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)**

19th March 2014

Chairman: Prof Kevin O'Donnell, JA 5.04

Student	Project	Degree	Year	Time	Supervisors
Rachel Elvin	Effects of electron irradiation on photoluminescence spectra of thin film Cu(InGa)Se2	MPhys Physics	4	1:00 – 1:15pm	Rob Martin, Michael Yakushev
Catherine Freeke	Electroluminescence spectroscopy and electrical characterisation of light-emitting diodes	MPhys Physics	4	1:15 – 1:30pm	Rob Martin, Paul Edwards
Matthew Lebessis	Luminescence Hysteresis	MPhys Physics	4	1:30 – 1:45pm	Kevin O'Donnell, Paul Edwards
Ivan Morgan	Eu-doped GaN	MPhys Physics	4	1:45 – 2:00pm	Kevin O'Donnell, Rob Martin
Hazel Stewart	Nanoparticle Metrology	MPhys Physics	4	2:00 – 2:15pm	David Birch, Jens Sutter
Jonathan McSherry	Glucose sensing	MPhys Physics	4	2:30 – 2:45pm	David Birch, Olaf Rolinski
Liam Glen	Biodegradable Choline-based Surfactants for Improving Stability of Carbon Nanoparticle Dispersions in Water	MPhys Physics	4	2:45 – 3:00pm	Maxim Fedorov, David Birch
Callum Mair	Effects of Alcohols on Stabilization and Bundle Formation of Carbon Nanotubes in Aqueous Dispersions Stabilized by Surfactants	BSc Hons Physics	4	3:00 – 3:15pm	Maxim Fedorov, David Palmer
Adam Higginson	Protein adaptation to extreme ionic environments: how bacteria can survive in highly concentrated salty water?	MPhys Physics	4	3:15 – 3:30pm	Olaf Rolinski, Maxim Fedorov
Craig Hooker	Optical Properties of ZnO Powder Doped with Lanthanide and Transition-metal Ions	BSc Hons Physics	4	3:30 – 3:45pm	Tom Han, Olaf Rolinski
Junaid Ahmad	A spectroscopic study Carbon Nano-particles	MPhys Physics	4	4:00 – 4:15pm	Tom Han, Yu Chen
Chloe Chung	Optical Properties of Nanoparticles	MPhys Physics	4	4:15 – 4:30pm	Yu Chen, Olaf Rolinski
William Fleming	Noble Metal Quantum Dots	BSc Hons Physics	4	4:30 – 4:45pm	Yu Chen, Olaf Rolinski
Matthew Risk	Energy Transfer as a Nanoscale Ruler	BSc Hons Physics	4	4:45 – 5:00pm	Yu Chen, Olaf Rolinski

26th March 2014

Chairman: Prof Erling Riis, JA 5.04

Student	Project	Degree	Year	Time	Supervisors
Craig Picken	Control of Quantum Cascade chirped laser pulses via dispersion management	BSc Hons Physics	4	1:00 – 1:15pm	Nigel Langford, Geoff Duxbury
Benjamin Wright	Non-resonant optical cavities	BSc Hons Physics	4	1:15 – 1:30pm	Nigel Langford, Alison Yao
David Morrison	Resonant optical cavities	BSc Hons Natural Sciences	4	1:30 – 1:45pm	Nigel Langford
Neil Stevenson	Optical Second Harmonic Generation in Urea	MPhys Physics	4	1:45 – 2:00pm	Tom Han, Nigel Langford
Peter Graham	Short-wavelength Two-photon Microscopy	BSc Hons Physics	4	2:00 – 2:15pm	Gail McConnell, Johanna Tragardh
Stuart Wilson	Digital control circuits	MPhys Physics	4	2:30 – 2:45pm	Erling Riis, Paul Griffin
Niamh Keegan	Light-Pulse Matter-Wave Interferometer in a Magnetic Waveguide	MPhys Physics	4	2:45 – 3:00pm	Erling Riis, Paul Griffin
Craig Colquhoun	Highly efficient frequency up-conversion in Rb vapour	MPhys Physics	4	3:00 – 3:15pm	Aidan Arnold, Erling Riis
Charelle Dunbar-Dawe	Holographic Atom Traps	MPhys Physics	4	3:15 – 3:30pm	Stefan Kuhr, Graham Bruce
Lauren Henry	Historical Physics Equipment	BSc Hons Physics with Teaching	4	3:30 – 3:45pm	Erling Riis, Kevin O'Donnell
Gillian Shenstone	Optical spectroscopy of distant sources	BSc Hons Physics	4	4:00 – 4:15pm	Carol Trager-Cowan, David McKee
Alasdair Rutherford	Characterisation of irregular shaped particles by optical microscopy and digital imaging	MPhys Physics	4	4:15 – 4:30pm	David McKee, Alex Cunningham
John McPhillimy	Silicon micro-resonators for non-linear optics	MPhys Physics	4	4:30 – 4:45pm	Michael Strain, Nicolas Laurand
Raphael Cathagne	Direct laser writing of mechanically-flexible hybrid photonic devices	Physics	4	4:45 – 5:00pm	Nicolas Laurand, Benoit Guilhabert

26th March 2014

Chairman: Dr Gordon Robb, JA 5.06

Student	Project	Degree	Year	Time	Supervisors
Stephen Howorth	The Physics of DNA	MPhys Physics	4	1:00 – 1:15pm	Neil Hunt, Katrin Adamczyk, Glenn Burley
Kelsey Provan	Predicting Solvation Thermodynamics of Bioactive Molecules	MPhys Physics	4	1:15 – 1:30pm	Maxim Fedorov, Neil Hunt, David Palmer
Peter Tinning	Testing for gravitational coupling to Entropy	MPhys Physics	4	1:30 – 1:45pm	Nick Lockerbie, Tom Han
Roseanne Clement	Atmospheric Correction of Remote Sensing Imagery	MPhys Physics	4	1:45 – 2:00pm	David McKee, Alex Cunningham
Robert Harris	Optical forces on nanoparticles	MPhys Physics	4	2:00 – 2:15pm	Ben Hourahine, Francesco Papoff, Gordon Robb
Sean Davies	The theory of X-ray Free electron Lasers	MPhys Physics	4	2:30 – 2:45pm	Brian McNeil, Gordon Robb
Robert Smith	Cold atom-light interactions	BSc Hons Physics	4	2:45 – 3:00pm	Gordon Robb, Brian McNeil
James Simpson	The scientific applications of X-ray Free Electron Lasers	MPhys Physics	4	3:00 – 3:15pm	Brian McNeil, Gordon Robb
Liviu Chirondojan	Exotic quantum operations with light	MPhys Physics	4	3:15 – 3:30pm	John Jeffers, Daniel Oi
Johnathan Conway	Quantum Optical Computational Toolbox	MPhys Physics	4	3:30 – 3:45pm	John Jeffers, Gian-Luca Oppo
Craig Gordon	Nanosatellite optics for free-space quantum communication	MPhys Physics	4	4:00 – 4:15pm	Daniel Oi, Alison Yao
Christopher Gibson	Pattern Formation and Turbulent Helical Waves	BSc Hons Physics	4	4:15 – 4:30pm	Gian-Luca Oppo, Alison Yao
Fiona Hynd	Simulations of Coupled Laser Networks	BSc Hons Physics	4	4:30 – 4:45pm	Gian-Luca Oppo, Thorsten Ackemann
Kristofer Gray	BEC-light interactions	MPhys Physics	4	4:45 – 5:00pm	Gordon Robb, Gian-Luca Oppo

26th March 2014

Chairman: Dr Adrian Cross, Col 4.05

Student	Project	Degree	Year	Time	Supervisors
Gregor Garbutt	Radiotherapy using Beams from Laser-plasma Accelerators	MPhys Physics	4	1:00 – 1:15pm	Dino Jaroszynski, Silvia Cipiccia
Euan Kleboe	Non-linear Optics in Plasma: Raman Amplification and Frequency Mixing	BSc Hons Mathematics and Physics	4	1:15 – 1:30pm	Dino Jaroszynski, Bernhard Ersfeld
Lewis Reid	Capillary Discharge Waveguides for Laser-Plasma Interactions	MPhys Physics	4	1:30 – 1:45pm	Dino Jaroszynski, Mark Wiggins
Alexander Macleod	Radiation Reaction	MPhys Physics	4	1:45 – 2:00pm	Dino Jaroszynski, Adam Noble
Alexander Macdonald	Laser-Wakefield Plasma Accelerated electron optimization for Very High Energy Electron (VHEE) cancer treatment	MPhys Physics	4	2:00 – 2:15pm	Dino Jaroszynski, Silvia Cipiccia
Callum Runciman	Beam-driven Plasma Wakefield Acceleration (PWFA)	MPhys Physics	4	2:30 – 2:45pm	Bernhard Hidding, Dino Jaroszynski
Gavriil Chatzitheodoridis	Atomic Processes for Astrophysical Plasmas	BSc Hons Physics	4	2:45 – 3:00pm	Nigel Badnell
Michael Ross	Design and Simulation of an electron beam source for a Millimetre Wave Klystron	BSc Hons Physics	4	3:00 – 3:15pm	Adrian Cross, Liang Zhang
Christopher Garvin	Design of components for a THz millimetre wave amplifier	BSc Hons Physics	4	3:15 – 3:30pm	Wenlong He, Craig R. Donaldson, Adrian Cross

28th March 2014

Chairman: Dr Adrian Cross, Col 3.20

Student	Project	Degree	Year	Time	Supervisors
John McCreadie	High energy ion acceleration in intense laser-plasma interactions	MPhys Physics	4	9:15 – 9:30am	Paul McKenna, Ross Gray
John Carson	Sweep Frequency Microwave Pulse Compression using a Helically Corrugated Waveguide	BSc Hons Physics	4	9:30 – 9:45am	Kevin Ronald, Wenlong He
Timothy Heelis	Simulation of electromagnetic waves in magnetized plasmas	MPhys Physics	4	9:45 – 10:00am	Bengt Eliasson, Kevin Ronald, David Speirs
Martyn Lees	Design of a Frequency Swept, Multi-Megawatt, Cherenkov Oscillator	BSc Hons Physics	4	10:00 – 10:15am	Kevin Ronald, Philip MacInnes