

This Week in Physics

SYRACUSE UNIVERSITY
College of Arts & Sciences

Week of
March 30, 2009

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

DEPARTMENT OF PHYSICS

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TUESDAY, MARCH 31

Tuesday Night Lecture Series:
7PM, Stolkin Auditorium

Prof. Robert Pompei (Binghamton University)
The Joy of Sax

WEDNESDAY, APRIL 1

Cafe Scientifique:
7pm - 8pm , Ohm Lounge, 314 S. Franklin St. Syracuse

Prof. Jen Schwarz (SU)
Should Physicists be Getting their Heads Wet with Biology?

THURSDAY, APRIL 2

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

Prof. Priya Natarajan (Yale University)
Cosmology with gravitational lensing by clusters of galaxies

Gravitational lensing by clusters has emerged as a powerful cosmological probe, enabling mapping of dark matter and constraining dark energy. I will present lensing tests of some the key aspects of the cold dark matter paradigm ranging from abundance of substructure, properties of density profiles - inner and outer slopes and central concentration, tidal stripping and constraints on the nature of dark matter. Cluster strong lensing can also be used to constrain dark energy models. I will present new results using simulated clusters that demonstrate that this technique could be competitive with others to probe the geometry of the Universe. The feasibility of this technique as well as its limitations and its power to discriminate between evolving and non-evolving dark energy equations of state will be presented. I will conclude with the future prospects for cluster lensing in the JWST/JDEM era.

FRIDAY, APRIL 3

Condensed Matter/Biological Physics Seminar

11:00 AM, Rm 202

Prof. Patrick Underhill (Rensselaer Polytechnic Institute)

TBA

Joint Relativity/Cosmology/High Energy Physics Seminar

2:30 PM, Rm 202

Prof. Priya Natarajan (Yale University)

Upper Bound on Black Hole's Mass

