



Contribution ID: 9

Type: **talk**

Predictions for $gg \rightarrow hh$ at full NLO QCD comparing non-linear and linear EFT frameworks and truncation effects

Friday, June 10, 2022 2:00 PM (30 minutes)

We present results for Higgs boson pair production in gluon fusion including both, NLO (2-loop) QCD corrections with full top quark mass dependence as well as anomalous couplings related to operators describing effects of physics beyond the Standard Model. The latter can be realized in non-linear (HEFT) or linear (SMEFT) Effective Field Theory frameworks. We show results for both and discuss the impact of different truncation options within the SMEFT description.

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Session Classification: Young scientists talks