



### 中心系列讲座 ICQM Weekly Seminar Series

# Quantum simulation of many-body physics with cold atoms, ions, and classical computers



**Prof. Luming Duan(段路明)**

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**Time: 4:00pm, Aug. 24<sup>th</sup>, 2011 (Wednesday)**

**时间: 2011年8月24日 (周三) 下午4:00**

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

**地点: 理科五号楼607会议室**

#### Abstract

In the talk, I will review recent progress on quantum simulation of Hubbard-type of physics with strongly interacting ultracold fermions in an optical lattice, of frustrated quantum magnetic models with trapped ions, and of frustrated many-body Hamiltonians through quantum information motivated numerical algorithms.

#### About the Speaker

Prof. Luming Duan received both his bachelor (in 1994) and Ph.D degree (in 1998) in physics from the University of Science and Technology of China (USTC). He joined the faculty of physics department at the University of Michigan (Ann Arbor) in 2003, tenured in 2007, and promoted to full professor in 2010. Since 2011, he also holds Andrew CC Yao Professorship at Tsinghua University. He has published over 100 papers in prestigious physics journals, including 6 in Nature, 2 in Science, 30 in PRL, with a total citation over 6000 times. He has received a number of recognitions, including the A. P. Sloan fellowship, the outstanding young researcher award from the Oversea Chinese Physics Association, and the Henry Russel Award from the University of Michigan. He was elected to fellow of the American Physical Society in 2009.