30 - 19:30	Special Event: Nobel Evening at Edler Hall, Stellenbosch University, Stellenbosch	

Wednesday, October 23, 2024

8 3 0 - 1 7 : 0 0	Registration	
8 : 3 0 - 9 : 0 0	Coffee/Tea	
9 : 0 0 - 1 0 : 3 0	Plenary Session- Chair: Prof Humberto Michinel Venue: Somerset 1 and 2	
9 : 0 0 - 9 : 5 5	Keynote Address - The route to attosecond pulses 2023 Nobel Laureate Prof Anne L'Hullier (Lund University, Sweden)	
9 : 5 5 - 1 0 : 3 0	Plenary 5: Structured attosecond pulses to probe ultrafast matter dynamics Prof Carlos Hernandez-Garcia (Universidad de Salamanca, Spain) ICO Award 2023	
1 0 : 3 0 - 1 0 : 5 0	Coffee/Tea Break	
1 0 : 5 0 - 1 2 : 0 0	<p>Theme: Quantum Optics, Atom Optics, and Information Processing Chair: Prof Mark Tame Venue: Somerset 1</p> <p>10:50-11:15 Prof Nana Liu (Shanghai Jiao Tong University, China) - Quantum: Simulation of partial differential equations (Invited talk)</p> <p>11:15-11:40 Prof Francesco Petruccione (Stellenbosch University, South Africa) - TBA (Invited talk)</p> <p>11:40-12:00 Mr Bo-Yu- Fu (University of Science and Technology of China, China, China) - Testing dragging effect of single photons in a moving media</p>	<p>Theme: Photonic Devices and Technologies Chair: Prof Kaoru Minoshima Venue: Somerset 2</p> <p>10:50-11:15 Prof Kent Choquette (University of Illinois, USA) - Mode Engineering in Diode Lasers (Invited Talk)</p> <p>11:15-11:40 Prof Ahmadou Wague (Dakar Cheikh Anta Diop University, Senegal) - From atomic physics to laser applications in science and technology: Building optics and photonics laboratories within collaborative actions in Africa (Invited Talk)</p> <p>11:40-12:00 Dr Nataliya Kundikova (Institute of Electrophysics, Russia) - Effect of the circular polarization sign on the topological charge in the longitudinal field of the Gauss beam waist</p>
1 2 : 0 0 - 1 4 : 0 0	Lunch	
1 2 : 3 0 - 1 4 : 0 0	Optica Session on Publishing (Venue: Somerset 1)	
1 4 : 0 0 - 1 5 : 0 0	Hyper spectral Camera Tutorial and Demo Session (Venue: Somerset 2)	

15:10 - 17:00

Cheetah Outreach/Free Time

Thursday, October 24, 2024

8:30 - 17:00	Registration	
8:30 - 9:00	Coffee/Tea	
9:00 - 10:45	Plenary Session-Chair: Prof John Howell Venue: Somerset 1 and 2	
9:00 - 9:35	Plenary 6: Photonics at the nano-scale: Multi-disciplinarity & Frontier science Prof Maalik Maaza (Ithemba Labs, South Africa) 2019 Galileo Galilei Medal	
9:35 - 10:10	Plenary 7: Optical and Quantum Manipulation from Microscopic to Large Scale using Light and Matter Waves: Recent Observations of Counterintuitive Forces Dr Rahman Chowdhury Mahdy (North South University, Bangladesh) 2023 Galileo Galilei Medal	
10:10 - 10:30	Coffee/Tea Break	
10:30 - 11:20	<p>Theme: Biophotonics and Medical Optics Chair: Venue: Somerset 1</p> <p>10:30-10:55 Prof Nathalie Westbrook (Université Paris- Saclay, France) - Biomechanics with optical tweezers and FRET fluorescence microscopy (Invited Talk)</p> <p>10:55-11:20 Prof Alessia Condeo (Politecnico di Milano, Italy) - Light sheet fluorescence microscopy for biophotonics (Invited Talk)</p>	<p>Theme: Optical Metrology and Sensing Chair: Prof Kent Choquette Venue: Somerset 2</p> <p>10:30-10:55 Prof John Howell (Chapman University, USA) - Superfunction Superradar (Invited Talk)</p> <p>10:55-11:20 Mr Eugene Fouche (Stellenbosch University) - Phase control of supercontinuum pulses for high axial resolution in optical coherence tomography</p>
11:20 - 12:50	"Roses in Science and Elite" Panel Session (Somerset 1 and 2)	
12:50 - 14:00	Lunch	
14:00 - 17:00	ICO General Assembly (Venue: Somerset 3)	

14:00-15:00	<p style="text-align: center;">Theme: Photonic Devices and Technologies Chair: Venue: Somerset 1</p> <p>14:00-14:20 Prof Changgon Kim (Kyung Hee University, Republic of Korea, Korea) - Optimization of trifold flexure structure for an aluminum mirror</p> <p>14:40-14:40 Prof Walter Furlan (Universidad de Valencia, Spain) - Customizable multiple-focus binary Gabor zone plate lenses</p> <p>14:40-15:00 Evgenii Menshikov (CNR-INO and University of Brescia, Italy) - Analog computing with nonlinear flat optics</p>	<p style="text-align: center;">Theme Optical Materials and Nanophotonics Chair: Prof Malik Maaza Venue: Somerset 2</p> <p>14:00-14:20 Prof Takashi Kato (University of Electro-Communications, Japan) - Broadband Simple Operation using Optical Phased Array with Optical Frequency Comb</p> <p>14:40-14:40 Dr Wakana Kubo (Tokyo University of Agriculture and Technology, Japan) - Nonradiative Cooling</p> <p>14:40-15:00 Dr Luke Ugwoke (Stellenbosch University, South Africa) - Emitter-in-a-nanocavity as a quantum plasmonic sensor</p>
15:00-15:30	Coffee/Tea Break	
15:30-17:15	<p style="text-align: center;">Theme: Advances in Optical Imaging and Spectroscopy Chair: Venue: Somerset 1</p> <p>15:30-15:50 Dr Bertus van Heerden (University of Pretoria, South Africa) - Real-time feedback-driven single-particle tracking spectroscopy of light-harvesting complexes (Invited Talk)</p> <p>15:50-16:15 Prof Gianluca Valentini (Politecnico di Milano, Italy) - Multiscale hyperspectral imaging platform for material science and heritage science</p> <p>16:15-16:35 Prof Wei Zhang (Tsinghua University, China) - Reconstructive photon-counting spectrometer and its application on high-dimensional imaging.</p> <p>16:35-16:55 Prof Andrei Naumov (Russian Academy of Sciences, Russia) - Spectroscopy and optical nanoscopy of single quantum emitters in a broad temperature range</p> <p>16:55-17:15 Dr Johan Nöthling (University of Pretoria, South Africa) - Modelling linear spectra and shining light on photosynthesis</p>	<p style="text-align: center;">Theme Optical Metrology and Sensing Chair: Venue: Somerset 2</p> <p>15:30-15:55 Prof Shaojuan Li (Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China) - Broadband giant in-plane optical anisotropy in ternary van der Waals crystals (Invited Talk)</p> <p>15:55-16:15 Prof Akifumi Asahara (University of Electro-Communications, Japan) - Mid-infrared Dual-comb Spectroscopy with Absolute Frequency Determination using Dual-comb Fiber Laser</p> <p>16:15-16:35 Prof Yukitoshi Otani (Utsunomiya University, Japan) - Microplastic imaging in marine animals using RGB polarization camera</p> <p>16:35-16:55 Prof Takeshi Yasui (Tokushima University, Japan) - Photonic RF Biosensing of SARS-CoV-2 nucleocapsid protein using dual combs</p>

16:55-17:15 Ms Jane Dai (Stellenbosch University, South Africa) - Singlet quenching: How does TMBP make avobenzene feel?

18:00-22:00

Banquet Dinner - Crystal Ballroom at the Lord Charles Hotel (Closing Ceremony)

