

## UK Neutron and Muon Science and User Meeting 2022 – Warwick

	Monday 25 April - Student Day (for UK PhD students using neutrons or muons in their research)	Neutron and Muon Science and User Meeting arrivals
<b>12:00</b>	Lunch – Radcliffe Restaurant Registration - reception area at Radcliffe	
<b>13:00</b>	Welcome and overview – <i>Dr Philip King</i> Meeting Space 2 – Radcliffe	
<b>13:10</b>	<u>Session 1: Group Talks</u> <i>Chair: Mingrui Liao</i> Crystallography – <i>Silvia Capelli</i> Spectroscopy – <i>Svemir Rudic</i> Excitations and polarisation – <i>Aleksandra Krajewska</i> Muon Spectroscopy – <i>Adam Berlie</i>	
<b>14:10</b>	<i>Short Break</i>	
<b>14:20</b>	<u>Session 2: Student Talks</u> <i>Chair: Sarah Dugmore</i> High Ammonia Adsorption in MFM-300 Materials – <i>Wanpeng Lu, University of Manchester</i> Negative muon spin rotation analysis techniques – <i>George Gill, University of Oxford</i> Inelastic neutron scattering study of endofullerenes: CH <sub>4</sub> @C <sub>60</sub> – <i>Mohamed Aouane, ILL</i> The Magnetic Structure of V <sub>1/3</sub> NbS <sub>2</sub> – <i>Amelia Hall, University of Warwick</i>	
<b>15:20</b>	<i>Group photograph</i>	
<b>15:30 – 16:00</b>	<i>Coffee – Coffee Lounge</i>	
<b>16:00</b>	<u>Session 3: Group Talks</u> <i>Chair: Zac Amato</i> Small angle neutron scattering – <i>Olga Matsarskaia</i> Disordered materials – <i>Esther Girón Lange</i> ISIS support laboratories – <i>Daniel Nye</i> How to write a successful proposal – <i>Adrian Hillier</i>	
<b>17:00</b>	<i>Short Break</i>	
<b>17:15</b>	<u>Session 4: Student Talks</u> <i>Chair: Samuel Sneddon</i> Adsorption at the Calcite-Oil Interface as seen with Neutron Reflection – <i>Lana Farren, University of Cambridge</i> Mimetic bacterial membranes challenged by multivalent cations and quadruply charged peptides – <i>Xuying Guo, Bristol</i> e-learning at ISIS – <i>Rhina Houinato and Madeleine McRoberts, ISIS</i> Synthesis of deuterated materials for neutron studies – <i>Rebecca Asquith and Shaun Olok-Jacobs, ISIS</i>	
<b>18:30</b>	<i>Free time</i>	<b>18:00</b> Registration open – reception area at Scarman House
<b>19:00 - 21:00</b>	Student Dinner - Lakeview Restaurant section 1	<b>19:30 – 21:00</b> Buffet Dinner - Lakeview Restaurant section 2

Tuesday 26 April – Science Day

08:30	<i>Registration and coffee – The Slate</i>				
<i>Plenary session – Slate 1</i> Chair: Donna Arnold (Kent)					
09:00	<b>Welcome</b>				
09:05	<b>Plenary: Tom Lancaster (Durham)</b> “Using muons to explore low-dimensional and topological magnetism”				
09:35	<b>Plenary: Abbie McLaughlin (Aberdeen)</b> “Ionic Conduction in Hexagonal Perovskite Derivatives”				
10:05	<b>Plenary: Peter Moody (Leicester)</b> “Neutrons to find deuterons in enzyme crystals > Heme Peroxidase mechanisms”				
10:35	<i>Coffee – Slate 2</i>				
<i>Parallel Sessions (individual breakout rooms)</i>					
11:00 – 13:00	<b>Energy &amp; Functional Materials</b> <b>Scarman Space 41</b>  Chair: Eddie Cussen, Emma McCabe  11.00 Jan-Willem Bos (Heriot-Watt) “In-situ neutron powder diffraction investigations of thermoelectric and electrode materials”  12.30 Nicolás Flores-González (Glasgow) “Understanding the effect of lattice polarisability on the electrochemical properties of lithium haloaluminates, LiAlX <sub>4</sub> (X = Cl, Br, I)”  11.30 Stephen Skinner (Imperial) “Using in-situ neutron scattering to develop electrode materials for solid oxide cell applications”  12.00 Silvia Ramos Perez (Kent) “X-ray spectroscopy techniques in the development of new materials for energy applications”	<b>Magnetism &amp; Superconductivity</b> <b>Scarman Space 42</b>  Chair: Lucy Clark, Sean Giblin  11.00 Thomas Hicken (Royal Holloway) “Muons, solitons, and skyrmions: muSR studies of Cr <sub>1/3</sub> MS <sub>2</sub> and GaV <sub>4</sub> S <sub>8</sub> ”  11.30 Otto Mustonen (Birmingham) “Tuning magnetism in oxides using diamagnetic d <sub>10</sub> and d <sub>0</sub> cations”  12.00 Viviane Pecanha-Antonio (Oxford) “f-d electron hybridisation in iron garnets”  12.30 Geetha Balakrishnan (Warwick) “Investigations of skyrmion materials”	<b>Biosciences &amp; Soft Matter</b> <b>Scarman Space 29</b>  Chair: Jian Lu  11.00 Delaram Ahmadi (Manchester) “At last, some hard truths about soft stuff”  11.30 Tom Arnold (ESS) “LOKI & FREIA: The UK Instruments at ESS”  12.00 Zongyi Li (Manchester) “SANS study of Lipid Nanoparticles (LNPs) for Plasmid-DNA Delivery”  12.30 Olga Matsarskaia (ILL) “Towards a microscopic picture of coacervation in elastin-like peptides”	<b>Molecular Systems and Catalysis</b> <b>Scarman Space 24</b>  Chair: Gosia Swadzba-Krasny  11.00 Alan Drew (Queen Mary) “Recent results on dynamics in small molecular semiconductors, probed by MuSR”  11.30 Camilla Di Mino (UCL) “Cooperative O-H...π and C-H...O Hydrogen Bonding in the Liquid State”  12.00 Zac Amato (Open University) “Exploiting Neutrons to Unveil Star-Formation: Exploring Dynamical Amorphous Ice Systems”  12.30 Terri-Louise Hughes (ISIS) “Combined Total Neutron Scattering and NMR Studies of Confined Hydrocarbons”	<b>Engineering</b> <b>Scarman Space 25</b>  Chair: Richard Moat  11.00 Catrin Davies (Imperial) “Residual stresses in Laser powder bed fusion components”  11.30 Alexander Korsunsky (Oxford) “Diffraction studies of deformation and transformation in shape memory nitinol samples”  12.00 Dong Liu (Bristol) “In situ high-temperature neutron diffraction on unirradiated and irradiated nuclear graphite materials”  12.30 Matthew Roy (Manchester) “EASI-STRESS benchmarks: preliminary results from neutron diffraction measurements”
13:00	<i>Lunch – The Slate</i>				

<b>14:15 – 15:45</b>	Chair: Eddie Cussen, Emma McCabe  14.15 Rob House (Oxford) “Detection of trapped molecular O2 in a charged Li-rich cathode by Neutron PDF”  14.45 Shriparna Mukherjee (Reading) “Effect of Copper diffusion in low thermal conductivity of thermoelectric Tetrahedrites”  15.15 Andy Sode Anker (Copenhagen) “Using Generative Adversarial Networks to match experimental and simulated inelastic neutron scattering data”	Chair: Lucy Clark, Sean Giblin  14.15 Nicola Kelly (Cambridge) “Magnetism on the stretched diamond lattice in lanthanide orthotantalates”  14.45 Sudeep Kumar Ghosh (Kent) “Spin-triplet superconductivity in Weyl nodal-line semimetals”  15.15 David Jonas (Warwick) “A muon-spin relaxation study of type-I rhenium investigating time-reversal symmetry breaking in the superconducting state”	Chair: Wuge Briscoe  14.15 Kirill Nemkovskiy (ISIS) “Dynamics in liquids and soft matter studied by polarized QENS on the LET spectrometer”  14.45 Naomi Elstone (York) “Determination of bulk and interfacial properties and structure of IL mixtures”  15.15 Alexander Armstrong (ISIS) “Probing the Adsorption of the Organic Friction Modifier glycerol monooleate (GMO) at the iron oxide-dodecane Interface with Neutron Reflectometry”	Chair: Sanghamitra Mukhopadhyay  14.15 Mi Tian (Exeter) “Dynamics of H2 in different pore geometries via QENS”  14.45 Adam Jackson (ISIS) “Simulation of inelastic neutron scattering with AbINS”  15.15 George Bacanu (Southampton) “Inelastic neutron scattering of noble gas endofullerenes”	Chair: Hongbiao Dong  14.15 Christopher Lawson (ISIS) “Neutron Imaging of an Operational Dilution Refrigerator”  14:45 Alan Williams (Wallace Collection) “Shah Jahan and Mughal steel”  15.15 Adrian Hillier (ISIS) “Elemental analysis using muons”
<b>15:45</b>	<i>Coffee – served outside each breakout room</i>				
<b>16:10 – 17:00</b>	Chair: Eddie Cussen, Emma McCabe  16.10 Dave Growney (Lubrizol) “Neutralising Acid in Engine Oil – How Stopped-Flow Neutron Scattering Transformed our Perspective”  16.40 <b>Discussion</b>	Chair: Lucy Clark, Sean Giblin  16:10 Deniza Chekrygina (STFC) “Parameter estimation for Inelastic Neutron Scattering using Machine Learning.”  16.40 <b>Discussion</b>	Chair: Jian Lu, Wuge Briscoe  16.10 Adam Squires (Bath) “From fibrils to membranes: new techniques to study self-organisation using deuterated biomolecules”  16.40 <b>Discussion</b>	Chair: Sanghamitra Mukhopadhyay, Gosia Swadzba-Krasny  16.10 Sihai Yang (Manchester) “Confined Catalysis of Small Molecules in Porous Materials”  16.40 <b>Discussion</b>	Chair: Richard Moat, Hongbiao Dong  16.10 None  16.40 <b>Discussion</b>
<b>14.00 – 17.00</b> LENS Council Meeting: (for those who are members of the LENS Council) <i>Scarman Space 23</i> <i>Tea and Coffee will be available at 15:00</i>					
<i>Plenary Session – The Slate</i>					
<b>17:15</b>	<b>Willis Prize for neutron scattering: award and talk</b> <b>2022 Willis Prize Winner</b>				
<b>18:00 - 19:00</b>	<i>Poster session with drinks - Lakeview Restaurant – Scarman House</i>				
<b>19:30</b>	<i>Conference dinner – The Slate</i>				

## Wednesday 27<sup>th</sup> April – User Meeting

**Chair: Donna Arnold (Kent)**

*The Slate*

<b>09:00</b>	<b>Welcome: Donna Arnold</b>
<b>09:10</b>	<b>Plenary: ISIS Impact awards</b>
<b>10:10</b>	<b>Update from STFC and UKRI – Alan Partridge (STFC Executive Director for Large Scale Facilities)</b>
<b>10:30</b>	<b>STFC Panels: Kathi Edkins (Manchester, member of STFC’s Life Sciences and Soft Matter Advisory Panel)</b>
<b>10:35</b>	<b>Update from facilities – ESS – Helmut Schober (ESS Director General)</b>
<b>10:55</b>	<i>Coffee - Slate 2</i>
<b>11:15</b>	<b>Update from facilities – ILL – Paul Langan (ILL Director)</b>
<b>11:35</b>	<b>Update from facilities – ISIS – Roger Eccleston (ISIS Director)</b>
<b>11:55</b>	<b>Update from facilities – Diamond – tbd</b>
<b>12:15</b>	<b>Table discussions</b>
<b>12:20</b>	<b>Panel Q&amp;A</b>
<b>12:40</b>	<b>Poster Prize award and talks</b>
<b>13:00</b>	<b>Closing remarks</b>
<b>13:15</b>	<i>Lunch – The Slate</i>