



# 清华大学高等研究院

Institute for Advanced Study, Tsinghua University

## 物理学学术报告 Physics Seminars (special talk)

- Title:** Search for effective low energy theories for spin liquid states
- Speaker:** Prof. NG Tai Kai  
*The Hong Kong University of Science and Technology*
- Time:** 3:15pm, Tuesday, April 2, 2013  
(2:45~3:15pm, Tea, Coffee, and Cookie)
- Venue:** Conference Hall 322, Science Building, Tsinghua University

### Abstract

I shall describe in this talk the difficulties we face in constructing low energy theories for spin liquid states and shall explain our recent work on a Landau Fermi-type effective low energy theory for  $S=1/2$  systems.

Some experimental predictions of our theory and its relation to slave-rotor type theories will be discussed. The limitation of the theory and some plausible directions of extensions of the theory will be discussed, especially in relation to  $S=1$  systems.