

XXVIII International Workshop on Deep Inelastic Scattering and Related Subjects



Contribution ID: 49

Type: **Contributed Talk**

A combined SMEFT analysis of the top quark and Higgs sectors

Tuesday, March 24, 2020 11:00 AM (30 minutes)

Apart from a few anomalies, the majority of measurements at the LHC have been consistent with the Standard Model (SM). Searches of new physics signals beyond LHC energies is now being realized by studying available data with an effective field theory framework. In this talk, I present the results from a combined analysis of top quark and Higgs production measurements at the LHC using SM Effective Field Theory (SMEFT) formalism and the SMEFiT fitting methodology. The analysis extends the most comprehensive top quark study to date by adding Higgs production measurements and constraining simultaneously the 60 Wilson coefficients associated with dimension-6 operators in the SMEFT that modify the relevant SM predictions.

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Session Classification: Electroweak Physics and Beyond the Standard Model

Track Classification: Electroweak Physics and Beyond the Standard Model