

Physics Theory Seminar

Monday, October 16, 2017 / Pupin Hall Theory Center, 8th Floor / 2:10 PM

“Loop Integrands from Ambitwistor Strings and Colour/Kinematics”

The last years have seen remarkable progress in understanding the scattering amplitudes of massless particles in arbitrary dimensions. They not only exhibit a simplicity completely obscured by the Feynman Diagram approach, but also a structure reminiscent of the worldsheet models describing string theory. After reviewing the key developments, I will discuss these underlying worldsheet models - so-called ambitwistor strings - and derive simple formulas for the one-loop integrands in gauge theory and gravity. The models manifest the BCJ colour-kinematics duality, and I will end my talk by deriving a compact representation for pure Yang-Mills BCJ numerators.

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