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## A Systematic Approach to Finite Multiloop Feynman Integrals

Finite Feynman integrals have been advocated as the optimal components for constructing a basis of master integrals in multiloop calculations, due to their improved analytic and numerical properties. In this paper, we show how the Loop-Tree Duality (LTD) is particularly well suited for systematically identifying finite integrals,

as it makes the origin of infrared and threshold singularities fully transparent at the integrand level. This clear separation of singular and non-singular contributions enables a more efficient strategy for isolating and promoting finite integrals, thereby streamlining both reduction and numerical evaluation. We present a new strategy

based on numerator and raised propagator Ansätze that provides results similar to other methods, although in "

a clearer and compact way. While this construction and other approaches establish a robust foundation, they often produce integrands that exhibit a rapid growth in the ultraviolet (UV) regime. To mitigate this bad UV behaviour, we introduce a generalized set of integrands fully defined within LTD. This new set is inherently infrared-finite and frequently free of threshold singularities, offering a more versatile framework for high-order calculations.

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