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Composite resonances of fundamental Composite Higgs models

Tuesday 22 May 2018 16:10 (20 minutes)

Composite Higgs models are among the most promising alternatives to solve the hierarchy problem and provide a dynamical mechanism to break the electroweak symmetry. In this talk I will discuss some predictions of specific UV realizations of such scenario. I will analyze in particular the phenomenology of vector and scalar states in a SU(4)/Sp(4) symmetry breaking pattern, using lattice results as well as unitarity and analyticity arguments to constrain the parameters of the theory. I will also discuss the phenomenology of vector and scalar states of a SU(4) gauge theory with symmetry breaking SU(5)/SO(5) and their interplay with a top partner responsible for the top mass via the partial compositeness mechanism, which is also present in the theory. The talk will be based on arXiv:1605.01363, arXiv:1705.02787 and ongoing work.

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Session Classification: Parallel Session on Composite Higgs