



## Weekly Seminar

In-plane magnetization-induced quantum anomalous Hall effect  
in honeycomb lattice systems

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**Time: 4:00pm, Nov. 4, 2015 (Wednesday)**

**时间: 2015年11月4日 (周三) 下午4:00**

**Venue: Room W563, Physics Building, Peking University**

**地点: 北京大学物理学院, 西楼563会议室**

### Abstract

In this talk, we will first briefly summarize the progress of exploring quantum anomalous Hall effect in graphene and related systems. In previous studies of various topological states in honeycomb lattices, the fundamental physics is mainly related to the band gap opening near valleys  $K$  and  $K'$ . We will then introduce a new mechanism of realizing quantum anomalous Hall effect by considering the in-plane magnetization, where the topologically nontrivial band gap opens at the  $M$  point but not valleys  $K$  and  $K'$ .

### About the Speaker

Prof. Zhenhua Qiao got his bachelor degree from Shanxi University in 2005, and Ph. D. in condensed matter theory and computational physics from the University of Hong Kong in 2009. After working as a postdoctoral researcher in the University of Texas in US for four years, he joined the University of Science and Technology of China as a professor in 2013. His research focuses on mesoscopic electronic transport in low-dimensional systems; topological properties of Dirac materials, e.g., graphene systems, topological insulators and first-principles calculations(VASP+NADCAL).