

This article studies scattering amplitudes of gauge and gravity theories by means of the so-called Lie polynomials and combinatoric properties. The article indicates that such an approach provides a sort of universal understanding to a variety of recent results on the scattering amplitudes at tree level such as the KLT relation between amplitudes of gluons and gravitons [1], the Berends-Giele recursion relation [2], the BCJ relation [3] and the CHY relation [4]. The article includes introductory sections on these relations and the Lie polynomials in particular. Interested readers may also refer to a related paper [5] to get familiarized to these topics.

References

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