

## Seminaria

## **Detecting hidden orders in frustrated magnets**

## Gang Chen

Fudan University

Time: 2:00Pm, Oct. 22, 2018 (Monday)

2018 10 22 2:00

Venue: Room W563, Physics building, Peking University

563

Hidden order is an unresolved issue in modern condensed matter physics and has puzzled us for more than three decades. Motivated by the rapid experimental progress on the spin-orbit-coupled Mott insulators, we propose and study a generic spin model that describes the interaction between the non-Kramers doublets on a triangular lattice and is relevant for triangular lattice rare-earth magnets. We predict that the system supports both pure quadrupolar orders and intertwined multipolar orders in the phase diagram. Besides the multipolar orders, we explore the magnetic excitations to reveal the dynamic properties of the systems. Due to the peculiar properties of the non-Kramers doublets and the selective