Contribution ID: **18**   Type: **not specified**

From Dilaton Effective Field Theory to the Composite Higgs

Wednesday 21 June 2023 14:30 (25 minutes)

In this talk, I review recent work developing dilaton effective field theory (EFT), which provides a framework for describing the Higgs boson as composite state. The EFT describes a multiplet of pseudo-Goldstone bosons which arise when an approximate global symmetry gets spontaneously broken, as well as a dilaton - a pseudo-Goldstone boson arising from the spontaneous breaking of an approximate conformal symmetry. The interactions of these states are then powerfully constrained by symmetry principles and power counting rules. The EFT has been checked against results from lattice gauge theory and used to build novel composite Higgs models in which the real world Higgs is an admixture of both the dilaton and one state from the multiplet of pseudo-Goldstone bosons.

PhD Student

no

Authors: INGOLDBY, James (ICTP (Trieste)); Prof. PIAI, Maurizio (Swansea University); APPELQUIST, Thomas (Yale)

Presenter: INGOLDBY, James (ICTP (Trieste))

Session Classification: Wednesday PM1