

**Condensed Matter Theory Center Seminar**  
**Tuesday, December 9 at 11:00 AM**  
**2205 Physics Building**

**Speaker: Subir Sachdev (Harvard)**

**Title: Order and criticality in the cuprate superconductors**

Abstract: A central mystery posed by the Cu-based high temperature superconductors has been the nature of their electronic state at low hole density. I will survey the remarkable progress made by recent experiments towards solving this mystery, with the first discovery of a density wave with a  $d$ -form factor. Aspects of this discovery were anticipated by theory. I will also discuss implications of these advances for the higher temperature “pseudogap” state, and for a quantum-critical point at optimal doping.

**Host: Sankar Das Sarma**

<http://www.physics.umd.edu/cmtc/seminars.html>

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