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Towards an automated generator based on OpenLoops+LTD

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We present ongoing work towards the development of an automated NLO generator in the OpenLoops framework. This new algorithm combines key features of the Loop Tree Duality (LTD) and OpenLoops methods. In particular, virtual and real corrections are combined in a way that enables the local cancellation of IR singularities. To this end we introduce a new technique that supports the calculation of IR safe observables in a similarly flexible and automated manner as within state-of-the-art parton-level generators. This new framework will serve as a basis for the development of an automated NNLO generator.

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