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Sector decomposition via computational geometry

Friday 26 February 2010 15:00 (30 minutes)

One of the powerful tools for evaluating multi-loop/leg integrals is
sector decomposition, which can isolate infrared divergences from
parametric representations of the integrals. The aim of this talk is
to present a new method to replace iterated sector decomposition, in
which the problems are converted into a set of problems in convex
geometry, and then they can be solved by using algorithms in
computational geometry. This method never falls into an infinite loop,
and some examples show that it gives the relatively small number of
generated sectors.

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