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ARNOLD SOMMERFELD  
CENTER FOR THEORETICAL PHYSICS



# Arnold Sommerfeld Lecture Series

**Professor Subir Sachdev**

**Harvard University, USA**

**Sommerfeld Theory Colloquium:**

**What can string theory teach us about  
condensed matter physics?**

String theory was originally constructed as a unification of the quantum field theory of elementary particles with Einstein's theory of gravitation. Unexpectedly, it has led to the discovery of new "dualities" which have given us a new perspective on quantum field theories not coupled to gravity. Some of the latter theories are relevant to the strongly-interacting quantum many body problems of condensed matter physics. I will survey some of the challenging open problems associated with condensed matter experiments, and discuss the insights gained from string theory.

**Wednesday, February 1, 2012, 16:15 h, Room A 348/349, Theresienstr. 37, LMU**