Tuesday 30 August

8:45 – 9:00	**Welcome and Introduction** **Room: Theatre**						
9:00 – 9:45	**Chair:** Dmitry Skryabin Plenary Talk - **Photonic Time-Crystals** Mordechai (Moti) Segev, Technion - Israel Institute of Technology **Room:** Theatre						
9:45 – 10.30	**Chair:** Ioan Notingher Plenary Talk – **Photonic non-von Neumann computing using functional materials for next-generation AI hardware** Harish Bhaskaran, University of Oxford, UK **Room: Theatre**						
10:30 – 11:00	**Refreshment Break** **Room:** Exhibition Hall						
	A: Active and Adaptive Optics **Chairs**: James Osborn and Amanda Wright **Room**: Suite 1	**B: Optical Environmental Sensing** **Chair:** Hugh Deighton **Room:** Suite 2	**C: Metamaterials and Plasmonics I** **Chair:** Rohit Chikkaraddy **Room:** Suite 3	**D - Quantum Communication I** **Chair:** Ross Donaldson **Room:** Theatre	**E - Nonlinear and Quantum Optics in Microresonators and Beyond I** **Chair:** Dmitry Skryabin **Room:** Suite 4		
11:00 – 11:30	**(Invited Talk) Title to be confirmed** Tim Morris Durham University	**(Invited Talk) Cavity-enhanced techniques for detection of trace species in high-temperature reacting flows** Iain Burns, University of Strathclyde	**(Invited Talk) Polarization and pulse manipulation in epsilon-near-zero materials** Vittorio Aita, Kings College London	**(Invited Talk) Exploiting angular misalignment to perform side-channel attacks on free space QKD** Veronica Fernandez, Consejo Superior de Investigaciones Científicas (CSIC)	**(Invited Talk) Optical frequency converters based on whispering gallery resonators made of non-centrosymmetric crystals** Ingo Breunig, University of Freiburg		

11:30 - 11:45	**Inside Maxwell's mind – artificial neural networks and light wave scattering** Laurynas Valantinas, University of Dundee	**Modeling of optical wave propagation through turbulent atmosphere using fractional approach for FSO wireless communication** Abdullah Nafis Khan, Information Technology University Lahore	**Strong Light–Matter Interaction in Hybrid Photonic–Plasmonic Resonators** Belkıs Gökbulut Boğaziçi University	**Practical Spatial-Division Multiplexing for QKD** Alfonso Tello Castillo Heriot-Watt University	**Optical parametric generation of fully stabilized mid-infrared frequency combs** Markku Vainio University of Helsinki		
11:45 - 12:00	**A physics embedded machine learning approach for sensorless adaptive microscopy** Qi Hu University of Oxford	**Long-distance optical Imaging of Alpha Radiation Emitters using Ultra-sensitive Cameras** Lingteng Kong University of Bristol	**Metallic nanoring-quantum dot devices for broadband, efficient, extraction of quantum light** Cori Haws University of Glasgow	**Enhancing continuous-variable quantum key distribution through impairment optimization** Andres Ruiz Chamorro The Institute of Physical and Information Technologies	**Optical parametric generation of fully stabilized mid-infrared frequency combs** Markku Vainio University of Helsinki		
12:00 – 12:15	**Fractional Gouy phases to form optical bottles and photonic islands** Braian Pinheiro da Silva University of Dundee	**Characterization of the Impact of Hydrogen on Soot Formation in Hydrocarbon Diffusion Flames using DBIEI Technique** Chaoxu Chen Imperial College London	**Time-Domain Analysis of Strongly Coupled Epsilon Near-Zero Plasmonic Systems** Mehdi Haji Ebrahim University of Glasgow	**Quantum key distribution with a bright telecom wavelength quantum dot single-photon source** Frederik Brooke Barnes Heriot-Watt University	**(Invited talk) Photonic Crystal Parametric Sources** Alexandre Chopin Universite of Paris Saclay		
12:15 – 12:30	**Building ideal paraxial optical skyrmions using rational map** Claire Cisowski University of Glasgow	**Looking Through The Glass: Raman Spectroscopy of Concealed Samples in Closed Containers Using Shaped Laser Light** Graham Bruce University of St Andrews	**High resolution impedance imaging with plasmonic nanostructures** Finlay Nelson University of Nottingham	**Experimental implementation of secure anonymous protocols on an eight-user quantum key distribution network** Zixin Huang Macquarie University			

12:30 – 14:00	**Lunch and posters** **Room:** Exhibition Hall **13:15 - 13:45 (Tutorial 1) How to get published Daniel Jopling and Celia Rowland, IOP Publishing** **Room:** Conference Room 1						
	A - Ultrafast and Strong Light-Matter Interactions **Chair:** David Ayuso Molinero **Room:** Suite 1	**B - Waveguide and Fiber Optic Devices and Sensors I** **Chairs:** George Gordon and Paul Wright **Room:** Suite 2	**C - Metamaterials and Plasmonics II** **Chair:** Rohit Chikkaraddy **Room:** Suite 3	**D - Quantum Communication II** **Chair:** Ross Donaldson **Room:** Theatre	**E - Nonlinear and Quantum Optics in Microresonators and Beyond II** **Chair:** Dmitry Skryabin **Room:** Suite 4		
14:00 – 14:15	**(Invited talk) Realtime tracking of the electron dynamics in complex molecules** Francesca Calegari DESY	**(Invited talk) New ways to look through multimode optical fibres** David Phillips University of Exeter	**(Invited talk) Nano-opto-mechanical Nonlinearity in Metamaterials** Kevin Macdonald University of Southampton	**Unscrambling Pixel Entanglement through a Complex Medium** Natalia Herrera Valencia Heriot-Watt University	**(Invited talk) Kerr Polarization Controllers and Bound States of Dark and Bright Solitons in Microresonators** Pascal Del'Haye Max Planck Institute for The Science of Light		
14:15 – 14:30				**Multiple mode phase stabilisation across integrated photonic devices** Molly Thomas Bristol University			
14:30 – 14:45	**High-repetition-rate laser filaments in air** Mehdi Haji Ebrahim University of Glasgow	**The Möbius Transformation in Coupled Wave Equations and Applications in Fibre Bragg Gratings** Stefanos Koufidis Imperial College London	**Tuning metasurfaces via flash localised heating** Mohsen Rahmani Nottingham Trent University	**Metrology to test and evaluate continuous variable QRNG and QKD hardware** Siva Pradyumn a Tekuru NPL	**(Invited Talk) Dual mode microresonators for stable dissipative Kerr soliton operation in SiN and AlN microresonators** John Donegan Trinity College Dublin		
14:45 – 15:00	**Turning elliptically polarized ultrashort laser pulses into highly**	**Influence on the backscattered spectra of gold nanoparticle doped optical fibres for different**	**Optimised design of a metasurface based spectrometer for industrial applications**	**Noise-Robust and Loss-Tolerant Quantum Steering with Qudits** Vatshal Srivastav			

	efficient chiro-optical tools Laura Rego Imperial College London	**sensing lengths and nanoparticle concentrations** Xiang Wang TU-Delft	Joseph Kendrick University of Huddersfield	Heriot-Watt University			
15:00 – 15:15	**Controlling multiphoton transitions for strong light-matter interactions using ultrafast pulse shaping** Debabrata Goswami Indian Institute of Technology Kanpur	**How to cloak a multi-mode fibre** Une Butaite University of Exeter	**Tuning the Structural Colour of a Direct Laser Written Polymeric Multilayer Structures using Thermal Post-processing** Yu-Shao Chen University of Bristol	**Hollow-Core Fiber for Near-Infrared Quantum Communications** Umberto Nasti Heriot-Watt University	**Edge-to-bulk scattering in the photonic multimode Su-Schrieffer-Heeger model** Aleksandr Tusnin EPFL		
15:15 – 15:30	**Propagating Superoscillatory Electromagnetic Skyrmions** Nikitas Papasimakis University of Southampton	**A neuromorphic sensory system** Gleb Anufriev University of Nottingham	**Employing resonant GaP metasurfaces for nonlinear sum-frequency generation** Mohsen Rahmani Nottingham Trent University		**Topology and chirality in soliton crystals** Zhiwei Fan University of Bath		
	Refreshments Break **Room:** Exhibition Hall						
	A - Biophotonics I **Chair:** Ioan Notingher **Room:** Suite 1	**B - Waveguide and Fiber Optic Devices and Sensors II** **Chairs:** George Gordon and Paul Wright **Room:** Suite 2	**C - Nanophotonics and Nanoscale Quantum Optics I** **Chair:** Nikitas Papasimakis **Room:** Suite 3	**D - Quantum Thermodynamics and Foundations** **Chair:** Irene D'Amico **Room:** Theatre	**E - Nonlinear and Quantum Optics in Microresonators and Beyond III** **Chair**: Alessia Pasquazi **Room:** Suite 4		
16:00 – 16:30	**(Invited Talk) Multispectral and polarization-resolved endoscopic surgical imaging**	**(Invited Talk) Optical fibre sensors in industry: underpinning a sustainable future** Kenneth T V Grattan	**(Invited Talk) Chiroptical harmonic scattering effects** Ventsislav Valev University of Bath	**(Invited Talk) Open quantum dynamics and thermodynamics from a global point of view**	**(Invited Talk) Temporal solitons in coherently driven active cavities** François Leo		

	Daniel Elson Imperial College London	City University		Walter Strunz TU Dresden	Université Libre De Bruxelles		
16:30 – 16:45	**Characterizing structural features of myelofibrosis using Mueller matrix microscopy** Yifei Ma University of Oxford	**Employing quasi-degenerate optical modes for chirality sensing** Shaikhah Almousa Cardiff University	**Aperiodic photonic devices as a platform for nano-photonics and quantum optics experiments** Luca Sapienza University of Glasgow	**Precision matters: from quantum thermometry to the quantum estimation of scales, and back** Jesús Rubio University of Exeter	**Mid-infrared χ(2) microcomb based on parametric down-conversion** Nicolas Amiune University of Freiburg		
16:45 – 17:00	**Third harmonic generation deep tissue imaging with a thulium fibre laser at 1840nm.** Konstantinos Bourdakos University of Southampton	**Computational complexity statistical analysis of modulation instability in fibre optics** Auro Michele Perego Aston University	**Dynamic Random Lasers of Reconfigurable Active Colloidal Assemblies** Wai Kit Ng Imperial College London	**DFT-inspired approximations for quantum work** Krissia De Zawadzki Royal Holloway University of London	**Bright-dark solitons in the microresonator second-harmonic generation** Danila Puzyrev University of Bath		
17:00 – 17:15	**Model-based optimisation of laser excitation and detection to improve the signal to noise and signal contrast in biological samples** Max Dooley University of Nottingham	**Ultrafast laser fabricated fused silica fibre preforms** Calum Ross Heriot-watt University	**Perfect Chirality with Imperfect Polarisation** Ben Lang University of Nottingham	**On the partitioning of Energetics and Entropy in Time-Dependent Open Quantum Systems** Parth Kumar University of Arizona	**Mode-matched thin-film lithium niobate frequency doubler design** Innokentiy Zhdanov Karlsruhe Institute of Technology (KIT)		
17:15 – 17:30		**SNAP Microfluidics** Gabriella Gardosi Aston university	**Spectral control of random lasers** Thottungal Valapu Raziman Imperial College London	**Probing measurement-induced energy transfers** Cyril Elouard Inria / Ens Lyon			

17:30 – 19:30	**Posters / Exhibition / Reception** **Room:** Exhibition Hall

Wednesday 31 August

9:00 – 9:45	**Chair:** Alex Clark Plenary talk and RANK Prize Lecture - Manipulating and trapping particles from atoms to microbeads using optical nanofibers Sile Nic Chormaic, OIST Graduate University Room: Conference Theatre						
9:45 – 10:30	**Chair:** Jonathan Taylor Plenary talk – **Smart microscopy for everyone with open source hardware** Richard Bowman, University of Bath **Room:** Conference Theatre						
10:30 – 11:00	**Refreshment Break** **Room:** Exhibition Hall						
	A - Biophotonics II **Chairs:** Ioan Notingher **Room:** Suite 1	**B - Integrated Photonics and Photonic Systems I** **Chairs:** Rob Harris **Room:** Suite 2	**C - Nanophotonics and Nanoscale Quantum Optics II** **Chair:** Nikitas Papasimakis **Room:** Suite 3	**D - Quantum Metrology, Imaging and Sensing I** **Chairs:** Animesh Datta and Alastair Sinclair **Room:** Theatre	**E - Nonlinear and Quantum Optics in Microresonators and Beyond IV** **Chair:** Francois Leo **Room:** Suite 4		**F - Industry Technology Programme I** **Room:** Gallery Suite
11:00 – 11:30	**(Invited talk) From Spectroscopy to Imaging: Raman scattering applications in biology and medicine** Sumeet Mahajan University of Southampton	**(Invited Talk) Astrophotonics: Bringing Integrated Photonic Components to the Telescope** Aline Dinkelaker Leibniz Institute for Astrophysics Potsdam	**(Invited Talk) Integrating homodyne detection into silicon photonics for quantum technology** Jonathan Matthews University of Bristol	**(Invited Talk) Quantum-enhanced interferometry for new physics** Denis Martynov University of Birmingham	**(Invited Talk) III-V-on-Silicon-Nitride Mode-Locked Lasers** Bart Kuyken IMEC	**11:00**	**Emerging Type-II superlattice (T2SL) for Infrared Detectors** Manoj Kesaria and Dominic Kwan Cardiff University

11:30 – 11:45	**uFLIM – Unsupervised analysis of FLIM-FRET microscopy data** Francesco Masia Cardiff University	**Large-scale integrated homodyne detector arrays for classical and quantum applications** Euan J. Allen University of Bath	**Individually addressable superconducting nanowire array operating in the mid-IR regime** Vidur Raj University of Glasgow	**Spontaneous Emission Tomography** Ben Burridge QET Labs, University of Bristol	**Dispersion Engineering for Kerr Frequency Comb Generation in Gallium Phosphide Photonic Crystal cavity resonators** Alberto Nardi IBM Research	**11:25**	**T2SL Research Programmes and Development Issues** Charlie Turner Leonardo
11:45 – 12:00	**OptoRheo: An optical instrument for non-invasive micromechanical sensing and 3D imaging of biological systems** Tania Mendonca University of Nottingham	**Photon storage in an interrupted waveguide** Matt Overton University of Nottingham	**Generation of photonic cluster states in integrated microring resonators** Lucia Caspani University of Strathclyde	**Quantum jump metrology with quantum feedback in cavity networks** Kawthar Al Rasbi University of Leeds	**Ultralow-phase-noise optically stabilised microwave generation using a self-referenced microcomb** Jonathan Silver National Physical Laboratory	**11:50**	**Photodiodes for Short-Wave Infrared (SWIR) Band** Jo-Shien Ng Sheffield University
12:00 – 12:15	**ATR fibre-optic distal end probe enabled by ultrafast-laser-induced selective-chemical-etching** Katjana Ehrlich Heriot-Watt University	**Subangstrom-precise fabrication of SNAP microresonators by optical fibre annealing with a heated nichrome wire** Misha Sumetsky Aston University	**Exciton–polaritons in GaAs-based slab waveguide photonic crystals** Tommi Isoniemi University of Sheffield	**Tuning the balance and losses in nonlinear interferometers for enhanced interaction-free mid-infrared imaging with undetected photons** Nathan Gemmell Imperial College London	**Dual & Nested Spontaneous Symmetry Breakings of Light in Kerr Ring Resonators** Lewis Hill University of Strathclyde	**12:15**	**Break**
12:15 – 12:30	**Single cell cardiac contractility sensing with micro and nano lasers** Soraya Caixeiro University of Cologne			**Noise Rejection Through An Improved Quantum Illumination Protocol** Thomas Gregory University of Glasgow	**Heterogeneously integrated low-loss lithium niobate photonic platform** Mikhail Churaev EPFL		
12:30 – 14:00	**Lunch and Posters/ Exhibition** **Room:** Exhibition Hall **13:15 - 13:45 (Tutorial 2) How IOP membership can advance your career Gaynor Gardner and Vishanti Fox, Institute of Physics**						

	Room: Conference Room 1

	A - Biophotonics III **Chair:** Penny Lawton **Room:** Suite 1	B - Integrated Photonics and Photonic Systems II **Chair:** Misha Sumetsky **Room:** Suite 2	C - Quantum Dots, Nanocrystals and Low Dimensional Materials I **Chair:** Luca Sapienza **Room:** Suite 3	D - Quantum Metrology, Imaging and Sensing II **Chair:** Jonathan Matthews **Room:** Theatre	E - Nonlinear and Quantum Optics in Microresonators and Beyond V **Chair:** Auro Perego **Room:** Suite 4		F - Industry Technology Programme I **Room:** Gallery Suite
14:00 – 14:30	**(Invited Talk) From dental imaging to retinal imaging** Alistair Bounds University of St Andrews	**(Invited Talk) All optical photoacoustics and photothermal spectroscopy with hollow microresonators** Gualtiero Nunzi Conti Institute of Applied Physics "N. Carrara"	**(Invited Talk) A low-noise quantum dot in a one-sided microcavity** Richard Warburton University of Basel	**(Invited Talk) Transforming seafloor cables into a giant sensor network for Earth monitoring** Giuseppe Marra NPL	**(Invited Talk) Temporal cavity solitons and frequency combs via quantum interference** Gian-Luca Oppo University of Strathclyde	**14:00**	**T2SL Based IR Detectors, the Future of IR Detector Technology** Ross Wheeler Teledyne e2v
14:30 – 14:45	**Multiscope: Improving data reproducibility using a parallelized imaging microscope** Alexander Corbett University of Exeter	**Design of a lab-on-chip optical biosensor for multiplexed detection of biomarkers** Francesco Masia Cardiff University	**Capturing of Non-hydrogenic Rydberg Series of Exciton Binding Energy in Two-Dimensional Mono-layer WS2 Using a Modified Coulomb Potential in Fractional Space** Shahzad Ahmad University of The Punjab	**Covert imaging with heralded single photons** Dr Steven Johnson University of Glasgow	**(Invited Talk) Self emerging laser cavity solitons as dominant attractor of a microcomb system** Alessia Pasquazi University of Sussex	**14:25**	**Global Shifts in the Semiconductor Industry and its Implications for the UK Economy** Mark Goossens CSA Catapult

14:45 – 15:00	**Coherent Raman detection at the nanoscale via the local field enhancement at a single plasmonic nanorod** Martina Elisena Recchia Cardiff University	**Multiplexed biofunctionalization of GaAs with sub-micron feature sizes via UV photo activation** Lukas Payne Cardiff University	**Identification of Janus exciton complexes in a charge-tuneable WSeS monolayer** Matthew Feuer University of Cambridge	**Quantum-limited estimation of range and velocity for lidar detection** Zixin Huang Macquarie University	**(Invited Talk) Self emerging laser cavity solitons as dominant attractor of a microcomb system** Alessia Pasquazi University of Sussex	**14:50**	**Break**
15:00 – 15:15	**Repeatable, accessible, programmable microscopy with open source hardware** Joe Knapper University of Bath	**Co-doping 1.3µm InAs Quantum Dot Lasers with P-type modulation doping and direct N-type doping** Lydia Jarvis Cardiff University	**High Intra- and Interwire uniformity in 2D Radial GaAsP/GaAs Core/Shell Triple Quantum Well Structures** Nikesh Patel University of Manchester	**Ghost Displacement** John Jeffers University of Strathclyde	**Fast frequency-tuneable narrow-linewidth laser with intra-cavity photonic wire bond** Yung Chen Karlsruhe Institute of Technology (KIT)	**15:00**	**T2SL/Related Technologies Roadmap Workshop Part I: Goals & Vision; Capability Assessment; Technical Challenges; and Commercial Challenges** (Moderators: Jolyon De Freitas and Mark Goossens)
15:15 – 15:30	**Interrogating single proteins' structural change in various pH solutions by using photonic nanostructures** Arman Yousefi Nottingham Trent University	**Vertical Growth Models for Analysing Vanadium Dioxide Phase Transition in Thin Films** Xu Fang University of Southampton	**Surface Modification of Self-Assembled Semiconductor Quantum Dot Microlasers** Bethan Charlton University of Strathclyde	**Characterisation of single-photon detectors** Luke Arabskyj NPL	**Hybrid-integrated semiconductor mode-locked laser at 1060 nm** Ewoud Vissers Ghent University		
15:30 – 16:00	**Refreshment Break** **Room:** Exhibition Hall					**16:10**	**Break**

	A - Biophotonics IV **Chair:** Penny Lawton **Room:** Suite 1	B - IR and THz Photonic Technology **Chair:** Paul Wright **Room:** Suite 2	C - Quantum Dots, Nanocrystals and Low Dimensional Materials II **Chair:** Luca Sapienza **Room:** Suite 3	D - Quantum Optics I **Chair:** Alex Clark **Room:** Theatre	E - Nonlinear and Quantum Optics in Microresonators and Beyond VI **Chair:** Hamid Ohadi **Room:** Suite 4		F - Industry Technology Programme I **Room:** Gallery Suite
16:00 – 16:30	**(Invited Talk) Eye as a Window to the Brain: Adaptive Optics Retinal Imaging for Pre-symptomatic Detection of Neurodegenerative and Psychiatric Disease** Karen Hampson University of Oxford	**(Invited Talk) Mid-infrared fibreoptics: current status and future opportunities** Angela Seddon University of Nottingham	**(Invited Talk) Porous nitrides for photonic devices** Rachel Oliver University of Cambridge	**(Invited Talk) Efficient spin-photon interfaces with a coherence time beyond 100 microseconds** Dorian Gangloff University of Oxford	**(Invited Talk) Localisation by coherent drive and dissipation in photonic lattices** Alberto Amo University of Lille		
16:30 – 16:45	**Advancing Raman spectroscopy and multimodal imaging techniques for establishing a diagnostic signature for disease progression in osteoarthritis patients** Anna Crisford University of Southampton	**Theory and optimisation of radiative recombination in mid-infrared superlattice light-emitting diodes** Christopher Broderick University of California	**Connecting atom-like systems with silicon nitride photonics** Joe Smith University of Bristol	**Photon condensation in an arbitrary gauge cavity model** Dominic Rouse University of Manchester	**(Invited Talk) Novel Non-equilibrium Phenomena in Quantum Fluids of Light** Marzena Szymanska University College London	16:30	**T2SL/Related Technologies Roadmap Workshop Part II: Proposals and Grand Challenges; Funding & Brexit; Signposting & Milestone** (Moderators: Jolyon De Freitas and Mark Goossens)
16:45 – 17:00	**Non-Markovian Dynamics of Decoherence in Bio-molecular Chromophores** Adam Burgess	**Characterising dielectric-lined waveguides used for terahertz-driven electron acceleration** Beatriz Higuera Gonzalez	**Coherent coupling of excitons between vertically stacked pyramidal quantum dots** Vikramdeep Singh	**Few-photon all-optical phase rotation in a quantum-well micropillar cavity** Paul Walker			

	University of Surrey	The University of Manchester	Cardiff University	The University of Sheffield			
17:00 – 17:15	**Absolute local refractive index sensing of protein-binding using Microlasers with spectral encoding** Soraya Caixeiro University of Cologne	**Electro-optical sampling of single-cycle THz fields with single-photon detectors** Taylor Shields University of Glasgow	**GaAs Site-Controlled Pyramidal Quantum Dots: A Spectrally Uniform Source of Single and Entangled Photon Pairs** Iman Ranjbar Jahromi Tyndall National Institute	**Defining the semiclassical limit of the quantum Rabi Hamiltonian** Elinor Irish University of Southampton	**Impact of optically pumped dark excitons in bistable polariton microcavities** Elena Rozas Technical University of Dortmund	17:30	Wrap up and Close
17:15 – 17:30	**A label free method to measure the dynamics of membranes to determine their biophysical properties and the effect of protein insertion** Freya Turley Cardiff University	**Design and characterization of a Compact 8-channel Loop-back AWG basedIntegrated Comb Processor** Louw Roel Van Der Zon Universitat Politècnica de València	**Towards the experimental realisation of a photonic cluster state with site-controlled GaAs QDs** Francesco Mattana Tyndall National Institute	**Experimental demonstration of Pulse modes and Frequency bins entanglement** Fabrizio Chiriano Heriot-watt University	**Realization of Rashba-Dresselhaus spin-orbit coupling in polariton condensates at room temperature** Xuekai Ma Paderborn University		
17:30 – 19:30	**Posters / Exhibition / Reception / PubPHD** **Room:** Exhibition Hall and Bar Area						

Thursday 1 September

9:00 - 9:45	**Chair:** Alex Clark Plenary talk **- Integrated optics and pulsed light for quantum photonics** Christine Silberhorn Paderborn University **Room:** Conference Theatre						
9:45 – 10:30	**Chair:** Laura Young Plenary talk - **Designs and Optimisation of Photonic Devices** Plenary and Optics and Photonics Prize B M A Rahman University of London **Room:** Conference Theatre						
10:30 – 11:00	**Refreshment Break** **Room:** Exhibition Hall						
	A - Novel and Super-Resolution Microscopy I **Chair:** Melissa Mather **Room:** Suite 1	**B - Advances in Optical Metrology and Measurements I** **Chair:** Paul Wright **Room:** Suite 2	**C - Nonlinear Photonics I** **Chair:** Auro Perego **Room:** Suite 3	**D - Quantum Optics II** **Chair:** Vincent Boyer **Room:** Theatre	**E - Nonlinear and Quantum Optics in Microresonators and Beyond VII** Chair: Marzena Szymanska **Room:** Suite 4	**ITP Time:**	**F - Industry Technology Programme IV** **Room:** Gallery Suite
11:00 – 11:30		**(Invited Talk) Optical instrumentation for in-process monitoring of wire and arc additive manufacturing** Tom Charrett	**(Invited Talk) Ultrafast nonlinear optics in gas-filled hollow-fibres** John Colin Travers Heriot-Watt University	**(Invited Talk) Quantum photonics: interference beyond HOM, entanglement, and quantum networks** Stefanie Barz	**(Invited Talk) Coherence of Exciton-Polaritons in microcavities loaded with atomically thin crystals** Christian Schneider	**11:00**	**Fibre QKD systems** Jake Kennard, Kets Quantum Security

		Cranfield University		University of Stuttgart	University of Oldenburg		

11:30 – 11:45	**Polarisation-sensitive super-resolution phononic reconstruction of nanostructures** Rafael Fuentes Dominguez University of Nottingham	**Highly linear, compact interferometric displacement sensors** Kieran Wiseman Cranfield University	**Single field light plateaus for counterpropagation in ring resonators** Graeme Campbell University of Strathclyde	**Multiple projection tomography towards minimum-error quantum measurement** Martin Bielak Palacky University	**Nonlinear Interactions of Dipolar Excitons and Polaritons in MoS2 Bilayers** Charalambos Louca University of Sheffield	**11:25**	**Work in QKD networks and applications** Emilio Hugues-Salas BT
11:45 – 12:00	**Development of Optoacoustic Lenses for Lateral Super Resolution Imaging** Mengting Yao University of Nottingham	**ACute3D: A compact, cost-effective, 3D printed laser autocollimator** Qingxin Meng University of Bath	**Generation of optical frequency combs by parametric modulation of a bottle microresonator: beyond the lumped model** Manuel Crespo-Ballesteros Aston University	**Engineered pure single photons for multi-photon experiments** Joseph Ho Heriot-Watt University	**Nonlinear response of trion-polaritons due to Coulomb interactions** Kok Wee Song University of Exeter	**11:50**	**Standardised measures for security assurance of QKD photonic hardware** Christopher Chunnilall NPL
12:00 – 12:15	**Quantitative size and shape analysis of individual silver nanoplates by high throughput widefield extinction microscopy** Furqan Alabdullah Cardiff University	**Creating sub-diffraction features in low index polymers using direct laser writing** Alexander Corbett University of Exeter	**4-field asymmetries in twin-resonator photonic molecules** Alekhya Ghosh, Max Planck Institute for the Science of Light	**Sub-0.1 degree phase locking of Mach-Zehnder interferometer for single-photon applications** Vojtech Svarc Palacky University Olomouc	**Optical molecules with trapped exciton-polariton condensates** Anton Nalitov University of Wolverhampton	**12:15**	**Break**
12:15 – 12:30	**iGOR: Interferometric Gated Off-axis Reflectance and its Application to Nanoparticle 3D Tracking and Characterisation**	**Optical polarisation gratings and their use in chiral analysis** Robert Cameron University of Strathclyde	**The persistent spin-helix lasing as a result of spin-orbit coupling in liquid crystal optical microcavity** Przemysław Oliwa University Of Warsaw	**Characterising High-dimensional Bi-photon States** Will McCutcheon Heriot-Watt University	**Giant effective Zeeman splitting in a monolayer semiconductor realised by spin selective strong light-matter coupling** Daniel Gillard		

	David Regan Cardiff University				The University of Sheffield		
12:30 – 14:00	**Lunch / Posters/ Exhibition** **Room: Exhibition Hall** **13:15 - 13:45 (Tutorial 3) Equality, Diversity, and Inclusion in Photonics: A discussion Fiona Dorrington, Institute of Physics** **Room: Conference Room 1**						
	A - Novel and Super-Resolution Microscopy II **Chair:** Jonathan Nylk **Room:** Suite 1	**B - Advances in Optical Metrology and Measurements II** **Chair**: Iain Burns **Room:** Suite 2	**C - Nonlinear Photonics II** **Chair:** John Travers **Room:** Suite 3	**D - Quantum Optics III** **Chair:** Patrick Ledingham **Room:** Theatre	**E - Nonlinear and Quantum Optics in Microresonators and Beyond VIII** **Chair:** Dmitry Krizhanovskii **Room:** Suite 4		**F – Industry Technology Programme** **Room:** Gallery Suite
14:00 – 14:30	**(Invited Talk) Bending the beam for planar illumination** Tom Vettenburg University of Dundee	**(Invited Talk) Application of laser-based diagnostics to understand soot formation at technical conditions** Klaus Peter Geigle German Aerospace Center (DLR)	**(Invited Talk) Nonlinear Optics with Rydberg Excitons** Matthew Jones Durham University	**(Invited Talk) Pioneering platform for integrated quantum memories** Margherita Mazzera Heriot-Watt University	**(Invited Talk) Ultrafast time-delayed effects in exciton-polaritons for photonic binarized and spiking neural networks** Barbara Pietka University of Warsaw	**14:00**	**Micro and nanofabricated photonic components for atomic quantum technologies** Brendan Casey Kelvin Nanotechnology
14:30 – 14:45	**Optical quantum super-resolution imaging and hypothesis testing** Pieter Kok The University of Sheffield	**Compressed Sensing Time-Resolved Photoluminescence Microscopy of Semiconductor Materials and Devices** Aidas Baltušis University of Surrey	**Control of light-atom solitons and atomic transport by optical vortex beams propagating through a Bose-Einstein Condensate** Grant Henderson University of Strathclyde	**Rayleigh Optical Activity** Emmanouil Alexakis University of Strathclyde	**Dispersive and dissipative coupling of photon Bose-Einstein condensates** Chris Toebes University of Twente	**14:25**	**Photonic components for quantum technologies** Michael Wright ALTER Technology
14:45 – 15:00	**Transfering ultra-thin metallic metasurfaces onto fibreendoscope**	**Optical Flow Velocimetry for instantaneous liquid interfacial velocity**	**Non-linearities in a driven-dissipative SSH lattice** Nicolas Pernet	**A fresh perspective on the Casimir effect** Almut Beige University of Leeds	**Density fluctuations near the condensate transition of a trapped polariton condensate**	**15:00**	**Atom interferometers for navigation** Joseph Thom M-Squared Lasers

	probes for advanced imagingn Fei He University of Nottingham	**spatial distribution on a liquid jet surface injected in a gas flow** Tianyi Wang Imperial College London	CN2		Paolo Comaron University College London		
15:00 – 15:15	**Understanding the limits of remote focusing microscopes** Alexander Corbett University of Exeter	**High Sensitivity Speckle Metrology with Integrating Spheres: or How We Learned to Stop Worrying and Love Disorder** Graham Bruce University of St Andrews	**Boosted second-harmonic generation within lithium niobate slab governed by bound states in the continuum** Ze Zheng Nottingham Trent University	**Polarization-entangled biphotons as a spectroscopic probe** Ravyn Malatesta Georgia Institute of Technology	**Tracking quantum coherence in polariton condensates with time-resolved tomography** Carolin Lüders TU Dortmund	**15:25**	**Miniature atomic clocks: translating technology from lab to product** Mohsin Haji NPL
15:15 – 15:30	**Rapid Volumetric Imaging through 3D Reconstruction from 2D Projection Data** Daniel Olesker University of Glasgow	**Polarization dynamics, tunability and stability of a polarization-multiplexed single-cavity dual-comb fibre laser** Alberto Rodriguez Cuevas Aston University	**Optical Activity in nonlinear light scattering: New methods for chiral characterisation** Ben Olohan University of Bath	**Generation and device-independent certification of polarisation entanglement at 2.1 μm** Adetunmise Dada University of Glasgow	**Photon Bose-Einstein condensation under controlled dissipation and feedback** Charlie Mattschas University of Twente	**15:50 - 16:15**	**Growing a UK Quantum Industry Ecosystem** Chris Jones UKRI & InnovateUK
15:30 – 16:00	**Refreshment break** **Room:** **The Concourse**						
	A - Astronomical and Space Instrumentation **Chairs:** Tim Morris and Stephen Todd **Room:** Suite 1	**B - Medical Applications of Light I** **Chairs:** Mike Tanner and Laura Young **Room:** Suite 2	**C – Optomechanics** **Chair**: Xavier Rojas **Room:** Suite 3	**D - Quantum Optics IV** **Chair:** Zixin Huang **Room:** Theatre	**E - Nonlinear and Quantum Optics in Microresonators and Beyond IX** **Chair:** Christian Schneider **Room:** Suite 4		

16:00 – 16:30	**(Invited Talk) Commissioning the Webb Telescope** Alistair Glasse UKATC	**(Invited Talk) In-vivo optical monitoring of cerebral metabolism: from newborn brain injury to dementia** Gemma Bale University of Cambridge	**(Invited Talk) Brillouin optomechanics in whispering-gallery-mode microresonators: From strong coupling to single-phonon-level operations** Michael Vanner Imperial College London	**(Invited Talk) Quantum resolution enhancements in discrete imaging and remote sensing** Gerardo Adesso University of Nottingham	**(Invited Talk) Nonlinear polaritons in photonic microstructures: from many-body phenomena to single polariton nonlinearity** Dmitry Krizhanovskii University of Sheffield		
16:30 – 16:45	**(Invited Talk) HiPERCAM and GOTO** Vikram Dhillon University of Sheffield	**Impedance microscopy: a new tool for high-resolution imaging of electrical properties of cells** Sidahmed Abayzeed University of Nottingham	**Exploiting non-linear effects in optomechanical sensors with continuous photon-counting** Lewis Clark University of Warsaw	**Coupling a single molecule to an interrupted nanophotonic waveguide** Alex S. Clark University of Bristol	**Polariton lasing in GaN microrings with GaN/AlGaN quantum wells** Tommi Isoniemi University of Sheffield		
16:45 – 17:00		**Numerical modelling and experimental study of femtosecond laser ablation on dental hard tissues** Sarathkumar Loganathan University of Leeds	**Optical levitation and manipulation of nanoparticles in vacuum** Maryam Nikkhou King's College London	**Rydberg exciton-polaritons in a Cu2O microcavity** Konstantinos Orfanakis University of St Andrews	**Ordering and synchronization in lattices of polariton condensates** Paul Eastham Trinity College Dublin		
17:00 – 17:15	**Effect of residual fabrication error on segmented primary mirror of National Large Optical Telescope** Varun Prakash Padikal CHRIST University	**Fibre optic probes for endoscopic measurement of uterine hypoxia** Andrew Green Heriot Watt University	**Coherent oscillations of a vibrating carbon nanotube** Edward Laird Lancaster University	**The gauge-relativity of photons and atoms, and its significance in non-standard regimes** Adam Stokes Newcastle University	**Observation of KPZ universal scaling in a one-dimensional polariton condensate** Quentin Fontaine Centre for Nanoscience and Nanotechnology		

17:15 – 17:30	**HARMONI – first light adaptive optics assisted spectrograph for the Extremely Large Telescope** Niranjan Thatte University of Oxford	**Clinical implementation of a Raman spectroscopy device for detection of residual basal cell carcinoma during skin surgery** Radu Boitor University of Nottingham		**Exploiting angular misalignment to perform side-channel attacks on free space QKD** Pablo Arteaga,	**(Invited Talk): Title to be confirmed** Ronald Holwarth Menlo Systems		
17:30 – 17:45							
19:30 – 22:00	**Conference Dinner** **Room:** Banqueting Hall/Exhibition Hall						

Friday 2 September

9:00 – 9:45	**Chair:** Laura Youngs Plenary Talk - **Polarization textures of light** Sonja Franke-Arnold University of Glasgow **Room:** Theatre
9:45 – 10:30	**Chair:** David Binks Plenary Talk - **Picophotonics** Nikolay Zheludev University of Southampton **Room:** Theatre

10:30 – 11:00	**Refreshment Break** **Room: The Concourse**						
	A - Trapping and Manipulation **Chairs:** Une Butaite and Lynn Paterson **Room:** Suite 1	**B - Medical Applications of Light II** **Chairs:** Mike Tanner and Laura Young **Room:** Suite 2	**C - Optical Materials for Quantum Technology** **Chair:** Mark Hughes **Room:** Suite 3	**D - Quantum Information and Computation** **Chairs:** J P Hadden and Joe Goodwin **Room:** Theatre			
11:00 – 11:30	**(Invited talk) Opto-fluidic technologies to construct and manipulate synthetic cells** Yuval Elani Imperial College London	**(Invited Talk) Computational imaging for high-speed 3D microscopy** Andy Harvey University of Glasgow	**(Invited talk) Emerging rare-earth doped crystals for quantum photonics** Philippe Goldner Chimie Paristech - Cnrs	**(Invited talk) Single Photons from a ion-cavity system** Matthias Keller University of Sussex			
11:30 – 11:45	**Non-invasive microrheology study of living cells** William Hardiman University of Nottingham	**A miniaturised chip on tip FLIM system for biomedical applications** Andrew Matheson University of Edinburgh	**Topological Photonic Crystal Fibre** Nathan Roberts University of Bath	**Measurement-device independent quantum tomography** Robert Starek Palacky University Olomouc			
11:45 – 12:00	**Cooling the optical-spin driven limit cycle oscillations of a levitated gyroscope** Graham Bruce University of St Andrews	**Miniaturisable and clinically translatable Spatial Frequency Domain Imaging for improved early detection of gastrointestinal cancers** Jane Crowley University of Nottingham	**A membrane-transfer technique for hybrid quantum photonic devices for quantum technology applications** Cori Haws University of Glasgow	**Experimental two-out-of-four quantum state elimination** Jonathan Webb Heriot-Watt University			

12:00 – 12:15	**Enhanced optical geometries for atoms** Aidan Arnold University of Strathclyde	**The impact on optical resolution of holographic diffusers** Matt Hellis TU Dublin	**A Theoretical and Experimental Study of Efficiency Droop in InGaN/GaN Quantum Wells** Rachel Barrett The University of Manchester	**Does the weak trace show the past of a quantum particle?** Jonte Hance University of Bristol			
		Using a model eye in AOSLO to improve precision in retinal imaging and eye tracking Penny Lawton Newcastle University	**Modelling the light transport in LED-pumped masers** Juna Sathian Northumbria University	**Inverse-design of high-dimensional quantum optical circuits in a complex medium** Suraj Goel Heriot-Watt University			
12:30 – 13:30	**Lunch and depart** **Room: The Concourse**						
13:30 14:15 15:00	**Tour of the Sir Peter Mansfield Imaging Centre** **(tours are limited, please sign up at reception)**						

Posters

P1: Towards single-photon switching via two-photon absorption in Rb vapour Tabijah Wasawo University Of Bath	**P2: Aberration correction of photonic microstructures for photonic devices** Matt Mai University of Oxford	**P3: Towards non-iteration wavefront shaping at depth in highly scattering media** Amanda Wright University Of Nottingham	**P4: Single-shot characterization of vector beams by generalized measurements** Mustafa Al Khafaji University of Glasgow	**P5: Build-up dynamics in polarization-multiplexing fibre laser** Alberto Rodriguez Cuevas Aston University	**P6: Manufacturing and testing of a laser-drilled electrospray emitter created out of flat dielectric plates** Sahil Maharaj University Of Manchester

P7: Disordered Surface Plasmon Sensor for Multiple Scattering Enhanced Single Particle Detection Matthew Foreman Imperial College London	**P8: Assessing variable degrees of blood perfusion in ischaemic skin flaps and grafts** Mark Main University of Glasgow	**P9: Spectromics: holistic optical appraisal of articular cartilage via complimentary vibrational spectroscopy for diagnosis of osteoarthritis** Hiroki Cook University of Southampton	**P10: Modeling time dependent heat transfer problems in laser material processing using physics informed neural networks (PINNs)** Michael Moeckel University of Applied Sciences Aschaffenberg	**P11: Design of Ribbed Triangular Nanobeam Cavities in Gallium Nitride** John Hadden Cardiff University	**P12: Sensing and dynamic switching of toroidal resonances in a bilayer terahertz-metamaterial** Angana Bhattacharya Indian Institute of Technology Guwahati
P13: Mid-Infrared Timing Jitter in Superconducting Nanowire Single-Photon Detectors Ewan MacKenzie University of Glasgow	**P14: High resolution eye tracking with an AOSLO: The impact of optical aberrations on accuracy** Laura Young Newcastle University	**P15: Combining Optical Activity and Structural Chirality in Meta-media: Novel Circular Bragg Phenomena** Stefanos Koufidis Imperial College London	**P16: Investigation of optical nonlinearity in conformally thin film coated three-dimensional photonic crystals** Mike Taverne Northumbria University	**P17: Optimising GaAs Photonic Crystal Cavities and Waveguides for use in Lab-On-Chip Optical Biosensors** Nadhia Monim Cardiff University	**P18: Quantum Imaging: Optically Detected Magnetic Resonance of Nanodiamond Wide-Field Epifluorescence and Total Internal Reflection Florescence Microscopy** Rebecca Craig University of Strathclyde
P19: A novel parametric amplifier architecture based on two nonlinear waveguides with spatially dependent coupling Auro Michele Perego Aston University	**P20: Compact Optical Parametric Oscillators for Three Photon Fluorescence Microscopy** Ewan Allan Heriot-Watt University	**P21: Control of the atomic vapour pressure in alkali vapour cells mediated by Au nanoparticles** Kunjalata Majhi University of Bath	**P22: Cardiff University Sizing dielectric nanoparticles using quantitative differential interference contrast microscopy** Samuel Hamilton Cardiff University	**P23: Doubly-Resonant Enhancement of Second Harmonic Generation from a WS2 Nanomesh Polymorph with a Modified Energy Landscape** Alexander Murphy University of Bath	**P24: Third-order correlation studies on NV centres in nanodiamonds** Ted Silva Santana NPL
P25: Gouy phase-matched angular and radial mode conversion in four-wave mixing Aidan Arnold University Of Strathclyde	**P26: Observation of triangular-lattice pattern in nonlinear wave mixing with optical vortices** Braian Pinheiro da Silva University of Dundee	**P27: Spatiotemporal structures in mode-locked fibre laser** Sergey Sergeyev Aston University	**P28: Ultrashort-pulsed optical parametric oscillator employing Brewster angle prism retroreflectors** Diana Hunter Heriot-Watt University	**P29: Characterizing scattering of orbital angular momentum states to improve measurements of ocean attenuation** Anna Gribbon University of Strathclyde	**P30: Enhanced Second Harmonic Generation via Flatband mode in photonic moiré superlattice** Mohsen Rahmani Nottingham Trent University

P31: Generating 3-dimensional images of pollen grains from their scattering patterns using deep learning James Grant-Jacob University of Southampton	**P32: Time-resolved fibre optic distributed temperature sensing** Caitlin Tye Heriot-Watt University	**P33: Seed-testing Quantum Random Number Generator with an uncharacterised detector** Hamid Tebyanian University of York	**P34: Simulation of reflected jamming in satellite quantum key distribution** Cameron Simmons Heriot-Watt University	**P35: Towards quantum-confined spin-qubits in monolayer, semiconducting WSe2** Eleanor Nichols University of Cambridge	**P36: The impact of spot-size on single-photon avalanche diode timing-jitter and QKD** Alexandra Lee Wideblue Ltd
P37: Engineered Semiconductor Quantum dot Structures in Glass Matrices for Photothermal Heating of Water Mohanad Al-Murish University of Leeds	**P38: Novel direct-write lithography of GaAs-AlGaAs micropillars for coupling into a single-mode fibre** Matthew Jordan Cardiff University	**P39: Self-assembled Cadmium-free Semiconductor Microspheres Based on Colloidal Quantum Dots** Dillon Downie University of Strathclyde	**P40: Theory of electronic structure and radiative recombination in direct-gap hexagonal SiGe alloys** Christopher Broderick University of California, Santa Barbara	**P41: Quantum imaging with a photon counting camera** Thomas Gregory University of Glasgow	**P42: Building modes carrying orbital angular momentum using the semiclassics of the Higgs oscillator** Kerr Maxwell University of Birmingham
P43: Optical and Electronic Designs for Optical Deep Learning Networks Phil Birch University of Sussex	**P44: Robust Routing, Entanglement Generation, and Phase Sensing as Emergent Behaviour in Quantum Spin Networks** Abdulsalam Alsulami University of York	**P45: Quantum illumination with asymmetric multi-photon subtracted twin beam squeezed vacuum state** Nigam Samantaray University of Strathclyde	**P46: Quantum illumination with multiplex idler detection** John Jeffers University Of Strathclyde	**P47: Bidirectional optimal quantum control boosted by deep learning: A use case of polarization in liquid crystals** Dominik Vašinka Palacký University Olomouc	**P48: Angular momentum redirection phase of vector beams in a non-planar geometry** Amy McWilliam University of Glasgow
P49: Towards a Quantum inspired Lidar using random coherent states Thomas Brougham University of Strathclyde	**P50: Towards enhanced nonlinear imaging with entangled photons** Thomas Dickinson University of Strathclyde	**P51: Reducing noise in photonic crystal fibre sources of high purity heralded single photons** Will Smith University of Bath	**P52: Self-referenced subcycle metrology of quantum fields** Andrey S. Moskalenko KAIST	**P53: The vector gas: Mapping concurrence onto cold atoms** Sphinx Svensson University of Glasgow	**P54: Levitodynamics with optically active nanocrystals** Cyril Laplane Macquarie University / Sydney Quantum Academy
P55: Deterministic controlled enhancement of local quantum coherence Nikola Horová Palacký University Olomouc	**P56: Microwave-optical coupling via Rydberg excitons in Cu2O** Liam Gallagher Durham University	**P57: Access to energy fluctuations in a many-body quantum heat engine** Marcela Herrera Universidad Autónoma De Occidente; Universidad del Valle	**P58: Harnessing nonadiabatic excitations promoted by a quantum critical point** Obinna Abah Newcastle University	**P59: Photon cooling: linear vs nonlinear interactions** Armen Allahverdyan Alikhanian National Laboratory	**P60: Stochastic entropy production in quantum state diffusion** Ian Ford University College London

P61: Backscattering in Nonlinear Microring Resonators Via a Gaussian Treatment of Coupled Cavity Modes Will McCutcheon Heriot-Watt University	**P62: Differential Phase Measurement of Soliton Microcombs** Krishna Twayana Chalmers University of Technology	**P63: Internally driven parametric conversion and Turing patterns in near-phase-matched microresonator second harmonic generation** Vladislav Pankratov University of Bath	**P64: Microresonator-based frequency combs for calibration of astronomical spectrographs** Ignacio Baldoni Menlo Systems Gmbh	**P65: Nonlinear Parametric Scattering of Exciton Polaritons in PerovskiteMicrocavities** Jinqi Wu Nanyang Technological University	**P66: Walsh mode compensation for focussing through a multimode fibre** Eusebiu Sutu University of Oxford
P67: Nonlinear Photonics in Thin film Lithium Niobate Halvor Fergestad KTH	**P68: Bistability induced by loss of strong coupling in the coherently driven** exciton-polariton state Andrzej Opala Institute of Physics, Polish Academy of Sciences	**P69: Sum-frequency generation spectroscopy for ultrafast highly enantio-sensitive imaging of molecular chirality** Joshua Vogwell Imperial College	**P70: Single-ended Recovery of Optical Fibre Transmission Matrices using Neural Networks** Yijie Zheng University of Nottingham	**P71: Maximal entanglement of spectrally distinct solid-state qubits by iteration** Elena Callus University of Sheffield	**P72: Stack, seal, evacuate, draw: A method for drawing antiresonant hollow-core fiber stacks under positive and negative pressure** Leah Murphy University of Bath
P73: Range-finding with click detection practical quantum LIDAR Richard Murchie University of Strathclyde	**P74: Engineering the Zeros of the Point Spread Function to Increase Estimation Accuracy** Joseph Baker University of Birmingham	**P75: Measuring photon indistinguishability from single quantum emitters** Alex Clark University Of Bristol	**P76: A DFT study of the interaction between an NV- centre and an interstitial carbon in the diamond.** Guangzhao Chen University of Oxford	**P77: Efficient Network Interfaces for Tuneable-Cavity-Coupled Diamond Spin Qubits** Gareth Jones University Of Oxford	**P78: Design of a flip flop S-R circuit based on plasmon ressonance surface** Marcos Moura Federal Center for Technological Education

P79: Spectral Control of Microlaser Array Using Artificial Neural Networks Wai Kit Ng Imperial College London	**P80: A Lab-in-a-Fibre microfluidic tool: towards in-situ cellular analysis of bronchoalveolar lavage** Katjana Ehrlich Heriot-Watt University	**P81: Brightness-enhanced light source technology for medical imaging** Bethan Ford Northumbria University	**P82: Application of coherent scattering from spin doped quantum dots to entanglement generation** Samuel Mister University of Bristol	**P83: A high-efficiency, dual cavity optical frequency comb generator** Mateusz Mrozowski University of Strathclyde	**P84: Helicity lattices - numerical simulation using FDTD (Finite Difference Time Domain)** Romuald Kilianski University of Glasgow
P85: Simultaneous Generation of Dark-Bright Soliton Pairs in a Microresonator Toby Bi Max Planck Institute for the Science of Light					

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