Contribution ID: **10** Type: **not specified**

The SMEFT program at the LHC

Tuesday, 29 June 2021 15:30 (50 minutes)

The LHC experiments are entering a precision era, where the sensitivity to indirect effects of new physics, i.e. discrepancies between data and SM predictions, will increase substantially.
Searches for these signals are most conveniently performed within the framework of the Standard Model Effective Field Theory (SMEFT), that allows to implement a very ambitious program: a systematic search for inconsistencies with SM predictions in a large number of different processes, from which "agnostic" information about new physics can be extracted via a combined SMEFT interpretation.
I will review the current status of this effort, that has seen important theoretical and experimental advancements in recent years. I will focus in particular on studies in the Higgs sector and on the complementarities between Higgs, electroweak and top quark processes.

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Session Classification: Higgs phenomenology