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## Four-dimensional regularization of higher-order computations: FDU approach

*Saturday, July 8, 2017 9:40 AM (20 minutes)*

We have recently proposed a new regularization framework based on the loop-tree duality theorem. This theorem allows to rewrite loop level amplitudes in terms of tree-level like structures and phase-space integrations. In consequence, it is possible to combine naturally real and virtual contributions at integrand level. Moreover, by introducing a proper momentum mapping, a complete local cancellation of infrared singularities is achieved, by-passing the necessity of counter-terms. In this talk, we explain the implementation of this novel approach to compute some physical processes, and we show how to deal with both infrared and ultraviolet divergences without using DREG.

### Experimental Collaboration

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