

- Date & Time : **Friday 30th May 2025 13:00-14:30**
- Venue : #154 156, Main Research building



Prof. Chunli Huang

**Assistant Professor,
University of Kentucky**

" Novel Magnetic Phenomena in Rhombohedral Multilayer Graphene "

Rhombohedral multilayer graphene has become a seminal material for studying the rich variety of phases that emerge from strong-correlation effects and non-trivial band topologies. This versatile platform has enabled the realization of nearly all prototypical textbook many-body phases, including spin and orbital magnetism, multiferroic metals, spin-singlet and spin-triplet superconductivity, as well as groundbreaking phases such as integer and fractional quantum anomalous Hall states and chiral superconductors, through the simple manipulation of electric displacement fields and electron density. In this talk, I will provide a concise overview of the rapid experimental advancements that have shaped our current understanding of this material. I will then highlight three extraordinary magnetic properties unique to rhombohedral multilayer graphene: (1) sign reversal of magnetic moments with electron density, (2) an anomalous Hall effect generated by (time reversal even) electric displacement field, and (3) a momentum-space AC Josephson effect within the intervalley-coherent phase.