

Part II Project Talks 2019

Monday 13 May and Tuesday 14 May 2019 (Week 3, Trinity Term)  
Hume-Rothery Lecture Theatre

Time	Student	College	Supervisor	Title of Talk
<b>Mon 13th May</b>				
9.45	Coffee and pastries HR Meeting Room ( <b>Judges only</b> )			
10.15	<b>Introduction: Prof. Keyna O'Reilly</b>			
10.30	1. Oliver PADOVAN		RIT	Failure of armour ceramics in compression
10.45	2. Alex AUSTIN		RIT	Cold Sintering of Zinc Oxide
11.00	3. Gil CHAMBERS		NG/RIT	Freeze-Casting: Strategies and Applications for Total Alignment in Hierarchically Porous Structures
11.15	4. Douglas ANDREWS		NG	The Potential of Fuzzy Fibres in Carbon Brakes
11.30	5. Sam HUMPHREY		HB/Cheng	Monatomic phase change memory for all optical computing
11.45	6. Jeremy LIANG		HB (Oxford supervisor)	Reconfigurable photonics enabled by optical change materials
12.00	Lunch (JUDGES ONLY: St Edmund Hall)			
14.00	7. John ORBELL		RCR/Barba	Additive Manufactured Strut-based Lattices for Biomedical Applications
14.15	8. Steve KENCH		RCR/Barba	Novel deformation mechanisms in Ni-based superalloys
14.30	9. Nathan LOWE		RN/JRY	DFT simulation of electron microscopy images
14.45	10. Jetty ZHANG		RN/JRY	DFT modelling of atomic vibrations
15.00	11. Yuxin YIN		RN/JRY	Theoretical exploration of charge density wave in CuS <sub>2</sub>
15.15	12. Jit RAMESH		JRY	Designing Redox Couples for Energy Storage with Artificial Intelligence and First Principles Simulation
15.30	Tea/Coffee (Hume-Rothery Foyer)			
15.45	13. Josh DERU		PRW	Inversion layer solar cells based in ion-charged dielectrics
16.00	14. Rachel KEALY		PRW/Bonilla	Ionic Charge Kinetics in SiO <sub>2</sub>
16.15	15. Anita ZHOU		PRW/Bonilla	Microscale Electrical Characterisation of Silicon Solar Cells
16.30	16. Matthew SYLVA		KP	Mixed-metal fullerene molecular magnets
16.45	17. Jack ASPINALL		JaMS/Trichet	Triggered single photon sources based on point defects in diamond.
17.00	18. Brandon SEVERIN		JaMS/Trichet	Hybrid microcavities for the study of nanoparticles.

Time	Student	College	Supervisor	Title of Talk
<b>Tuesday 14th May</b>				
09.00 Coffee & pastries HR meeting room (Judges only)				
09.30	19. Matthew LYNCH		PGB	Synthesis and electrochemical characterisation of Li ionic conductors for all-solid-state batteries
09.45	20. Yijun LIM		TJM	In-situ 3D observation of damage development and healing in a carbon fibre/epoxy composite
10.00	21. Dylan SMYTHE		TJM	In-situ studies of graphene and carbon nanotube auxetic rubber bionic composites
10.15	22. Gemma FRANCIS		HEA	Novel patterned-deposition suitable for roll-to-roll processing
10.30	23. Bilal HUSSAIN		HEA	Characterisation of gas-barrier polymer films
10.45	Tea/Coffee (HR Foyer)			
11.00	24. Inigo HOWE		Tarleton/Hofmann	In-situ deformation of a polycrystalline thin foil
11.15	25. William ROBERTS		Tarleton/AJW	Crystal Plasticity Modelling of Micro Cantilever Experiments
11.30	26. Claire SAXBY		CRMG/ SCS	"Perfect"persistent mode joints for NbTi superconducting wires
11.45	27. Laura WHEATLEY		SCS/ CRMG	Microstructural characterisation of bulk Magnesium Diboride for medical applications
12.00	28. Henry HODGSON		SCS/ CRMG	Thin film deposition of superconducting materials for device applications
12.15 Break				
12.30	29. Henry HE		PAJB/MPM	Atom Probe analysis of Half-Heusler alloys for thermoelectric applications
12.45	30. Victoria STRUTT		MPM/ PAJB	Atomic Scale Characterisation of T91 for Fission Reactors
1.00	31. Tom FAIRCLOUGH		DEJA	Effect of Heavy Ion Irradiation Conditions on the Mechanical Properties of Ferritic Steels for Nuclear Applications
1.15	32. Michael GOODE		PDN	Modelling electron scattering for atomic scale characterisation of materials via simulated EDX column partial cross-sections
<b>1.30 Judging (HR Meeting Room)</b>				