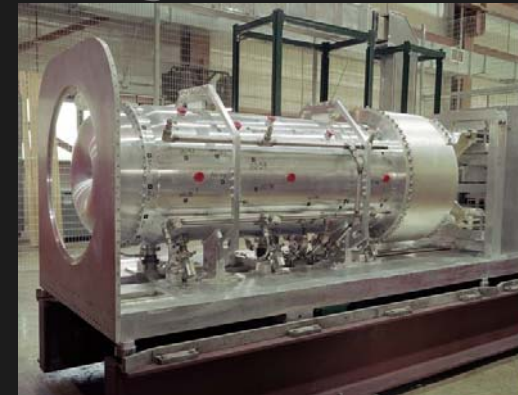


CU Physics Department Colloquium

Monday, November 21, 2011 4:10 PM 428 Pupin Hall

Probing Mechanics of Biological Systems

Biological systems harness mechanical phenomena to serve critical functions on the molecular, cellular, and organismic levels. Beyond the variety in length scales, the mechanical processes are enriched further by the broad range of time scales involved. We will first present experimental methods developed in our group to access forces and displacements on the nanoscale with a temporal resolution around one microsecond. We applied these methods to understand mechanical behavior of biological systems under extremes like short durations, distances, and high pressure levels. We will demonstrate some of the biological imaging methods that have come of this work, as well as new biologically-based approaches to energy conversion from the natural environment.



Ozgur Sahin, Columbia University