Contribution ID: **150** Type: **Parallel Sessions**

Fully Differential Prediction for Higgs Boson Production at N3LO

Thursday 21 October 2021 15:00 (10 minutes)

I present state of the art predictions for differential distributions of the decay products of the Higgs boson. In particular, I demonstrate the impact of next-to-next-to-next-to leading order (N3LO) QCD corrections to the gluon fusion production mechanism. The impact of this newly obtained corrections is required to fully exploit the physics potential of the LHC.

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Track Classification: Higgs-boson precision physics