

PHYSICS DEPARTMENT COLLOQUIUM

“Intellectual Challenges in Physics
Posed by Bionanotechnology”

BY

Deborah Kuchnir Fygenon

University of California,
Santa Barbara

Nanotechnology is a natural phenomenon in biology. After reviewing common characteristics of biomolecular machinery, I will introduce DNA tiling as a model system for exploring the physics that underlies biomolecular machinations. Two limiting features of DNA tilings currently challenge the best rational designs: structural defects and thermal/mechanical fragility. I will discuss some ongoing work using microscopy and bulk measurements to understand the self-assembly of DNA tilings, its implications for rational quality control and the insight it provides into both natural and rational biomolecular design.

THURSDAY, NOVEMBER 30, 2006
4:00 PM IN 102 JFB
REFRESHMENTS AT 3:30 PM IN 219 JFB