

Theoretical and experimental considerations of a multi-brane world

Tuesday 21 May 2019 14:00 (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 the theoretical possibilities and related collider signals. The resulting signals require dedicated strategies at LHC, with varying sophistication. In addition, these strategies are relevant for a broad class of BSM scenarios. A specific realization of this multi-brane setup presents a way to study conformal dark sectors, with non-gravitational interactions to the SM. Motivating the minimal interaction needed, I will discuss the collider and cosmological bounds on this scenario.

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