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## Two-loop tensor integral coefficients in OpenLoops

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Numerical tools, such as OpenLoops, compute NLO scattering amplitudes in a fully automated way. In order to meet the precision requirements of the LHC era and future experiments, however, NNLO calculations are crucial, and their automation in a similar tool highly desirable.

In the OpenLoops framework, D-dimensional two-loop amplitudes are decomposed into loop momentum tensor integrals and corresponding tensor coefficients constructed in 4 dimensions, as well as rational terms.

In this talk we present a new and fully general algorithm for the construction of two-loop tensor coefficients, which exploits the factorization of Feynman diagrams into universal building blocks derived from the Feynman Rules of the model at hand.

This algorithm has been implemented in a fully automated way for two-loop QED and QCD corrections to the Standard Model. We will discuss the general structure of this algorithm and its implementation in OpenLoops, and present detailed studies on its numerical stability and efficiency.

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