

Microscopy Society of Ireland (MSI) 2023 Symposium Program, Tyndall-UCC



Wednesday 18 th January 2023		
11:00-onwards	Arrival at Tyndall Reception and Registration	
11:45–12:30	Lab Tours	
12:30–13:30	Optional Lunch	
13:45–14:00	Opening Ceremony with William Scanlon (CEO of Tyndall) and Lewys Jones (President of MSI)	
	Plenary Talk – Chair: Fiona Lyng (Technological University of Dublin)	
14:00–14:45	J.C. Séamus Davis (University College Cork, University of Oxford, UK and Cornell University, USA) – <i>Visualizing Macroscopic Quantum States</i>	(P)
	Light Microscopy – Chair: Fiona Lyng (Technological University of Dublin)	
14:45–15:15	Michelle Itano (University of North Carolina, USA) – <i>Developing tools and data pipelines for reporting reproducible fluorescence microscopy methods</i>	(I)
15:15–15:30	James Lillis (University of Limerick) – <i>Surpassing the Diffraction Limit in Label-Free Optical Microscopy Through Artificial Neural Network Reconstruction</i>	(O)
15:30–15:45	Janith Wanigasekara (Technological University Dublin) – <i>Three-dimensional cell culture models to advance glioblastoma research and to improve therapeutic outcomes with novel devices</i>	(O)
15:45–16:15	Tea/Coffee Break	
	Instrument Development and Electron Microscopy I – Chair: Mark Pickering (University College Dublin)	
16:15–16:30	Niamh Burke (University College Dublin) – <i>EnderScope: A Low-Cost 3D Printer Based Microscope for Microplastic Detection</i>	(O)
16:30–16:45	Adam Browne (Trinity College Dublin) – <i>Achieving real-time, high framerate imaging with interlaced STEM</i>	(O)
16:45–17:00	Krishna Hari (University of Limerick) – <i>Engineered growth of polycrystalline amino acid films for eco-friendly piezoelectric sensing</i>	(O)
17:00–17:15	Laura Gambini (Trinity College Dublin) – <i>Video frame interpolation Neural Network for FIB-SEM tomography</i>	(O)
17:15–17:20	Techno Bite from FEI-ThermoFisher Sponsor	
17:20–17:25	Techno Bite from JEOL Sponsor	
17:25–17:30	Techno Bite from Tescan Sponsor	
17:45–18:45	Microscopy Society of Ireland AGM (Members Only)	
		Hybrid

Thursday 19 th January 2023		
	Electron Microscopy II – Chair: Lewys Jones (Trinity College Dublin)	
09:00–09:30	Shelly Conroy (Imperial College London, UK) – <i>Probing the Dynamics of Charged Interfaces with the Electron Beam</i>	(I)
09:30–09:45	Tigran Simonian (Trinity College Dublin) – <i>Structural Characterisation of BaZr_{0.3}Se_y Perovskite Thin Films via Scanning Transmission Electron Microscopy</i>	(O)
09:45–10:00	Nicholas Stephen (Queen's University Belfast) – <i>Dislocation and strain distribution in InGaAs Metamorphic Buffers</i>	(O)
10:00–10:15	Margarita Georgieva (Munster Technological University) – <i>Quantification of self-assembled molecular monolayer (SAM) on Germanium by energy dispersive X-ray spectroscopy (EDS) on an electron microscope</i>	(O)
10:15–10:30	Samad Abdus (University of Limerick) – <i>Exploring the laser induced Phase Changes within 2D MoTe₂ via Electron Microscopy and Spectroscopy Techniques</i>	(O)
10:30–10:45	Mariana Cortinhal (i3N/CENIMAT, Portugal) – <i>Influence of Production Parameters of Hydrothermally Synthesized ZnO Nanowires: A Microscopy Analysis</i>	(O)
10:45–11:00	Ursel Bangert (University of Limerick) – <i>Establishing Constellations and Quantification of individual Ion-Implanted Dopants in Monolayer MoS₂</i>	(O)
11:00–11:30	Tea/Coffee Break	
	Access to Microscopy Infrastructure – Chair: Tiina O'Neill (University College Dublin)	
11:30–11:45	Peter Chung (University College Cork) – <i>A new microbeam analysis facility at the School of Biological, Earth and Environmental Sciences at UCC</i>	(O)
11:45–12:00	Peter Owens (University of Galway) – <i>A spotlight on the Centre for Microscopy and Imaging - a shared resource facility at the University of Galway</i>	(O)
12:00–12:15	Barry O'Connell (Dublin City University) – <i>Open Access Microscopy Facilities in DCU</i>	(O)
12:15–12:30	Michael Schmidt/Davinder Singh (Tyndall National Institute) – <i>Advanced Electron Microscopy Services at Tyndall Assist with Analysis of State-of-the-Art Materials and Devices</i>	(O)
12:30–12:45	Shelly Conroy (Imperial College London, UK) – <i>Access to Microscopy Infrastructure in the UK and USA</i>	(O)
12:45–12:50	Techno Bite from ASCENT+ Sponsor	
12:50–12:55	Techno Bite from Quorum Technologies Sponsor	
12:55–13:00	Techno Bite from Laboratory Instruments & Supplies Sponsor	
13:00–14:00	Lunch Break (with lunch for delegates from "Loving Salads")	
	Image Analysis – Chair: Eoin Moynihan (University of Warwick)	
14:00–14:30	Bram Koster (Leiden University Medical Center, Netherlands) – <i>Electron Microscopy: Visualization and Image Analyses</i>	(I)
14:30–14:45	Alanna Stanley (University of Galway) – <i>Characterisation of an Ischemia Reperfusion Injury using a Pressure Ulcer Model</i>	(O)
14:45–15:00	Luke Dolan (Trinity College Dublin) – <i>Morphological characterisation of printed networks of nanomaterials using FIB-SEM nt</i>	(O)
15:00–15:15	Gonzalo Saiz-Gonzalo (University College Cork) – <i>Elucidating the role of dietary emulsifiers in intestinal epithelial cell function</i>	(O)
15:15–15:30	Jade Monaghan (Technological University Dublin) – <i>Effect of pre-analytical variables on micro-FTIR spectral content of lymphocytes</i>	(O)
15:30–15:45	Saritha Unnikrishnan (Atlantic Technological University) – <i>A Deep Learning-based Segmentation of Particles from a Pharmaceutical Emulsion-based Hydrogel</i>	(O)
15:45–15:50	Techno Bite from Gatan-Ametek Sponsor	
15:50–15:55	Techno Bite from DENS Solutions Sponsor	
15:55–16:00	Techno Bite from Mason Technology Sponsor	
16:00–17:30	Poster Session with Tea/Coffee	
19:30–Late	Gala Dinner at the Maldrón Hotel, Shandon	

PTO for Friday's schedule.....

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Friday 20 th January 2023		
Physical Probe Microscopy – Chair: Sarah Guerin (University of Limerick)		
09:00–09:30	Donald M. Evans (University of Augsburg, Germany) – <i>Local measurements of (super-)conducting microstructure in quantum materials</i>	(I)
09:30–09:45	Brendan Sheehan (Tyndall National Institute) – <i>Advanced Materials Research using Atomic Force Microscopy</i>	(O)
09:45–10:00	Debimita Dutta (Tyndall National Institute) – <i>Scanning probe microscopy investigations on the influence of CVD parameters on film surface topography / ferroelectric properties of bismuth titanate thin films</i>	(O)
10:00–10:15	Ayse Ozcan Atar (Tyndall National Institute) – <i>Why 'Zn diffusion' is not always diffusion</i>	(O)
10:15–10:30	Joseph Carroll (University College Cork) – <i>Detection of a Pair Density Wave State in UTe₂</i>	(O)
10:30–10:35	Techno Bite from ZEISS Sponsor	(S)
10:35–10:40	Techno Bite from Oxford Instruments Sponsor	(S)
10:40–11:10	Tea/Coffee Break	
Correlative Microscopy – Chair: Emma McDermott (University of Galway)		
11:10–11:40	Deb Kelly (Pennsylvania State University, USA) – <i>Advancing the Real-time Revolution in Molecular Microscopy</i>	(I)
11:40–11:55	Christopher Evans (University College Dublin) – <i>CoCID: Compact Cell Imaging Device for interrogating Hepatitis E infection</i>	(O)
11:55–12:10	Daniel Falk (University College Cork) – <i>Microscopy, spectroscopy and X-ray fluorescence reveal a new model for the preservation of Eocene frogs</i>	(O)
12:10–12:30	Closing Session and Early Career Researcher Prizes	
12:45–13:30	Lab Tours	

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