Contribution ID: **23** Type: **not specified**

Computing Pinched Feynman Integrals and the Method of Regions

Wednesday 13 December 2023 11:15 (30 minutes)

Sector decomposition is a well known method for numerically computing Feynman integrals. In the physical (Minkowski) region, it is sometimes necessary to deform the integration contour into the complex plane in order to avoid poles, or more generally singular hypersurfaces, in the integration domain. However, there exist Feynman integrals with 'pinched' singularities, for which the usual contour deformation procedure fails. Using simple examples, I will describe this problem and discuss one possible solution that allows it to be avoided. I will briefly discuss how the above problem is related to the appearance of new regions (in the sense of the Method of Regions), when integrals are expanded around a small or large scale.

Author: JONES, Stephen Philip (University of Durham (GB))

Presenter: JONES, Stephen Philip (University of Durham (GB))

Session Classification: Wednesday AM 2