

The symbology of Feynman integrals from twistor geometries I, II

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In this talk, we describe a method producing the symbol letters of planar Feynman integrals evaluating to multiple-polylogarithms (MPL) from geometries in momentum twistor space, generated from “Schubert problems”. We establish the method in the case of dual conformally invariant (DCI) integrals in the first part of the talk, and extend the method to non-DCI integrals (eg. those appearing in QCD) in the latter. We present many one- and two-loop examples, as well as preliminary attempts to extend the method to non-planar and beyond-MPL cases. Our construction provides new insight into how the symbol letters organize into unions of A-type cluster algebras, and is expected to be useful for bootstrapping individual Feynman integrals.

Summary

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