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# A one-loop central-emission vertex for two gluons in N=4 SYM

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There has been much recent progress towards extending the BFKL equation to next-to-next-to-leading logarithmic (NNLL) accuracy. One of the remaining ingredients of the BFKL kernel is the one-loop central-emission vertex (CEV) for two gluons which are not strongly ordered in rapidity. In this talk I will discuss our recent extraction of this vertex in N=4 super Yang-Mills (SYM) theory, which is a component of the two-gluon CEV in QCD. We will see that the central next-to-multi Regge limit captures much of the colour and kinematic complexity of one-loop gluon amplitudes in general kinematics, while still leading to tractable expressions. I will emphasise the further simplifications that occur when considering the interference of the one-loop CEV with its tree-level counterpart.

**Presenter:** BYRNE, Emmet

**Session Classification:** Recent theoretical results on QCD and saturation

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