

## Higher-order QCD calculations for hard scattering processes

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Precise measurements of hard scattering processes are a corner stone of the LHC physics programme. On theory side, the large energy transfer in these processes allows for higher-order perturbative computations in QCD to achieve remarkable precision. Combined these measurements and predictions are able to put stringent constraints on PDFs, coupling constants and masses. In this talk I will give a review the necessary ingredients, state-of-the-art and challenges of perturbative computations beyond NLO QCD, both for hadron-hadron as well as lepton-hadron collisions. On the way I will highlight some recent results and applications.

**Author:** PONCELET, Rene (IFJ PAN)

**Presenter:** PONCELET, Rene (IFJ PAN)

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