

## Top-quark loops in $gg \rightarrow ZH$ and $gg \rightarrow ZZ$ via a transverse momentum expansion

*Thursday, 28 September 2023 15:35 (20 minutes)*

In this talk I will present some recent developments in the calculation of the NLO QCD corrections for two gluon-initiated processes that are relevant for Higgs physics at the LHC, namely  $gg \rightarrow ZH$  and  $gg \rightarrow ZZ$ . The two-loop box diagrams with massive internal lines contributing to these amplitudes pose a technical challenge, and I will discuss their analytic calculation using a small-transverse-momentum expansion, which also allows for a fast numerical evaluation of the QCD corrections.

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**Session Classification:** Topical Talks