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Profiling NNLO+PS simulations: GENEVA as a case study

Tuesday 14 November 2023 16:45 (30 minutes)

In this talk I will review the stages and parallelization strategies used in NNLO+PS simulations, focusing on the GENEVA Monte-Carlo code. Concentrating on three benchmark processes, Drell-Yan, Higgs production via gluon fusion and diboson production, I will report results of a profiling exercise aimed at identifying the current bottlenecks in each stage that will benefit the most from possible improvements connected with the usage of alternative computing architectures or different approaches based e.g. on machine-learning techniques.

Presenter: ALIOLI, Simone (Universita & INFN, Milano-Bicocca (IT))

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