



# EINLADUNG

im Rahmen des Teilchenphysikseminars

zum Vortrag

von

**Simone ALIOLI**

(CERN)

über

***“The GENEVA Monte Carlo framework:  
improving SMC with resummation”***

**Abstract:**

I will discuss the GENEVA Monte Carlo framework, as an example of how to include analytic resummation in Shower Monte Carlo event generators. GENEVA combines the fully-differential NNLO calculation with higher-order resummation of the resolution parameter, providing a systematic assessment of perturbative uncertainties.

The resulting parton-level events are further combined with parton showering and hadronization in Pythia 8. For the Drell-Yan case presented, the 0-jettiness resummation is carried out to NNLL', which consistently incorporates all singular virtual and real NLO corrections. In this way, the perturbative accuracy of 0-jet-like resummation variables is significantly improved beyond the parton shower approximation. I will show comparisons with LHC measurements at 7 TeV from ATLAS, CMS and LHCb, including results for several underlying-event sensitive observables.

**Zeit:** Dienstag, 25.04.2017, 16:15

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

gez.: A. Hoang, H. Neufeld