PH450 Project Talks 2019-20

Wednesday 19th February 2020

Room JA3.27

1300	Family Name	Given	Project Title	Primary Supervisor	Secondary
1315	MacKintosh	Kirsty	Evaluating Spot-Finding Methods	Sebastian van de Linde	Daniel Oi
1330	Cairney	Stephanie	Computational Methods in Single-Molecule Localization Microscopy	Sebastian van de Linde	Oliver Henrich
1345	Miller	Lennard	Construction and Characterisation of a 3D Printed Holographic Microscope	Brian Patton	David McKee
1400	Smith	Lauren	Generating and using standing waves for applications in optical microscopy	Gail McConnell	
1415					
1430	Thompson	Bethany	Investigation of polytypism in nitride semiconductors	Carol Trager-Cowan	Jochen Bruckbauer, Gergely Ferenczi
1445	Jonusas	Paulius	Tailoring multilayer semiconductor structures for hybrid quantum hardware	Konstantinos Lagoudakis	TBA
1500	Dickson	Euan	Investigation of spectral characteristics of UV LEDs	Jochen Bruckbauer	Robert W. Martin, Carol Trager-Cowan
1515	Foia	Patricia	Pathological modifications in proteins detected by their intrinsic fluorescence	Olaf Rolinski	Yu Chen
1530					
1545	Macintyre	Hazel	Investigation of β-Gallium Oxide semiconductors for power electronics applications	Naresh Kumar	Rob Martin
1600	Nicol	David	Ga2O3 solar-blind detectors and the quest for the optimal electrical contacts	Fabien Massabuau	Paul Edwards
1615	Nicolson	Ewan	Investigation of Gallium Oxide semiconductors for UV applications	Rob Martin	Fabien Massabuau
1630	Mir	Tariq	Topological Insulators	Benjamin Hourahine	Andrew Daley
1645					

Room JA3.17

1300	Family Name	Given	Project Title	Primary Supervisor	Secondary
1315	McCullough	Jake	Accelerometer-based Motion Tracking	Paul Griffin	Billy Wallace
1330	McDermid	Lewis	Digital Feedback For Control of Quantum Optics Experiments	Paul Griffin	Oliver Burrow
1345	Parsonage	Christopher	Propagation of orbital-angular momentum beams through a scattering medium	Paul Griffin	David McKee
1400					
1415					
1430	Alexakis	Emmanouil	Observing beam propagation using fluorescence	Aidan Arnold	Paul Griffin
1445	Auld	Fraser	Building A 3D Airborne Fluxgate Magnetometer for Geomagnetic Field Measurements	Terry Dyer	Erling Riis
1500	MacLean	Craig	Building A 3D Airborne Fluxgate Magnetometer for Geomagnetic Field Measurements	Terry Dyer	Erling Riis
1515					
1530					
1545	McLaughlin	Beth	Grating magneto-optical trap modelling	Aidan Arnold	Paul Griffin
1600	Maneely	Scott	Atomic Physics Game Design for Outreach Activities	Stuart Ingleby	Paul Griffin, Gordon Robb
1615	Schroff	Paul	Holographically generated light potentials for quantum simulation	Stefan Kuhr	TBA
1630					
1645					

Room JA5.02

1300	Family Name	Given	Project Title	Primary Supervisor	Secondary
1315	Dickson	Alex	Space Radiation Reproduction and Testing	Bernhard Hidding	Mark Wiggins
1330	Duncan	Craig	Space Radiation Reproduction and Testing	Bernhard Hidding	Mark Wiggins
1345	Hamilton	Scott	Monte Carlo Modelling of Particle Beam-Matter Interaction	Bernhard Hidding	Mark Wiggins
1400	Sahota	Goran	Beam-driven Plasma Wakefield Acceleration (PWFA)	Bernhard Hidding	Dino Jaroszynski
1415					
1430	Docherty	Lauren	Radiation Reaction	Adam Noble	Dino Jaroszynski, Samuel Yoffe
1445	Getchell	Claire	Nonlinear waves in plasmas	Adam Noble	Dino Jaroszynski
1500	Cairns	Adam	A coherent synchrotron source based on a laser-plasma wakefield accelerator	Antoine Maitrallain	Dino Jaroszynski
1515	Anderson	Harry	Ion Channel Laser with Large Oscillation Amplitude	Bernhard Ersfeld	Dino Jaroszynski
1530					
1545	McKnight	Amy	Electron Beam Therapy	Dino Jaroszynski	Karolina Kokurewicz
1600	McWeillis	Hamish	Plasma Gratings as Optical Elements with High Damage Thresholds for Ultrashort, Extremely Intense Laser Pulses	Dino Jaroszynski	Gregory Vieux, George Holt
1615	Lee	Lok	Terahertz radiations driven by two-colour lasers in gas	Zhengming Sheng	Weimin Wang
1630					
1645					

Wednesday 26th February 2020

Room JA3.27

1300	Family Name	Given	Project Title	Primary Supervisor	Secondary
1315	Gruber	Heidi	Astigmatic mirror multipass absorption cells for long path length spectroscopy	Nigel Langford	Alison Yao
1330	Svensson	Sophie	Nonlinear Optical Loop Mirrors Based on 3 X 3 fibre optic couplers	Nigel Langford	Alison Yao
1345	Chisholm	Alice	Interactive Physics Simulations	Gordon Robb	Nigel Langford
1400	McCallum	Abbie	Cold Atom-Light Interactions	Gordon Robb	Brian McNeil
1415					
1430	Chan	Matthew	Scattering of twisted light by chiral molecules	Robert Cameron	Alison Yao
1445	Sattery	Susan	Scattering of light beams carrying angular momentum	Francesco Papoff	Alison Yao
1500	Ferguson	Kieran	Photon statistics of small lasers	Thorsten Ackemann	Konstantinos Lagoudakis
1515					
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Room JA3.17

1300	Family Name	Given	Project Title	Primary Supervisor	Secondary
1315	Flouri	Sofia	Characterising Digital Camera Sensors	Daniel Oi	TBA
1330	Sarguroh	Khadija	Quantum Random Number Generation	Daniel Oi	John Jeffers
1345	Barr	Kristopher	Coherent Perfect Amplification of Light	John Jeffers	Daniel Oi
1400	Mallon	Stephen	Two-Photon Young's Beamsplitters for Communication	John Jeffers	Daniel Oi
1415					
1430	Keenan	Alex	Soliton Glass	Gian-Luca Oppo	Francesco Papoff
1445	McCormick	Cameron	Opto-mechanics of Bose-Einstein Condensates in Optical Cavities	Gian-Luca Oppo	Gordon Robb
1500	Abbot	James	Quantum transport in superconducting wires and cold atoms	Andrew Daley	François Damanet
1515					
1530					
1545					
1600					
1615					
1630					
1645					

Room JA5.02

1300	Family Name	Given	Project Title	Primary Supervisor	Secondary
1315	Ryan	Calum	Plasma instabilities in intense laser-foil interactions	Martin King	Ross Gray, Paul McKenna
1330	Bacon	Ewan	Laser-driven ion acceleration from ultrathin foils undergoing relativistic self-induced transparency	Robbie Wilson	Ross Gray, Paul McKenna
1345	Crampsey	Ben	Development of field-pickup diagnostics for high-power microwave signal analysis	Philip MacInnes	Kevin Ronald
1400	Harra	David	Scattering of Relativistic Electrons off Electromagnetic Ion Cyclotron Waves	Bengt Eliasson	Kevin Ronald
1415					
1430	Afxenti	Ivi	The theory of X-ray Free electron Lasers	Brian McNeil	Gordon Robb
1445	Derrick	Taylor	Computational Modelling of X-ray Free Electron Lasers	Brian McNeil	Gordon Robb
1500	Harrison	Jack	Design, simulation and experiments of an Extended Interaction Oscillator based on a pseudospark sourced sheet electron beam	Adrian W. Cross	Liang Zhang
1515					
1530					
1545	Braunholtz	Rosie	Atomic Processes for Astrophysical Plasmas	Nigel Badnell	Junjie Mao
1600	Brodie	Seoras	Atomic Processes for Astrophysical Plasmas	Nigel Badnell	Junjie Mao
1615	O'Connor	Kieran	Simulation and measurement of folded-waveguide structure	Craig W. Robertson	Adrian W. Cross
1630					
1645					

To be Announced

TBA	McCulluch	Kerr	Engineering semiconductor defects for quantum electronics	Alessandro Rossi	Robert Martin

TBA	Adair	Andrew	Photonic Neurons: Spiking information processing with lasers	Antonio Hurtado	Thorsten Ackemann
TBA	Bennett	Daniel	Spectroscopy of Dy-doped crystals for mid-IR laser applications	Alan Kemp	Vasili Savitski
TBA	Nikolov	Boyko	Generation and detection of photon pairs in integrated circuits	Lucia Caspani	
TBA	Tsina	Iaonna	3D imaging using high speed LEDs and a smartphone camera	Michael Strain	Johannes Herrnsdorf
TBA	Parker	Grace	Photon velocity control on a silicon photonic chip	Michael Strain	Benoit Guilhabert
TBA	Monaghan	Martin	Mapping brain activity: A multi-channel fiber photometry device	Niall McAlinden	Keith Mathieson