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## Weekly Calendar

November 17 -21, 2014

### SPECIAL SEMINAR

**Louisiana Consortium for Neutron Scattering**

**“Investigations of the Conformation and Dynamics of Soft Colloids using Neutron Scattering”**

Monday, November 17, 2014, 3:00-4:00pm  
1008B Digital Media Center, LSU

*Xin Li*

Oak Ridge National Laboratory

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Louisiana Alliance for Simulation-Guided Materials Applications

### Fall Seminar

**“Superconducting Transition in a Flat Band”**

**3:30pm – 4:30pm, Wednesday, November 19, 2014**

**1008B, Digital Media Center, Louisiana State University**

*Richard Scalettar*

University of California, Davis

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### PUBLICATIONS:

1. "A new non-destructive readout by using photo-recovered surface potential contrast", Le Wang, Kui-juan Jin, Jun-xing Gu, Chao Ma, Xu He, **Jindi Zhang**, Can Wang, Yu Feng, Qian Wan, Jin-an Shi, Lin Gu, Meng He, Hui-bin Lu & Guo-zhen Yang, Scientific Reports 4, Article number: 6980.

Louisiana Consortium for Neutron Scattering

# Seminar Series

## Investigations of the Conformation and Dynamics of Soft Colloids using Neutron Scattering

Mon, Nov 17

3:00-4:00pm

1008B Digital Media Center

Louisiana State University

ABSTRACT: Soft colloids, such as dendrimers and star polymers, are hybrids between linear polymers and hard colloids. Their solutions exhibit rich phase phenomenon due to their unique microstructure. In scaling theories a geometrically-defined overlap concentration  $c^*$  is used to identify the dilute concentration regime, and it has been well accepted that the conformation of soft colloids remains invariant below  $c^*$ . However, in the regime below  $c^*$ , our study discovered the crossover point between the intramolecular relaxation and the intermolecular collision, and the competition between these two dynamical processes leads to a steady conformational evolution. Furthermore, we investigated the correlation between the molecular solvation and the conformation of star polymers above  $c^*$ . To understand the relationship between the microstructure and the global conformation of a star polymer, we proposed the scattering function of a star polymer with the excluded volume effect incorporated, and the model demonstrated a good agreement with the experiment data.



*Guest Speaker*

# XIN LI

Postdoctoral  
Research Associate

Oak Ridge National  
Laboratory

*Free and open to the public*

