

Loop Tree Duality for multi-loop numerical integration

Thursday, 18 July 2019 17:45 (20 minutes)

Loop Tree Duality (LTD) offers a promising avenue to numerically integrate multi-loop integrals directly in momentum space by relating them to on-shell trees.

I will first present our novel formulation of this duality, applicable systematically and for generic multi-loop integrals.

I will then showcase our first numerical results for up to four-loop finite scalar topologies, and conclude by discussing our ongoing work regarding applications to physical loop amplitudes that require an adequate contour deformation and local subtraction of its IR divergences

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