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Two-loop QCD corrections to pp->ttj

In this talk, I will discuss the status of the calculation of the two-loop QCD corrections to the production of a top-quark pair associated with a jet at hadron colliders. This is the main bottleneck for achieving NNLO predictions. I will review recent progress in calculating the required Feynman integrals using the method of differential equations. I will also present the cutting-edge computational techniques that allow us to tackle the extreme algebraic complexity of the two-loop multi-scale helicity amplitudes and the presence of complicated special functions.

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