



PHYSICS & ASTRONOMY WEEKLY CALENDAR

TEL: 225-578-2261
FAX: 225-578-5855
<http://www.phys.lsu.edu>

202 NICHOLSON HALL
Louisiana State University
Baton Rouge, Louisiana 70803-4001

December 3, 2007

Departmental Colloquium

"Origin of Cosmic Rays

3:40 PM - Thursday, December 6, 2007
109 Nicholson Hall

James Matthews
LSU - Physics and Astronomy

Host - Juhan Frank

• Refreshments served at 3:15 PM in 229 Nicholson Hall •

Material Science and Engineering

"Recent Trends in Strongly correlated Electronic Systems: the Bulk, the Multilayer, and the Nano"

12:45 PM - Wednesday, December 5, 2007
435 Nicholson Hall

Elbio Dagotto
University of Tennessee and Oak Ridge National Laboratory

Host - John DiTusa

The area of research called "strongly correlated electrons" (SCE) continues attracting the attention of the condensed matter community. Besides its well-known relevance for the description of some bulk materials, such as transition metal oxides, strong correlation is important to address issues of charge transport related with Kondo effects in quantum dots and small molecules, and it is also important to study properties of oxide superlattices. In this presentation, recent theoretical results in the SCE context will be summarized [1]. The seminar will address (a) Monte Carlo simulations of models for the Mn oxides that have the so-called colossal magnetoresistance effect, (b) recent studies of high temperature superconductors in the underdoped regime, (c) investigations of oxides multilayers, and, if time permits, (d) an analysis of quantum transport in quasi one-dimensional systems. Future work will also be discussed.

Research supported by NSF and DOE.

1. C. Sen et al., Phys. Rev. Lett. 98, 127202 (2007); E. Dagotto, Science 309, 257 (2005); S. Yunoki et al., Phys. Rev. B 76, 064532 (2007); K. A. Al-Hassanich et al., Phys. Rev. B 73, 195304 (2006).

Saturday Science

"Clean Energy: We all need it"

10:00 - 11:30 - SATURDAY, DECEMBER 8, 2007

ROOM 130 NICHOLSON HALL

James Spivey - Chemical Engineering - LSU
Host - Ravi Rau

Congratulations To:

Edward Seidel who was elected fellow of the American Physical Society by the Division of Computational Physics (DCOM).

Announcement:

Cosmologist, author and blogger ***Sean Carroll***, California Institute of Technology will present a lecture, "**From reality to metaphor, by way of imagination**" on Wednesday December 5, 2007 at the art gallery in the Shaw Center downtown at 6pm.