Department of Theoretical Physics

Free Meson Seminar

Speaker	:	Matthew Schwartz (Johns Hopkins University, Maryland, USA)
Topic	:	Jets, Effective Field Theory, and the LHC
Day, Date & Time	:	Thursday, December 6, 2007 at 2:30 p.m.
Place	:	AG 69

Abstract

The dominant way almost all beyond-the-standard-model physics will show up at the LHC is through the production of large numbers of jets. This is also the dominant signature of the standard model. Thus, distinguishing signal from background in multijet events will be critical to finding new physics at the LHC. I will review our current understanding of jets and explain one of the biggest difficulties in simulating them: merging matrix elements with parton showers. I will then introduce a new way to overcome this difficulty using theoretical ideas based on soft-collinear effective field theory.

(Saumen Datta)