A Canonical Introduction to Feynman Integral Reduction

Thursday, 29 October 2020 01:00 (1 hour)

In order to get high order scattering amplitudes, it is essential to calculate corresponding Feynman integrals. However, for multi-loop orders, there will be a huge number of Feynman integrals for a physical process. Thanks to the integration-by-parts (IBP) identities, we can reduce these integrals to a small set of integrals, i.e., master integrals. Here I give an introduction on IBP identities and the Laporta algorithm, which is the standard algorithm for IBP reduction. I will also present the usage of FIRE6 — a popular software on automatic IBP reduction.

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