

Three-boson signals of a three-brane world

Tuesday, 4 June 2019 16:50 (20 minutes)

Simple generalizations of well known BSM scenarios can lead to dramatic signals at colliders, providing interesting theoretical playgrounds and motivating new methods to isolate non-standard experimental signals. In this talk I will consider warped extra-dimensional models with multiple branes in the IR and discuss various possibilities and related collider signals. One generic feature of this scenario is the presence of three boson final state, with double resonant structure, and non-standard boosted fat jets in large parts of parameter space. These signals require dedicated strategies at LHC, with varying sophistication. I will present these methods, which are also relevant for many other BSM scenarios. This framework also motivates studying conformal dark sectors, with non-gravitational interactions to the SM. Motivating the minimal interaction to the conformal dark sector, I will discuss the collider and cosmological bounds on this scenario.

Presenter: MISHRA, Rashmish (SNS, Pisa)

Session Classification: Parallel Session BSM+DM