

PHYSICAL MATHEMATICS SEMINAR

TOPIC: MECHANICS OF DNA PACKING IN VIRUSES

SPEAKER: JANÉ KONDEV  
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ABSTRACT:

Viruses self-assemble inside the host cell which they have infected. For bacterial viruses, an important part of the self-assembly process is the packaging of the viral DNA, which is tens of microns long, into the viral capsid, a protein shell only thirty or so nanometers in diameter. This amazing feat is accomplished with the assistance of a protein machine, which, recent experiments have shown, can exert large forces in excess of 50pN on the DNA being packaged.

In this talk I will review the physics of DNA packaging in viruses, and present a theoretical model which accounts for the measured forces and provides predictions for a new generation of experiments.

TUESDAY, MAY 11, 2004  
2:30 pm  
Building 2, Room 338

Refreshments will be served at 3:30 PM in Room 2-349

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