

June 20 (Fri.) 13:30 – 14:30

## **Exotic Freezing Phenomena in Metallic and Insulating Frustrated Magnets**

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I will introduce several unusual freezing phenomena found in our recent experiments on two types of a frustrated magnet. First topic is on  $\text{NiGa}_2\text{S}_4$ , a rare example of 2D triangular Heisenberg magnets. On cooling, this system goes through a transition like freezing phenomena at  $\sim 10$  K and forms an unusual low temperature “phase” with critical spin dynamics. This transition might be related to a vortex binding transition. The other is the metallic pyrochlore system with a metallic spin ice like configuration at low temperatures. It exhibits “irreversibility” in the anomalous Hall effect in a “paramagnetic” state. This suggests a freezing or a phase transition of a higher order object than spin itself, for example, spin chirality.