

# SFB 608

## Einladung zum Kolloquium

**Ort:** Universität zu Köln  
II. Physikalisches Institut, Seminarraum 201

**Zeit:** Mittwoch, den 07. Januar 2004, 15 Uhr c.t.

**Sprecher:** Prof. M. Vojta.  
Institut für Theorie der Kondensierten Materie  
Universität Karlsruhe

**Thema:** Competing orders and quantum phase transitions in the cuprates

The unusual properties of the high-temperature superconductors and their possible connection to quantum phase transitions have been subject to an intense debate in recent years. In the talk we discuss the competition between different ordered states which is generic to doped Mott insulators. Based on recent STM and neutron scattering experiments, we argue that the main competitors to superconductivity are collinear spin and associated bond charge order. In addition, we discuss the possibility of a secondary pairing transition near optimal doping, and speculate about the influence of disorder.

Gez. Priv. Doz. St. Scheidl