PH450 Projects 1st Round Allocation 27th September 2019

Surname	1st Name	Project Title	Primary	Secondary
Docherty	Lauren	Radiation Reaction	Adam Noble	Dino Jaroszynski, Samuel Yoffe
Getchell	Claire	Nonlinear waves in plasmas	Adam Noble	Dino Jaroszynski
Harrison	Jack	Design, simulation and experiments of an Extended Interaction Oscillator based on a pseudospark sourced sheet electron beam	Adrian Cross	Liang Zhang
Alexakis	Emmanouil	Observing beam propagation using fluorescence	Aidan Arnold	Paul Griffin
McLaughlin	Beth	Grating magneto-optical trap modelling	Aidan Arnold	Paul Griffin
Abbot	James	Quantum transport in superconducting wires and cold atoms	Andrew Daley	François Damanet
Cairns	Adam	A coherent synchrotron source based on a laser-plasma wakefield accelerator	Antoine Maitrallain	Dino Jaroszynski
Adair	Andrew	Photonic Neurons: Spiking information processing with lasers	Antonio Hurtado	Thorsten Ackemann
Mir	Tariq	Topological Insulators	Benjamin Hourahine	Andrew Daley
Dickson	Alex	Space Radiation Reproduction and Testing	Bernhard Hidding	Mark Wiggins
Duncan	Craig	Space Radiation Reproduction and Testing	Bernhard Hidding	Mark Wiggins
Hamilton	Scott	Monte Carlo Modelling of Particle Beam-Matter Interaction	Bernhard Hidding	Mark Wiggins
Sohota	Goran	Beam-driven Plasma Wakefield Acceleration (PWFA)	Bernhard Hidding	Dino Jaroszynski
Afxenti	Ivi	The theory of X-ray Free electron Lasers	Brian McNeil	Gordon Robb
Miller	Lennard	Construction and Characterisation of a 3D Printed Holographic Microscope	Brian Patton	David McKee
Smith	Lauren	Investigating sub-grain structure and dislocations in nitride semiconductor thin films	Carol Trager-Cowan	Jochen Bruckbauer
Thompson	Bethany	Investigation of polytypism in nitride semiconductors	Carol Trager-Cowan	Jochen Bruckbauer, Gergely Ferenczi
O'Connor	Kieran	Simulation and measurement of two-dimensional periodic surface lattice	Craig W. Robertson	Adrian W. Cross
Flouri	Sofia	Characterising Digital Camera Sensors	Daniel Oi	TBA
Sarguroh	Khadija	Quantum Random Number Generation	Daniel Oi	John Jeffers

McKnight	Amy	Electron Beam Therapy	Dino Jaroszynski	Karolina Kokurewicz
McWeillis	Hamish	Plasma Gratings as Optical Elements with High Damage Thresholds for Ultrashort, Extremely Intense Laser Pulses	Dino Jaroszynski	Gregory Vieux, George Holt
Nicol	David	Ga2O3 solar-blind detectors and the quest for the optimal electrical contacts	Fabien Massabuau	Paul Edwards
Sattery	Susan	Scattering of light beams carrying angular momentum	Francesco Papoff	Alison Yao
Keenan	Alex	Soliton Glass	Gian-Luca Oppo	Francesco Papoff
McCormick	Cameron	Opto-mechanics of Bose-Einstein Condensates in Optical Cavities	Gian-Luca Oppo	Gordon Robb
Chisholm	Alice	Interactive Physics Simulations	Gordon Robb	Nigel Langford
McCallum	Abbie	Cold Atom-Light Interactions	Gordon Robb	Brian McNeil
Dube	Thomas	Quantum applications of Semiconductor Disk Lasers	Jennifer Hastie	Paulo Hisao Moriya
Dickson	Euan	Investigation of spectral characteristics of UV LEDs	Jochen Bruckbauer	Robert Martin, Carol Trager-Cowan
Barr	Kristopher	Coherent Perfect Amplification of Light	John Jeffers	Daniel Oi
Mallon	Stephen	Two-Photon Young's Beamsplitters for Communication	John Jeffers	TBC
Jonusas	Paulius	Tailoring multilayer semiconductor structures for hybrid quantum hardware	Konstantinos Lagoudakis	TBA
Ryan	Calum	Plasma instabilities in intense laser-foil interactions	Martin King	Ross Gray, Paul McKenna
Tsina	Iaonna	3D imaging using high speed LEDs and a smartphone camera	Michael Strain	Johannes Herrnsdorf
Macintyre	Hazel	Investigation of β-Gallium Oxide semiconductors for power electronics applications	Naresh Kumar	Rob Martin
Monghan	Martin	Mapping brain activity: A multi-channel fiber photometry device	Niall McAlinden	Keith Mathieson
Braunholtz	Rosie	Atomic Processes for Astrophysical Plasmas	Nigel Badnell	Junjie Mao
Brodie	Seoras	Atomic Processes for Astrophysical Plasmas	Nigel Badnell	Junjie Mao
Gruber	Heidi	Astigmatic mirror multipass absorption cells for long path length spectroscopy	Nigel Langford	Alison Yao
Svensson	Sophie	Nonlinear Optical Loop Mirrors Based on 3 X 3 fibre optic couplers	Nigel Langford	Alison Yao
Foia	Patricia	Pathological modifications in proteins detected by their intrinsic fluorescence	Olaf Rolinski	Yu Chen
Abbouab	Clara	Digital feedback for control of quantum optics experiments	Paul Griffin	Oliver Burrow

McCullough	Jake	Accelerometer-based Motion Tracking	Paul Griffin	Billy Wallace
McDermid	Lewis	Digital Feedback For Control of Quantum Optics Experiments	Paul Griffin	Oliver Burrow
Parsonage	Christopher	Propagation of orbital-angular momentum beams through a scattering medium	Paul Griffin	David McKee
Crampsey	Ben	Development of field-pickup diagnostics for high-power microwave signal analysis	Philip MacInnes	Kevin Ronald
Nicolson	Ewan	Investigation of Gallium Oxide semiconductors for UV applications	Rob Martin	Fabien Massabuau
Bacon	Ewan	Laser-driven ion acceleration from ultrathin foils undergoing relativistic self-induced transparency	Robbie Wilson	Ross Gray, Paul McKenna
Chan	Matthew	Scattering of twisted light by chiral molecules	Robert Cameron	Alison Yao
Cairney	Stephanie	Computational Methods in Single-Molecule Localization Microscopy	Sebastian van de Linde	Oliver Henrich
Schroff	Paul	Holographically generated light potentials for quantum simulation	Stefan Kuhr	TBA
Maneely	Scott	Atomic Physics Game Design for Outreach Activities	Stuart Ingleby	Paul Griffin, Gordon Robb
Auld	Fraser	Building A 3D Airborne Fluxgate Magnetometer for Geomagnetic Field Measurements	Terry Dyer	Erling Riis
Ferguson	Kieran	Photon statistics of small lasers	Thorsten Ackemann	Konstantinos Lagoudakis
Bennett	Daniel	Spectroscopy of Dy-doped crystals for mid-IR laser applications	Vasili Savitski	Alan Kemp
Lee	Lok	Terahertz radiations driven by two-colour lasers in gas	Zhengming Sheng	Weimin Wang