Sächsische Forschergruppe FOR877

NTZ
Prof. Dr. W. Janke

UNIVERSITÄT LEIPZIG
Fakultät für Physik und Geowissenschaften
Institute für Physik

gemeinsames

NTZ-/ FOR877-Kolloquium

Donnerstag, den 07.06.2012, um 17:00 Uhr

Prof. Dr. Sanjay Kumar

Department of Physics, Banaras Hindu University, India

DNA under periodic force: Scaling and phase diagram

The separation of a double stranded DNA to two single stranded DNA below its melting point is a prerequisite for processes like transcription and replication. To execute such processes, various proteins work far away from equilibrium in a staggered way. In this talk, we shall discuss some aspects of unzipping of DNA under a drive in non-equilibrium conditions. We shall propose dynamical scaling to characterize this transition and a steady state phase diagram of driven DNA, which is amenable to verification in force spectroscopic experiments. Using the work theorem, we show that it is possible to extract equilibrium pathways from non-equilibrium data.

Ort: Großer Seminarraum, Institut für Theoretische Physik
Vor dem Hospitaltore 1, 04103 Leipzig