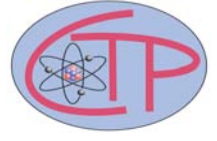




NEW YORK CITY COLLEGE OF TECHNOLOGY
Physics Department
Center for Theoretical Physics



How Pencils Can Be Used In Lattice Calculations

Presented by:

Prof. Christopher Aubin

Fordham University

Thursday, February 10 at noon
Namm, Room 823

Abstract

One of the easiest ways to understand fundamental interactions in Nature is to study its electromagnetic properties, which is done by calculating (or measuring) what are called "Electromagnetic Form Factors." In particular, the Delta baryon, which is a particle that is similar to the proton or neutron, is of considerable interest since not much is known about it. I will discuss a new method for calculating Delta, or in principle any, form factors that will allow for a cleaner extraction of the signal for the matrix elements of interest. Results will be shown how this works on simple two-point functions to extract the Delta mass, and I will show how this will be done with current simulations to get the three-point functions and thus the electromagnetic form factors.

Light refreshments will be served.