

## **Internal Seminar**

### **Exploring Anomalous Hall Effect in Few-layer Kagome Metal**

**Malavika Chandrasekhar**

**TIFR, Hyderabad**

The recently discovered family of superconductors, which are layered kagome metals with the chemical formula  $AV_3Sb_5$  (where  $A = K, Rb, \text{ and } Cs$ ) have fascinated researchers due to their exotic properties with implications for future applications in quantum computing. Kagome lattices, with an unusual atomic arrangement that resembles and takes its name from a Japanese basket weave pattern of interlaced, corner-sharing triangles, provide a platform for exploring quantum phenomena including frustrated geometry quantum magnetism, topology, strong electron correlations, symmetry breaking charge density waves and so on. Here we study Kagome metal,  $KV_3Sb_5$ , where devices are fabricated using dry transfer technique and the electrical contacts [Ti/Au (10 nm/ 100 nm) electrodes] were patterned and studied in two different ways, one with bottom contact and the other with top contact. A CDW temperature of 60-75 K is identified using transport and magnetometry studies. The device made using bottom contact shows better performance which has been supported by the published works on the same. In my talk, I will be focusing on how we fabricated the device, followed by basic transport measurements done to check the quality of the device.

***Monday, Feb 10<sup>th</sup> 2025***

***16:00 Hrs***

***CR-4, TIFRH***