

Integration-By-parts-Reduction using syzygies

Tuesday, February 14, 2023 4:30 PM (30 minutes)

Integration By parts Reduction to master integrals is an essential step in most modern multi-loop scattering amplitude calculations. In recent years, IBP reduction based on syzygy methods has become increasingly popular, allowing the calculation of many challenging processes. We will discuss our approach to calculate these syzygies using linear algebra and finite field based methods, as well as a few example calculations where these were successfully employed.

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