

Part II Project Talks 2022
Thursday 5th May 2022 (Week 2, Trinity Term)

Time	Student	Supervisor	Title of Talk
Thursday 5th May			
9.00	Pre-talks meeting (Judges only)		
9.30	Introduction: Prof. Keyna O'Reilly		
9.45	1. Rowena Stening	Prof Susie Speller & Prof Chris Grovenor	Preparing REBCO surfaces for persistent joint making
10.00	2. Stephen Hoy	Dr Rebecca Nicholls & Prof Susie Speller	XANES Modelling of Irradiation Defects in YBCO
10.15	3. Prisma Gautum	Prof Chris Grovenor & Prof Susie Speller	Solid-state batteries based on nitrogen-doped thin film LAGP electrolyte
10.30	4. Martin Kim	Prof Chris Grovenor & Prof Susie Speller	Persistent joints in high temperature superconductors
10.45	5. Zoe Harper	Prof Chris Grovenor	Li alloys for solid state batteries
11.00	COFFEE/TEA BREAK – HUME ROTHERY FOYER		
11.15	6. Shane McCarthy	Prof. Michael Moody, Dr Ben Jenkins & Prof Chris Grovenor	Multi-scale characterisation of zirconium-based alloys for fusion applications
11.30	7. Harry Chapman	Prof David Armstrong & Prof Chris Grovenor	Liquid lithium corrosion of materials for nuclear fusion
11.45	8. Isobel Hardwick	Prof Pete Nellist & Prof David Armstrong	Screw dislocation structures in BCC metals
12.00	9. Simona Misakova	Prof David Armstrong & Prof Angus Wilkinson	Sustainable high-entropy alloys
12.15	10. Davidson Sabu	Dr Paul Bagot & Prof David Armstrong	Characterising Nickel-based alloys for molten salt nuclear reactors
12.30	Lunch Break		
13.30	11. Harry Yuan	Prof Angus Kirkland & Dr Chris Allen	Atomic resolution electric field mapping
13.45	12. James Graca-Jones	Prof Angus Kirkland & Dr Chen Huang	Automated aberration measurement from Ronchigrams using machine learning
14.00	13. Barry Yu	Prof Harish Bhaskaran	Novel 3D Nano-manufacturing Method for Micro-Ring Resonator Non-volatile tuning
14.15	14. Toby Edison	Prof Harish Bhaskaran & Dr Mengyun Wang	Efficient design and optimisation of bio-photonic sensors
14.30	15. Yuhang Lee	Prof Harish Bhaskaran	Novel electro-optic approaches to digital-to-analogue conversions in AI applications
14.45	COFFEE/TEA BREAK – HUME ROTHERY FOYER		
15.00	16. Louis Makower	Prof James Marrow & Prof Nicola Pugno (Trento)	In situ studies of the deformation of 3D highly porous ZnO network materials
15.15	17. Veera Vudathu	Prof James Marrow	Exploring damage mechanisms in novel SiC-SiC composites for aerospace applications
15.30	18. Mariella Papapavlou	Prof Mark Thompson (EngSci) & Prof Jan Czernuszka	Optimising and characterising fibrin for in vitro microvessel models
15.45	19. Jinhao Dong	Prof Jan Czernuszka	Calcium carbonate to calcium phosphate transformations
16.00	20. Nick Watt	Prof Nicole Grobert	Hexagonal-Boron Nitride Free-standing Assemblies Synthesised using Aligned Carbon Nanotube Templates for Unidirectional Heat Transfer
16.15	End		

Part II Project Talks 2022
Friday 6th May 2022 (Week 2, Trinity Term)

Time	Student	Supervisor	Title of Talk
Friday 6th May			
9.00	Pre-talks meeting (Judges only)		
9.30	21. Rena Yang	Prof Hazel Assender	Novel Multi-Layered Drug Reservoir for Long Term Drug Release in Neural Implants
09.45	22. Chloe Curtis-Smith	Prof Brian Wardle (MIT) & Prof Hazel Assender	Determining the Process-Structure-Property Relationships in High Volume Fraction Aligned Carbon Nanotube/Polymer Composite Plies and Laminates
10.00	23. Dominic Peachey	Prof Zachary Cordero (MIT) & Prof Roger Reed	Directional Recrystallization of Additively Manufactured Ni-base Superalloys
10.15	24. Lewis Sutton	Dr Enzo Liotti	Creating high entropy alloys from recycled materials
10.30	25. Kehinde Lawal	Prof Sergio Lozano-Perez, Dr Gareth Hughes & Dr Junliang Liu	Optimising SIMS mapping of nuclear materials
10.45	COFFEE/TEA BREAK – HUME ROTHERY FOYER		
11.00	26. Thomas Bricknell	Prof Rob Weatherup	Suspended 2D material membranes for photoelectron spectroscopy of solid-liquid interfaces
11.15	27. Chanisa Phutrakul	Prof Rob Weatherup	Developing low-resistance interfaces in solid state Li-ion batteries
11.30	28. Camilla Hurst	Prof Mauro Pasta and Dr Ed Darnbrough	Can composite solid electrolytes solve the challenges of all-solid-state batteries?
11.45	29. Saskia Krefting	Prof Mauro Pasta & Dr Sudarshan Narayanan	Linking Lithium's surface topography and mechanics to the electrochemistry of Li-metal batteries
12.00	30. Karen Yan	Prof Lapo Bogani & Dr Michael Slota	Investigating the quantum and classical spin properties of graphene nanoribbons
12.15	Lunch Break		
13.15	31. Femi Fakokunde	Prof Natalia Ares (EngSci) & Prof Andrew Briggs	Developing a flexible control interface for quantum experiments
13.30	32. Daniel Antoine-Donatein	Prof Marina Galano, Prof Natalia Ares & Dr Fernando Audebert	Pushing the limits of materials for quantum devices
13.45	33. Maya Wall	Prof Jason Smith	Magnetic biasing of solid state spin qubits
14.00	34. Charlotte Withyman	Prof Jason Smith	Characterisation of ultrafine aerosol particles using single photon detection
14.15	35. Tom Flatters	Prof Simon Benjamin	Fabrication Defects in Quantum Computers
14.30	COFFEE/TEA BREAK – HUME ROTHERY FOYER		
14.45	36. Louis Wright	Dr Sebastian Bonilla	Negatively charged dielectric nanolayers to improve the efficiency of solar cells
15.00	37. Reggie Leung	Dr Sebastian Bonilla	Laser melting of Aluminium Kitchen Foil for Solar Cell Metallisation
15.15	38. Yingsi Lin	Prof Jonathan Yates & Dr Chris Patrick	Predicting the electronic structure of photovoltaic interfaces
15.30	39. Rajun Phagura	Prof Jonathan Yates & Dr Joe Prentice	Investigating the effects of intermolecular interactions on the absorption spectrum of dye molecules for dye sensitized solar cells
15.45	40. Adam Suttle	Dr Neil Young & Prof Richard Compton (Chem)	Ag Nanoparticle studies using TEM with nanophase diagram significance
16.00	End – Judges to convene separately		