

# CU Physics Department Colloquium

Monday, March 23, 2009 4:10 PM 428 Pupin Hall



**DAVID WEITZ, HARVARD UNIVERSITY**

## "Elasticity of Active Biopolymer Networks"

This talk will describe the mechanical properties of networks of biomolecules formed from proteins reconstituted from cells. Addition of active biomolecular motors to these networks can dramatically modify their properties, increasing their stiffness by several orders of magnitude. These networks represent a different class of materials, which are 'active,' having internal motors that convert chemical energy into mechanical energy. These networks can provide a route to synthesis of materials whose mechanics are controlled by enzymatic activity. They also offer insight into the mechanics of the cell, and suggest that motor activity may play an essential role in determining the stiffness of a cell.

Hosted by Boris Altshuler - Meet the Speaker will be held at 3:30 pm in 705 Pupin