



# INSTITUTE SEMINAR

Friday, 14 August 2015

4:00 p.m.

Fermion

**Speaker:**

**Ujjaini Alam**

*Cosmology Group, DST Young Scientist,  
Indian Statistical Institute, Kolkata*

**Title:**

**Constraining the Nature of Dark Energy  
from Cosmological Observations**

**Abstract:**

Dark energy is one of the most tantalizing mysteries in current cosmological research. A host of observations confirm that about two-thirds of the energy content of the universe comprises of this negative-pressure "dark energy" component that causes the expansion of the universe to accelerate. In my talk, I will explore two distinct facets of dark energy research. Many different theoretical models have been suggested for dark energy. One aspect of my research is to study these theoretical models, such as early dark energy and modified gravity models, and constrain them in light of current observations. A second approach to the dark energy problem is to study the various observations available to us with different statistical tools, and optimize these methods for obtaining maximum information on the dark energy parameters. Using these two complementary approaches in conjunction, we expect to shed light on the nature of dark energy.

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