

This Week in Physics

SYRACUSE UNIVERSITY
College of Arts & Sciences

Week of

January 19, 2009

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

DEPARTMENT OF PHYSICS

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THURSDAY, JANUARY 22

Colloquium

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

Dr. Eugene Lim (Columbia University)

Non-linear probes of the Inflationary Universe

The Inflationary Paradigm has become our de facto standard picture of the Early Universe. In recent years, it has passed a series of observational tests with flying colors. More remarkably, it generically predicts the spectrum of perturbations that we see in the Cosmic Microwave Background. Despite its success however, we do not possess a fundamental theory of Inflation, say one that can be derived from String Theory. In fact, as I will argue in this talk, the simplest models that have been used as phenomenological placeholders are under threat from being ruled out from the latest Cosmic Microwave Background results -- leading us to begin exploration of a much wider landscape of models. This will require additional probes of Inflation. I will talk about an exciting new probe of Inflation that will allow us to distinguish between the myriad models of Inflation -- namely primordial non-Gaussianities.

FRIDAY, JANUARY 23

Condensed Matter/Biological Physics Seminar

11:00 AM, Rm 202

Prof. Helmut G. Katzgraber (Texas A & M University)

Do spin glasses order in a field?

Joint Relativity/Cosmology/High Energy Physics Seminar

3:00 PM, Rm 202

Dr. Eugene Lim (Columbia University)

Field Theory in Cosmology : observational and theoretical applications