Project Presentation

Each student will be required to give a short project talk - **(Each talk should be 10 mins duration leaving 5 mins for questions)**

25th March 2015

Chair: Prof Kevin O'Donnell, JA 5.05

Student	Project	Degree	Year	Time	Supervisors
Adam Russell	Modelling semiconductor nanostructures using a Schrödinger-Poisson-current solver	MPhys	4	1:00 – 1:15pm	Paul Edwards
Anthony Howley	Optical and conductivity mapping of InGaN LEDs	BSc Hons Physics	4	1:15 – 1:30pm	Rob Martin
Scott Deans	Image processing of electron channelling contrast patterns and electron channelling contrast images	BSc Hons Physics	4	1:30 – 1:45pm	Carol Trager-Cowan
Ross Johnston	Statistical analysis of defect distributions in semiconductor thin films	MPhys	4	1:45 – 2:00pm	Carol Trager-Cowan
Jordan McSkeane	Spectroscopic Studies of Rare-earth ions doped in LiNbO3	BSc Hons Physics	4	2:00 – 2:15pm	Tom Han
Stacey Mitchell	Laser Selective Excitation Studies of Nd3+ doped mixed garnets	MPhys	4	2:30 – 2:45pm	Tom Han
David Newton	Spectroscopic Studies of Rare-earth ions doped in LiNbO3	MPhys	4	2:45 – 3:00pm	Tom Han
Jake Arnott	Thermal modelling of a gravitational ribbon-sensor	BSc Hons Physics	4	3:00 – 3:15pm	Nick Lockerbie, Wayne McRae
Peter Tinning	Testing for gravitational coupling to Entropy	MPhys Physics	5	3:15 – 3:30pm	Nick Lockerbie
Aneurin Harvey-Waugh	Gravitational ribbon-sensor modelling.	BSc Hons Physics	4	3:30 – 3:45pm	Nick Lockerbie, Wayne McRae
Nicole Hunter	Remote sensing of subsea light fields	BSc Hons Physics	4	4:00 – 4:15pm	Alex Cunningham
Christopher Hunter	Differential polarisation imaging for environmental applications	BSc Hons Physics	4	4:15 – 4:30pm	Alex Cunningham
Robert Liddell	Characterisation of irregular particles by optical microscopy and digital imaging	BSc Hons Physics	4	4:30 – 4:45pm	Alex Cunningham
Michael Green	Scattering from natural marine particle suspensions	BSc Hons Physics	4	4:45 – 5:00pm	David McKee

25th March 2015

Chair: Dr Gordon Robb, JA 5.02

Student	Project	Degree	Year	Time	Supervisors
Philip Doyle	Interaction of Spatial Optical Solitons	MPhys	4	1:00 – 1:15pm	Gian-Luca Oppo
Craig Gordon	Dynamics of Coupled Laser Systems	BSc Hons Physics	4	1:15 – 1:30pm	Gian-Luca Oppo
Mathias Weisen	Self-structuring and Optomechanics of Cold Atoms	MPhys	4	1:30 – 1:45pm	Gian-Luca Oppo
Michael Wilson	Simulations of Spin-Polarized Vertical-Cavity Surface-Emitting Lasers	BSc Hons Physics	4	1:45 – 2:00pm	Gian-Luca Oppo
Samuel Anderson	Spiral Bandwidth Control in Optical Parametric Oscillators	MPhys	4	2:00 – 2:15pm	Alison Yao
Karen Wallace	Dynamics of impurity atom coupled to a quantum gas	MPhys	4	2:30 – 2:45pm	Andrew Daley, Suzanne McEndoo
Gwen Morris	Transport dynamics of quantum gases in optical potentials	MPhys	4	2:45 – 3:00pm	Andrew Daley, Alexandre Tacla
Leon Chan	Ghost imaging and the Klyshko approach	MPhys	4	3:00 – 3:15pm	John Jeffers
Benjamin Ross	Quantifying quantum steering via semidefinite programming	MPhys	4	3:15 – 3:30pm	Marco Piani
Josh Robertson	Satellite free-space optics for quantum communication	BSc Hons Physics	4	3:30 – 3:45pm	Daniel Oi
Erin McAleese	Cold atom-light interactions	MPhys	4	4:00 – 4:15pm	Gordon Robb
Steven Lennox	BEC simulations	MPhys	4	4:15 – 4:30pm	Gordon Robb
James Dunn	Interactive Physics Simulations	BSc Hons Physics	4	4:30 – 4:45pm	Gordon Robb
Robert Smith	Cold atom-light interactions	BSc Hons Physics	4	4:45 – 5:00pm	Gordon Robb

25th March 2015

Chairman: Prof. Stefan Kuhr, CV4.05

Student	Project	Degree	Year	Time	Supervisors
Colin McCrann	Observing beam propagation by fluorescence	MPhys	4	1:00 – 1:15pm	Aidan Arnold
Wenbo Li	Automated optimisation of optical fibre coupling using microprocessor control	MPhys	4	1:15 – 1:30pm	Paul Griffin
Matteo Demelas	Single-shot, 3D reconstruction of the spatial profile of a laser beam	MPhys	4	1:30 – 1:45pm	Paul Griffin
Nick Bruce	Magnetic Field Stabilization with an Arduino Microprocessor	BSc Hons Physics	4	1:45 – 2:00pm	Elmar Haller
Kieran MacRae	Measurement of the quality of the laser focus in a scanning optical microscope	BSc Hons Physics	4	2:00 – 2:15pm	Gail McConnell, Johanna Tragardh
James Denholm	Non-resonant optical cavities	BSc Hons Physics	4	2:30 – 2:45pm	Nigel Langford
Gregor McDowall	Chirp management of LEDs	MPhys	4	2:45 – 3:00pm	Nigel Langford
Steven Russell	Optical pumping of molecular gas lasers by QC Lasers	MPhys	4	3:00 – 3:15pm	Nigel Langford
Heather Simmons	Non-resonant optical cavities	MPhys	4	3:15 – 3:30pm	Nigel Langford
Jonathan Wilkins	Thermal management of pulsed QC Lasers	BSc Hons Physics	4	3:30 – 3:45pm	Nigel Langford
Mark Carmichael	Photonic materials and devices for Visible Light Communication (VLC)	MPhys	4	4:00 – 4:15pm	Benoit Guilhabert, Nicolas Laurand
Jan Philipp Hausen	Neurophotonic systems for interfacing with the retina	ERASMUS	4	4:15 – 4:30pm	Niall McAlinden

1st April 2015

Chairs: Prof. Alex Cunningham, Dr Gordon Robb, JA 5.05

Student	Project	Degree	Year	Time	Supervisors
Caitlin Firth	Intrinsic Fluorophores in Sensing Applications	BSc Hons Physics	4	1:00 – 1:15pm	Olaf Rolinski
Craig Murray	Unusual fluorescence decays	BSc Hons Physics	4	1:15 – 1:30pm	Olaf Rolinski
Scott Brown	Surface fluorescence	BSc Hons Physics	4	1:30 – 1:45pm	Jens Sutter
Callum Runciman	Noble Metal Quantum Dots	BSc Hons Physics	4	1:45 – 2:00pm	Yu Chen
Nathan Dalgleish	Modelling of wettability of mineral surface by water and oil	BSc Hons Physics	4	2:15 – 2:30pm	Maxim Fedorov
Mark Governo	Predicting small molecule binding sites on protein surfaces	MPhys	4	2:30 – 2:45pm	Maxim Fedorov
Elaine Adair	A Physical Investigation of Protein-drug Binding	MPhys	4	2:45 – 3:00pm	Neil Hunt
Andrew Farrell	Uncovering the early stages of protein folding	MPhys	4	3:00 – 3:15pm	Neil Hunt
Christopher Campbell	Resonances in clouds of cold atoms	BSc Hons Physics	4	3:30 – 3:45pm	Francesco Papoff
Lucy Luecke	Parametric Oscillators	ERASMUS	4	3:45 – 4:00pm	Francesco Papoff
Ian Shanks	Surface Fields in Layered Nano Particles	BSc Hons Physics	4	4:00 – 4:15pm	Francesco Papoff
Matthew Brown	Computational modelling of X-ray Free electron Lasers	MPhys	4	4:15 – 4:30pm	Brian McNeil
Martyn Hunter	Resonant Electron Beam-light Interactions	MPhys	4	4:30 – 4:45pm	Brian McNeil
Scott Thomas	Computational modelling of X-ray Free electron Lasers	MPhys	4	4:45 – 5:00pm	Brian McNeil

1st April 2015

Chair: Prof. Adrian Cross, JA 5.02

Student	Project	Degree	Year	Time	Supervisors
Alan Brown	Modelling laser-driven plasma expansion and ion acceleration dynamics	MPhys	4	1:00 – 1:15pm	Ross Gray
Jonathan Jarrett	Design study on plasma optics	MPhys	4	1:15 – 1:30pm	Ross Gray
Weicheng He	Numerical simulation of laser interaction with dense magnetized plasma	BSc Hons Physics	4	1:30 – 1:45pm	Zheng-Ming Sheng
Madeleine Richards	Autocorrelation using a GaAsP Photodiode for Beam-driven Plasma Wakefield Acceleration	BSc Hons Physics	4	1:45 – 2:00pm	Bernhard Hidding
Andrew Beaton	Beam-driven Plasma Wakefield Acceleration (PWFA)	BSc Hons Physics	4	2:00 – 2:15pm	Bernhard Hidding
Gemma King	Medical Radio-isotope Production using a Laser-Plasma Wakefield Accelerator	MPhys	4	2:30 – 2:45pm	Mark Wiggins
Craig Murdoch	Phase-contrast X-ray imaging using an X-ray source based on a laser-plasma accelerator	MPhys	4	2:45 – 3:00pm	Silvia Cipiccia
Fraser Addies	Radiotherapy using Beams from Laser-plasma Accelerators	MPhys	4	3:00 – 3:15pm	Xue Yang
Adam Ross	Laser Wakefield Acceleration and Betatron Gamma Ray Radiation	MPhys	4	3:15 – 3:30pm	Ranaul Islam
Calum Bregazzi	Capillary Discharge Waveguides for Laser-Plasma Interactions	BSc Hons Physics	4	3:30 – 3:45pm	Mark Wiggins
Kyle Roulston	Electron Beam Transport and Diagnostics	MPhys	4	3:45 – 4:00pm	Enrico Brunetti
Alexandra Reid	High-Power Microwave Sources	MPhys	4	4:15 – 4:30pm	Phil MacInnes, Kevin Ronald