

PH450 Talk Schedule

Wednesday 15/02/2017

	First Name	Surname	Project	Primary	Secondary
JA5.02					
Session Chair: Gian-Luca Oppo					
1330	Alexander	MacKechnie	Resonant Optical Cavities	Nigel Langford	Alison Yao
1345	Niall	Grant	Resonant Optical Cavities	Nigel Langford	Alison Yao
1400	Robbie	McDermott	Non Resonant Optical Cavities	Nigel Langford	Alison Yao
1415	Shaun	Malone	Non Resonant Optical Cavities	Nigel Langford	Alison Yao
1430	Break				

Session Chair: Gian-Luca Oppo

1445	Lauren Christine	McFadzean	The scientific applications of X-ray Free Electron Lasers	Brian McNeil	Gordon Robb
1500	Lewis	McSheehy	The theory of X-ray Free electron Lasers	Brian McNeil	Gordon Robb
1515	Stacey	Connan	Computational Modelling of X-ray Free Electron Lasers	Brian McNeil	Gordon Robb
1530	Angus	Watt	Nonlinear Vacuum Electrodynamics	Dino Jaroszynski	Adam Noble, Samuel Yoffe
1545	Break				

Session Chair: Daniel Oi

1600	Craig	Lees	Bose Einstein Condensate (BEC) Simulations	Gordon Robb	Aidan Arnold
1615	Eilidh	McGowan	Interactive Physics Simulations	Gordon Robb	Nigel Langford
1630	Ellis	Gowan	Cold Atom-Light Interactions	Gordon Robb	Brian McNeil

JA5.05

Session Chair: Stefan Kuhr

1330	Lindsey	Keary	Observing Beam Propagation by Fluorescence	Aidan Arnold	Paul Griffin
1345	Katherine	McLellan	Implementation and characterization of optical lattice potentials for ultracold atoms	Elmar Haller	Stefan Kuhr
1400	Richard	Anderson	Modelling a Hybrid Atom-Superconductor Quantum System	Jonathan Pritchard	Daniel Oi
1415	Ben	Charles	Measurement of non-linear processes in silicon photonic waveguide arrays	Michael Strain	Gian-Luca Oppo
1430	Break				

Session Chair: Stefan Kuhr

1445	Anna	Gribbon	Precision Measurements with an Atom Interferometer	Paul Griffin	Erling Riis
1500	Craig	Wardlaw	Generation and propagation of spatially structured light	Paul Griffin	Alison Yao
1515	Raymond	Kwok	Generation and propagation of spatially structured light	Paul Griffin	Alison Yao
1530	Shannan	Foylan	Signal processing for Atomic Magnetometry	Paul Griffin	Stuart Ingleby
1545	Break				

Session Chair: Stefan Kuhr

1600	Liam	Rooney	Pattern formation with twisted beams	Alison Yao	NA
1615	Adam	Ramsay	Entangled Optical Turbulence	Gian-Luca Oppo	Alison Yao
1630	Emma	Fox	Domain Walls in Optical Fibre Resonators	Gian-Luca Oppo	Alison Yao

JA5.07

Session Chair: Marco Piani

1330	Ruairidh	McArthur	Simulating topological materials	Ben Hourahine	Luca Tagliacozzo
1345	Stuart Alexander	Flannigan	Topological band structures in optical lattices	Andrew Daley	Luca Tagliacozzo
1400	Connor	McKeown	Quantification of the entanglement of identical particles	Marco Piani	Andrew Daley
1415					
1430	Break				

Session Chair: Aidan Arnold

1445	Aidan	McFadden	Quantifying the entanglement of global quantum evolutions and measurements	Marco Piani	Daniel Oi
1500	Connor	Taylor Rehan	Ancilla-driven Quantum Dynamics	Daniel Oi	Marco Piani
1515	Pavlos	Bozinakis	Quantum State Comparison and Correction Amplifier	John Jeffers	Luca Mazzarella
1530					
1545	Break				

Session Chair: Aidan Arnold

1600	David John	Dunbar	Photonic Neurons: Spiking information processing with lasers	Antonio Hurtado	Thorsten Ackemann
1615	Ruaridh	Smith	Photonic Neurons: Spiking information processing with lasers	Antonio Hurtado	Thorsten Ackemann
1630	Ian	Millar	Characterisation of diamond for laser applications	Alan Kemp	Vasili Savitski, Sean Reilly

PH450 Talk Schedule

Wednesday 22/02/2017

First Name Surname Project Primary Secondary

JA5.02

Session Chair: Adrian Cross

1330	Andrew	Faulds	Space Radiation Reproduction and Testing	Bernhard Hidding	Grace Manahan
1345	Connor	Galbraith	Beam-driven Plasma Wakefield Acceleration (PWFA)	Bernhard Hidding	Dino Jaroszynski
1400	Graham	Pettigrew	Coherent and incoherent combination of laser pulses	Bernhard Hidding	Grace Manahan
1415	Scott John	Barrie	Femtosecond chemistry with laser-plasma-accelerators	Bernhard Hidding	Grace Manahan
1430	Break				

Session Chair: Bernhard Hidding

1445	Aidan	White	Medical Radioisotope Production using a Laser-Plasma Wakefield Accelerator	Mark Wiggins	Dino Jaroszynski
1500	David	Smyth	Investigation of energy exchange in relativistically transparent laser-plasma interactions	Paul McKenna	Martin King
1515	Euan James	Palmer	Simulations of magnetic turbulence in plasma	Bengt Eliasson	Kevin Ronald
1530	Craig	Stevenson	High-Power Microwave Sources	Phil MacInnes	Kevin Ronald
1545	Break				

Session Chair: Adrian Cross

1600	Benjamin	McGrogan	Self-phase Modulation of Relativistically intense laser pulses in near critical density plasmas	Ross Gray	Martin King
1615	Gavin	Graham	Intense laser pulse filamentation in near critical density plasmas	Ross Gray	Bruno Gonzalez-Izquierdo
1630	Zhe	Zheng	Compact X-ray sources from nonlinear Thomson scattering with intense lasers	Zhengming Sheng	Feiyu Li

JA5.05

Session Chair: Rob Martin

1330	David	Harper	Optical spectroscopy of distant sources	Carol Trager-Cowan	David McKee
1345	Joel	Scheffer	Doping profile measurements in silicon p-n junctions via capacitance-voltage measurements	Carol Trager-Cowan	Paul Edwards
1400	Mike	Gyurik	Energy upconversion in nano-crystallites for application in ultra-high definition display technology	Thomas Han	
1415	Ryan	Thomson	Lanthanide-doped fluoride sub-micron crystalline particles for biomedical applications	Thomas Han	
1430	Break				

Session Chair: Kevin O'Donnell

1445	Jennifer Lynn	Service	Investigating non-ideal behaviour in current-voltage curves from GaN-based LEDs	Rob Martin	Paul Edwards
1500	Marie	Clifford	UV Laser diodes: pushing the boundary	Rob Martin	Gunnar Kusch
1515	Simon	Lawrence	Colour properties and efficiency of white LEDs	Rob Martin	Jochen Bruckbauer
1530	Paul Anthony	Ross	Modelling of X-ray fluorescence spectroscopy	Paul Edwards	Rob Martin
1545	Break				

Session Chair: Carol Trager-Cowan

1600	Daniel	Dyer	RE-doped III-nitrides for solid state lighting applications	Kevin O'Donnell	Paul Edwards
1615	Douglas	Cameron	Hysteretic Photochromic Switching (HPS) of europium-magnesium (Eu-Mg) defects in GaN	Kevin O'Donnell	Paul Edwards
1630	Michael	Farnham	Phosphorescence of glowstones™	Kevin O'Donnell	Paul Edwards
1645	David	Loudon	Gravity Gradiometry with Satellite Constellations	Nick Lockerbie	Daniel Oi

JA5.07

Session Chair: Gordon Robb

1330	Yu	Zhang	Hairpin DNA-functionalized gold nanorods for mRNA detection in homogenous solution	Yu Chen	
1345	Niamh	Turner	Pathological modifications in proteins detected by their intrinsic fluorescence	Olaf Rolinski	Yu Chen
1400	Jonathon	Massey	Spectroscopic Studies of Melanin Fibrils; Spectra, Kinetics, Modulators	Jens Sutter	David Birch
1415	Kevin Graham	McKechnie	Spectroscopic Studies of Dye Aggregation	Jens Sutter	David Birch
1430	Break				

Session Chair: Gail McConnell

1445	Scott	Clarkson	Calibration of Spatial Light Modulators for Adaptive Optics Microscopy	Brian Patton	
1500	Callum	Kinnoch	Automated Image Analysis in Single-Molecule Localization Microscopy	Sebastian van de Linde	
1515	Ben	Williams	Parametric difference resonance in lasers	Francesco Papoff	Gordon Robb
1530	Daniel	Gray	Modelling scanning near-field microscopy	Francesco Papoff	Ben Hourahine
1545	Break				

Session Chair: Olaf Rolinski

1600	Cameron	Smith	In vivo optical imaging of microplastics in marine organisms	Gail McConnell	David McKee
1615	Daniel David	McColl	Quantification and measurement of marine microbial populations using the Mesolens	Gail McConnell	David McKee
1630	Rachel	MacPhee	Super-wide field of view two dimensional cell imaging	Gail McConnell	Lee McCann