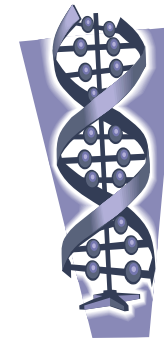


CU Physics Department Colloquium

Monday, November 10, 2008 4:10 PM 428 Pupin Hall

To Knot Or Not to Knot



The mathematics and physics of knots has a long and fascinating history, starting from a model of an atom suggested by W.Thompson (Lord Kelvin) and enthusiastically supported by Maxwell. Knots in DNA are abundant and important. Recently, we surveyed the protein data bank and found that evolution for some as yet unknown reason strongly preferred unknotted proteins. In theoretical aspect, the field was long dominated by either highly abstract mathematics or computer simulations. Recently, some progress was made in the direction of physical understanding of knots. One fruit of it is the prediction that knots under certain circumstances behave like a material with negative Poisson ratio. In the talk, all these various aspects will be reviewed in some mixture.



Alexander Grosberg
New York University

Hosted by Boris Altshuler - Meet the Speaker will be held at 3pm in 705 Pupin