

This Week in Physics

SYRACUSE UNIVERSITY
College of Arts & Sciences

Week of

October 19, 2009

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

DEPARTMENT OF PHYSICS

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THURSDAY, OCTOBER 22

Colloquium

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

Prof. Dennis Discher (University of Pennsylvania)

Soft Matter Physics approaches to Cell & Membrane Biology

Over the last few decades, a deeper understanding of how to make and measure synthetic soft materials has developed and now provides both 'material tools' and concepts that can be applied to biological systems. This will be illustrated with two systems. Self assembled block copolymer membranes will be shown to mimic cell membranes, but we exploit the robustness of the polymer systems in studies of electrostatics-based phase separation. We also mimic the compliance of soft tissue with controllably crosslinked gels and show that cells can physically 'feel' the differences -- with results extending to stem cell differentiation

FRIDAY, OCTOBER 23

Joint Condensed Matter/Biological Physics/ BMCE Seminar

1:00 PM 369 Link

Prof. Dennis Discher (University of Pennsylvania)

Evading Clearance to enhance Nano-Delivery: Surprises in Shape and Exploitation of a 'Marker of Self' ligand

Joint Relativity/Cosmology/High Energy Physics Seminar

2:30 PM, Rm 202

Dr. Darren Grant (Penn State)

TBA (about Ice Cube)

