



Contribution ID: 224

Type: **Parallel session talk**

Two-loop Electroweak corrections to $gg \rightarrow HH$

Wednesday 23 August 2023 08:50 (20 minutes)

We consider the next-to-leading order electroweak corrections to the Higgs boson pair production in gluon fusion. This requires the computation of two-loop four-point amplitudes with massive internal particles such as top quarks, Higgs and gauge bosons. We perform analytic calculations both in the high-energy and large top-quark mass limits. In particular, we show that our high energy expansion can even yield precise results above $p_t \approx 120$ GeV. The technical challenges are described and results for the form factors are presented.

Collaboration / Activity

CRC TRR 257

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Session Classification: T09 Higgs Physics

Track Classification: Higgs Physics