



EINLADUNG

im Rahmen des Teilchenphysikseminars

zum Vortrag

von

Stefano Di Vita

INFN Mailand

über

***„Differential equations and iterated integrals
for massive multi-loop Feynman integrals“***

Abstract:

In this talk I will give an overview of the differential equations method for the calculation of multi-loop Feynman integrals, which was recently applied to several cases where massive legs and propagators are present.

I will discuss how the systems of differential equations arise, how they are brought in canonical form with the help of the Magnus exponential, what functions can be used to give a closed-form representation of the solution, and how they are analytically continued to the kinematic regions of interest.

Some examples will be given, such as the master integrals for the NNLO QED corrections to mu-e scattering, which are crucial for the physics program of MUonE, an experiment proposed with the goal of determining the leading hadronic contribution to the muon $g-2$ in a novel way.

Zeit: Freitag, 13.12.2019 16:15

Ort: Erwin-Schrödinger-Hörsaal, Boltzmannngasse 5, 5. Stock

gez.: A. Hoang, S. Plätzer, M. Procura