



### Seminar

#### New insights into the phase diagram of the cuprates from transport and X-ray scattering studies of $\text{HgBa}_2\text{CuO}_{4+\delta}$



Martin Greven

University of Minnesota, USA

Time: 4:00pm, Oct. 24, 2013(Thursday)

时间: 2013年10月24日 (周四) 下午4:00

Venue: Conference Room 607, Science Building 5

地点: 理科五号楼607会议室

#### Abstract

I will review of our efforts to understand the properties of the simple tetragonal cuprate superconductor  $\text{HgBa}_2\text{CuO}_{4+\delta}$  (Hg1201). In particular, I will discuss our recent charge transport [1,2] and synchrotron X-ray experiments [3] that reveal Fermi-liquid behavior and charge-density wave correlations in the underdoped regime. These observations for Hg1201 have important implications for the phase diagram of the cuprates.

[1] N. Barišić *et al.*, Proc. Natl. Acad. Sci. USA **110**, 12235 (2013)

[2] N. Barišić *et al.*, arXiv:1310.1414

[3] W. Tabis *et al.*, unpublished

#### About the Speaker

**Martin Greven**, Professor of Physics, University of Minnesota, USA

##### *Professional Preparation*

Universität Heidelberg, Germany – Vordiplom, 1986-1988

Massachusetts Institute of Technology – Ph.D., 1995

Massachusetts Institute of Technology – Postdoc, 1995-1997

##### *Appointments*

Professor of Physics, University of Minnesota, 2011-present

Associate Professor of Physics, University of Minnesota, 2009-2011

Assistant Professor of Applied Physics/Photon Science, Stanford University, 1998-2009

##### *Selected Honors and Awards*

Fellow, American Physical Society, 2007 • Hellman Family Faculty Fund Award, 2003 •

NSF CAREER Award, 2000-2004 • Alfred P. Sloan Fellowship, 1999-2001