

PAUL SCHERRER INSTITUT



# Particle Theory Seminar

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“The automation of MC@NLO”

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**WBGB/021**

## **Abstract:**

With the advent of the LHC, an accurate theoretical prediction for physical observables is becoming mandatory in order to get precise and unbiased evidences from data. Results at the next to leading order (NLO) in QCD and Parton Shower Monte Carlo (PSMC) simulations, opportunely combined, are key ingredients to attain such an accuracy. MC@NLO is a framework in which PSMC and NLO computations are consistently matched in such a way as to retain all the strengths of the two, and gives thus a realistic prediction for collider spectra.

I shall introduce aMC@NLO, the new tool able to automatically produce results at the NLO in QCD matched to PSMC within the MC@NLO formalism, and show its characteristics and potentialities.