

India-RAL Neutron and Muon Science Meeting
June 12-16, 2023
Venue: Conference Hall, JNCASR, Bangalore 560064



Department of Science & Technology
Ministry of Science & Technology
Government of India



Tentative Programme

June 12, 2023

9:00 – 10:00	Welcome & Inauguration	
10:00 - 10:30	Tea/Coffee Break	
Session - I	Chair: Prof. A. Sundaresan	
10:30 - 12:00	Dr. Pascal Manuel	Time of flight neutron diffraction Refresher on space group
12.00 - 2:00	Lunch	
Session - II	Chair: Prof. Sean Langridge	
2:00 - 4:00	Dr. Fabio Orlandi – RAL	Magnetic space groups. Irreducible representation
4:00 - 4:30	Tea/Coffee Break	
Session - III		
4:00 - 5:00	Dr. Pascal Manuel – RAL Dr. Fabio Orlandi – RAL	Tutorial Isodistort

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Session - IV		
9:00 -10:30	Dr. Pascal Manuel Dr Fabio Orlandi	Tutorial Set up a TOF nuclear refinement (Fp/Jana) Finding the propagation vector (by try and error/k-search)
10:30 - 11: 00	<i>Tea/Coffee Break</i>	
Session - V		
11:00 -12:00	Dr. Pascal Manuel Dr Fabio Orlandi	Tutorial Using Isodistort/Basirep to find subgroup
12.00 - 2:00	<i>Lunch</i>	
Session - VI		
2:00 - 4:00	Dr Fabio Orlandi Dr. Pascal Manuel	Refinement of the distorted structure.
4:00 - 4:30	<i>Tea/Coffee Break</i>	
Session - VII		
4:30 – 5:30	Dr Fabio Orlandi Dr. Pascal Manuel	Q&A/bring your own structure
5:30 - 6:00	Dr. Sean Langridge	How to write beam time proposals

June 15, 2023

Session - VIII	Chair: Dr D. T. Adroja	
9:00 - 10:30	Dr Duc Le	Introduction to inelastic neutron scattering (INS) with examples from powder measurements.
10:30 - 11: 00	<i>Tea/Coffee Break</i>	
11:00 - 12:00	Dr Duc Le	Demonstration of modelling lattice dynamics with Euphonic and CASTEP.
12.00 - 2:00	<i>Lunch</i>	
2:00 - 4:00	Dr Duc Le	Demonstration of spin wave modelling with SpinW.
4:00 - 4:30	Tea/Coffee Break	
4:30 – 6:00	Dr Duc Le	Introduction to CEF fitting using Mantid.

June 16, 2023

Session - XI	Chair:	Prof. Zakir Hossain
9:00 - 9:30	Prof. Deepshika Jaiswal-Nagar (IISER, TVM)	Experimental realization of multipartite entanglement in a uniform antiferromagnetic quantum spin chain
9:30 - 10:00	Dr. S. M. Yusuf (BARC)	Quantum Spin Properties of spin-1/2 trimer chain compound $\text{Na}_2\text{Cu}_3\text{Ge}_4\text{O}_{12}$ and quasi-2D honeycomb compound $\text{Na}_2\text{Co}_2\text{TeO}_6$
10:00 - 10:30	Prof. R. Nirmala (IIT Madras)	Magnetism of spinel oxide CuAl_2O_4 : Probing by bulk magnetization, neutron diffraction and μSR measurements
10:30 - 11:00	<i>Tea/Coffee Break</i>	
Session - XII	Chair: Dr. S. M. Yusuf	
11:00 - 11:30	Prof. A. V. Mahajan (IIT Bombay)	μSR studies in candidate spin liquid materials
11.30 - 12:00	Dr. V. Siruguri (UGC-DAE Mumbai)	Spin dynamics in the neighbourhood of a quantum critical point in Co-doped CeRu_2Ge_2
12.00 - 12.30	Prof. R. P. Singh (IISER, Bhopal)	Probing Broken Time-Reversal Symmetry in Unconventional Superconductors
12:30- 2:00	<i>Lunch</i>	
Session - XIII	Chair: Prof. Deepshika Jaiswal - Nagar	
2:00 - 2:30	Prof. A. Bhattacharya (Ramakrishna Mission)	Frustrated magnetism in low dimensional layered oxide materials: platform for Kitaev quantum spin liquid
2:30 - 3:00	Prof. J.K. Basu (IISc Bangalore)	Structure and dynamics at soft matter interfaces induced by nanoparticles and probed by neutron scattering
3:00 - 3.30	Prof. Zakir Hossain (IIT Kanpur)	Probing Magnetic ground state of $\text{Pr}_2\text{Pd}_3\text{Ge}_5$ and Co-doped CeCu_2Ge_2
3:30 - 4:00	<i>Tea/Coffee Break</i>	
4:00 - 4:30	Prof. A. Sundaresan (JNCASR)	Role of Spin Frustration and Non-Collinear Magnetic structure in the Magnetoelectric Properties of LuMWO_6 ($M=\text{Fe,Cr}$)
4:30 - 5:30	Discussion and closing	