## SEMPARIS – Séminaires en région parisienne

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## **Particle Physics at LPTHE**

Mardi 26 Mars 2019, 14 :00 LPTHE, library Domaines : hep-ph—hep-th

 $\label{eq:constraint} \mbox{Titre}: Analytics \ from \ Numerics: Planar \ Two-Loop \ Five-Point \ QCD \ Amplitudes$ 

Orateur : Ben Page ( IPhT, Saclay )

Résumé : Two-loop scattering amplitudes are a vital component in highprecision cross section calculations at the LHC. At higher multiplicities, the increased number of scales can make the algebra of analytic amplitude calculations intractable. In this talk, we discuss how to apply numerical techniques to sidestep this intermediate complexity and combine them with physical properties of the amplitude to efficiently determine its analytic form. In particular we focus on planar five-point amplitudes in QCD.