**ICQM Weekly Seminar Series**

“Probing Dirac Fermions in Graphene”

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**Time:** 4:00pm, Apr. 27, 2011 (Wednesday)

**Venue:** Room 607, Conference Room A, Science Building 5

**Abstract**

Graphene, a single atomic layer of carbon, is a unique two-dimensional quantum material where electrons behave as massless particles (Dirac fermions) with an effective speed of light equal to c/300. This provides an interesting analogy to the high energy relativistic quantum mechanics in a condensed matter system. In this talk I will discuss our experiments probing the novel quantum phenomena arising from the “relativistic” nature of the quasiparticles in graphene. I will also show that, with one more layer added, the graphene bilayer is another intriguing system whose electronic structure can be controlled by electrical gating.

**About the Speaker**

Zhang Yuanbo graduated in technical physics from Peking University (2000) and obtained his PhD from Columbia University (2006). He received Miller Fellowship from University of California at Berkeley from 2006 to 2010. Now, he works as Professor in Fudan University. His research interests mainly focus on graphene and related field. Professor Zhang was granted the IUPAP Young Scientist Award in 2010.