Contribution ID: **28** Type: **not specified**

A refined machinery to calculate large moments from coupled systems of linear differential equations

Thursday, September 12, 2019 11:00 AM (25 minutes)

Recently, we have worked out how thousands of moments of Feynman integrals can be computed if they are represented by coupled systems of linear differential equations and sufficiently many initial values. Given these moments one is in the position to derive recurrence relations and to solve these recurrences, e.g., within the class of indefinite nested sums. In this talk we will present a refined version of this large moment method that speeds up the necessary calculation steps and that reduces the number of needed initial values. We show that this improved machinery can be used efficiently to calculate, e.g., contributions of the 3-loop massive form factor.

Primary author: SCHNEIDER, Carsten (RISC, Johannes Kepler University Linz)

Presenter: SCHNEIDER, Carsten (RISC, Johannes Kepler University Linz)

Session Classification: Thursday Morning A