S N BOSE NATIONAL CENTRE
FOR BASIC SCIENCES
Block JD, Sector III, Salt Lake, Kolkata 700 106

DEPARTMENTAL SEMINAR

Condensed Matter and Materials Physics

03rd February,2023 **11.30 AM** **ONLINE/ FERMION**

SPEAKER

Dr. Rajib Sarkar,
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TITLE OF THE TALK

COMPETING ORDERS AND SPIN DYNAMICS: NUCLEAR PROBES

ABSTRACT

Local probes, such as μSR and NMR, spectroscopy are sensitive microscopic probes to identify spin-liquid phases via the absence or presence of static magnetic moments and the presence of enhanced low energy spin dynamics. These probes allow us to detect competing magnetic ordered phases even in the absence of long-range coherence of the magnetic order. They are sensitive to determine the low energy-density of states of magnetic excitations. In recent years we have used these probes to understand correlated magnetism: from frustration to topology in different kinds materials which has different lattice geometry, such as the ideal triangular lattice, the kagome lattice etc. In this presentation, I will discuss our recent progress in this field by means of local probe studies by selectively identifying a few representative compounds namely Fe-Kagome, NaYbS2, Na2IrO3 and RuBr3. I will discuss the importance of these compounds and its relevance to frustration and topology.

HOST FACULTY

Dr. Thirupathaiah Setti , Associate Professor

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