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Single molecule studies of the mechanical stability of packed DNA
MICHELLE WANG, ALLA SHUNDROVSKY, Dept. of Physics-LASSP, Cornell University — Biological organisms must compactly store and yet efficiently read the huge amounts of genetic information contained in their DNA. In the cell nucleus, DNA is highly compact as compared to naked DNA. The primary packing unit, the nucleosome, consists of roughly two turns of DNA wrapped around a core histone octamer. The mechanical stability of nucleosomes determines the accessibility of DNA to the cellular machinery that must decode it. We will discuss our recent progress towards understanding the mechanical stability of nucleosomes using single-molecule studies.

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