

Building Blocks of Gravity Amplitudes

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Gravity possesses many interesting properties such as its enhanced soft behaviour under large BCFW shifts and its KLT constructibility. Planar $N=4$ SYM also has related nice properties, most of which can be understood as a result of its underlying Amplituhedron structure. In this talk, we address whether gravity has an underlying positive geometry. Our approach will be to construct the fundamental building blocks of tree amplitudes and leading loop singularities in gravity, the analogs of R-invariants in SYM. We draw inspiration from the BCFW recursive construction of tree amplitudes in order to find these “good” building blocks and show that they are geometric objects.

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