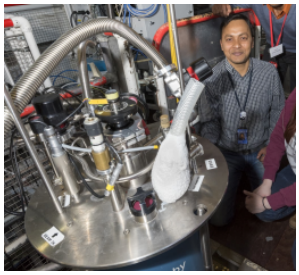

Contribution ID: **8** Type: **not specified**

Quantum disorder in low-dimensional molecule-based magnets

Tuesday, 12 September 2023 11:40 (20 minutes)

The search for new states of matter such as quantum spin-liquids involves the characterization of disordered magnetic ground states, and spinons or topological excitations, along with signatures of entanglement. Model examples of these features are found in systems with reduced dimensionality, especially one-dimensional spin chains. I will describe our recent investigations of low-dimensional systems built from metal centres linked by molecules. These include muon measurements on staggered and chiral spin-chain materials and also on materials that host spin dimers. Each of these is supported by electronic structure calculations that reveal not only muon sites, but also the underlying interactions at play in the materials.

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Session Classification: Quantum Magnetism

Track Classification: Quantum magnetism