

This Week in Physics

SYRACUSE UNIVERSITY
College of Arts & Sciences

Week of

February 9, 2009

[http://www.phy.syr.edu/
SeminarsEvents.htm](http://www.phy.syr.edu/SeminarsEvents.htm)

DEPARTMENT OF PHYSICS

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MONDAY, FEBRUARY 9

Condensed Matter/Biological Physics Seminar

11:00 AM, Rm 202

Dr. Jared Hertzberg (Cornell University)

Back-action Cooling and Back-action Evading Measurements of Nanomechanical Motion Approaching Quantum Limits

Joint Relativity/Cosmology/High Energy Physics Seminar

1:30 PM, Rm 202

Dr. Sarah Shandera (Columbia University)

Fundamental Interactions and Inflation

TUESDAY, FEBRUARY 10

Colloquium

4:00 PM, Rm 202 (refreshments 3:30 PM, Rm 204)

Dr. Sarah Shandera (Columbia University)

Cosmology and String Theory: a Symbiotic Tale

Theory and observation of the high energy early universe are both advancing at a rapid pace, each building on successes of the other. In this talk I will describe recent progress connecting fundamental ideas for high energy physics to current and upcoming observations. I will describe in particular how observations of primordial gravitational waves (sensitive to the scale of inflation) and non-Gaussianity (measuring early interactions) will allow us to distinguish between qualitatively different physics at the earliest times and highest energies.

THURSDAY, FEBRUARY 12

Joint Relativity/Cosmology/High Energy Physics Seminar
2:15 PM, Rm 202

Prof. Francesco Sannino (U of S. Denmark)

Novel Models of Dynamical Electroweak Symmetry Breaking and their impact on LHC phenomenology and Cosmology

Colloquium

4:00 PM, Rm 202 (refreshments 3:30 PM, Rm 204)

Dr. Vernita Gordon (University of IL, Urbana-Champaign)

Patterning lipid biomembranes using physics

FRIDAY, FEBRUARY 13

Condensed Matter/Biological Physics Seminar

11:00 AM, Rm 202

Dr. Vernita Gordon (University of IL, Urbana-Champaign)

Functional peptides in biomembranes: the roles of curvature and specific lipid interactions

