

Programme: Thursday 26 June 2025

9:00 AM - 10:00 AM	<p>Plenary Speaker: Susan Speller, University of Oxford, UK Session Chair: Antony Carrington (Room: B.H05. Sponsored by Kiutra) Radiation damage of high temperature superconductors for fusion magnets</p>
10:00 AM - 10:30 AM	Morning Break
10:30 AM - 12:50 PM	<p>Unconventional Superconductivity Session Chair: Shuqiu Wang (Room: B.H05. Sponsored by Kiutra)</p> <p>10:30 AM - 11:00 AM Lucia Iglesias Bernardo (Invited Speaker): Democratizing nickelates superconductors: Topotactic reduction induced by aluminum sputter deposition</p> <p>11:00 AM - 11:20 AM LV Levitin: Identification of topological superconductivity in antiferromagnetic heavy-fermion metal YbRh₂Si₂</p> <p>11:20 AM - 11:40 AM Simon Bending: Magnetically-controlled Vortex Dynamics in a Ferromagnetic Superconductor</p> <p>11:40 AM - 12:00 PM Andreas Kreisel: Quasiparticle Interference of Spin-Triplet Superconductors: Application to UTe₂</p> <p>12:00 PM - 12:20 PM Joseph Carroll: Imaging Odd-Parity Quasiparticle Interference in the Superconductive Surface State of UTe₂</p> <p>12:20 PM - 12:50 PM Brian Møller Andersen (Invited Speaker): Theory of superconducting pairing and topological surface states in UTe₂</p>
	<p>Non-equilibrium Session Chair: Stephen Clark (Room: LT2)</p> <p>10:30 AM - 11:00 AM Katarzyna Macieszczak (Invited Speaker): Gauge freedoms in unravelled quantum dynamics: How do different continuous measurements yield identical quantum trajectories and what does it mean for their symmetries?</p> <p>11:00 AM - 11:20 AM David Strachan: Non-Markovian Quantum Mpemba Effect</p> <p>11:20 AM - 11:40 AM Enrico Da Como: Coherent phonon dynamics in two-dimensional charge density wave materials</p> <p>11:40 AM - 12:00 PM Alvaro Lanza: Estimating Entropy from Coarse-grained Single-molecule Statistics in Langevin Systems</p> <p>12:00 PM - 12:20 PM Alessandro Romito: Theory of free fermions dynamics under partial post-selected monitoring</p> <p>12:20 PM - 12:50 PM Halim Kusumaatmaja (Invited Speaker): Harnessing Complex Interfacial Flow Dynamics for Structuring Soft Materials</p>

	<p>Facilities for CMQM (10:30am to 12:30pm) Session Chair: Nigel Hussey (Room: G.H01)</p> <p>10:30 AM - 11:00 AM David LeBeouf (Invited Speaker): Advancements in magnet technologies for condensed matter physics at EMFL</p> <p>11:00 AM - 11:30 AM Matthew Watson (Invited Speaker): Excelling in Photoemission Spectroscopy at Diamond Light Source</p> <p>11:30 AM - 12:00 PM Sanghamitra Mukhopadhyay (Invited Speaker): Condensed Matter and Quantum Materials Research at ISIS Neutron and Muon Source</p> <p>12:00 PM - 12:30 PM Amalia Patane (Invited Speaker): Magnificent Magnetic Fields</p>
12:30 PM - 1:00 PM	Lunch Discussion: Future Directions of Facilities (Room: G.H04)
12:50 PM - 2:15 PM	Lunch
	<p>Strongly Correlated Electron Systems Session Chair: Chris Hooley (Room: B.H05. Sponsored by Kiutra)</p> <p>2:15 PM - 2:45 PM Zlatko Papic (Invited Speaker): Fingerprints of composite fermion Lambda levels in scanning tunneling microscopy</p> <p>2:45 PM - 3:05 PM Peter Wahl: Emergent exchange-driven giant magnetoelastic coupling in a correlated itinerant ferromagnet</p> <p>3:05 PM - 3:25 PM Jacopo Radaelli: Critical spin fluctuations and strange metal behaviour in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$</p> <p>3:25 PM - 3:45 PM Mengke Ha: Time-Reversal Symmetry Protected Transport at Correlated Oxide Interfaces</p>
2:15 PM - 4:05 PM	<p>Unconventional Superconductivity II Session Chair: Joseph Beturas (Room: LT2)</p> <p>2:15 PM - 2:45 PM Malte Grosche (Invited Speaker): Field-resilient superconductivity in CeSb_2 and UTe_2</p> <p>2:45 PM - 3:05 PM Roemer Hinlopen: Resolving the Fermi surface and detection of anisotropic vortex pinning in FeSe</p> <p>3:05 PM - 3:25 PM Amalia Coldea: Strain-tuning of electronic structure of a tetragonal iron-chalcogenide superconductor</p> <p>3:25 PM - 3:45 PM Greg Mazur: Achieving topological superconductivity with artificial Kitaev chains</p> <p>3:45 PM - 4:05 PM Kourosh Shirkoohi: ARPES-derived anomalous spectral weight across the Fermi surface of the strange metal phase</p>

	<p>2D and 1D Materials Session Chair: Graham Baker (Room: G.H01)</p> <p>2:15 PM - 2:45 PM Michele Pizzochero (Invited Speaker): Unconventional π-electron magnetism in graphene nanoribbons</p> <p>2:45 PM - 3:05 PM Lewis Burke: Momentum–dark excitons & trions in systems exhibiting a Mexican-hat energy dispersion: example of InSe</p> <p>3:05 PM - 3:25 PM Mugerabe Zerabza: The folded pseudochiral Fermi surface of charge density wave material 4Hb-TaSe₂</p> <p>3:25 PM - 3:45 PM Jeongmin Lee: Physical properties of layered metal-rich chalcogenides Ta₂Se and its application</p> <p>3:45 PM - 4:05 PM Jan Tomczak: Universal transport at Lifshitz metal-insulator transitions in two dimensions</p>
4:05 PM - 4:30 PM	<p>Afternoon Break Ice-cream provided and sponsored by M4QN</p>
4:30 PM - 5:30 PM	<p>Plenary Speaker: Chris Howard, University College London, UK Session Chair: Clifford Hicks (Room: B.H05. Sponsored by Kiutra) Studying low-dimensional materials, from fundamental research to real world impact</p>
7:00 PM - 10:30 PM	<p>Conference Dinner Sponsored by Oxford Instruments NanoScience Great Hall, Wills Memorial Building, Queens Road, Bristol, BS8 1RJ</p>