

Constraining the Analytic Properties of Feynman Integrals

Monday, February 13, 2023 5:30 PM (30 minutes)

The analytic properties of Feynman integrals are heavily constrained by basic physical principles such as causality and locality; however, the specific implications of these principles remain only partially known. In this talk, I will describe two methods for deriving concrete constraints on the analytic structure of Feynman integrals. The first of these methods leverages information about the asymptotic expansion of these integrals around singular points, while the second takes into account homological information about the spaces of momenta that describe on-shell scattering processes. I will illustrate these methods in examples involve generic masses.

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