



## Special Seminar

# Topology and Geometry of Bloch Electrons

## 牛谦 教授

德克萨斯大学奥斯汀分校  
北京大学量子材料科学中心



**Time: 2:00pm, July. 9, 2018 (Monday)**

**时间: 2018年7月9日 (周一) 下午 2:00**

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

**地点: 北京大学物理楼 西563**

### Abstract

The 2016 Nobel Prize for physics was a grand celebration of our understanding of topological phases and transition, part of which dates back to pioneering work of David Thouless and his collaborators when I became a graduate student of him 36 years ago. I was fortunate to be able to witness and even participate in the development of this topological theory of Chern insulators at the beginning of my career. In this talk, I will give an “inside look” of the topological Chern numbers, not only from my personal perspective, but also concentrating on its physical content, the Berry curvatures, to see how such topological and geometrical concepts have transformed our view of solid state physics.

### About the Speaker

牛谦，德克萨斯大学奥斯汀分校Trull教授，美国物理学会会员，曾就主任于中科院国际量子结构中心和北京大学国际量子材料科学中心。主要研究方向为量子输运、Berry相、自旋霍尔效应、光晶格中的超冷原子、半导体的自旋电子学等。他在量子论、凝聚态物理等方面具有很深的造诣，在相关的研究领域引领世界科学研究的潮流，是为数不多的、活跃在前沿物理研究中的杰出华人科学家代表。