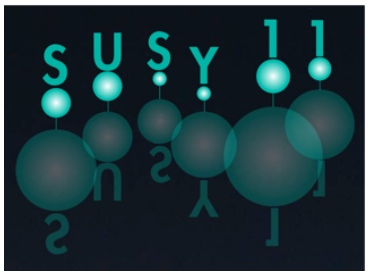

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How to improve on results of SUSY searches: higher-order corrections to squark and gluino production cross sections at the LHC

Tuesday, August 30, 2011 12:10 PM (25 minutes)

Predictions for squark and gluino total production cross sections are one of the important theory ingredients for determining
SUSY mass exclusion limits or, in case of discovery, masses and properties of sparticles. In this talk, I will present results of
calculations of higher-order QCD corrections to all processes
of squark and gluino production relevant at hadron colliders. The
calculations are performed at the NLL+NLO accuracy, and provide the
most precise theory predictions for the inclusive squark and gluino
production through strong interactions. In particular, I will
discuss predictions for the total cross sections for proton-proton
collisions at 7 TeV. I will also show the reduction of the theory
error achieved by performing these calculations and argue that the
results of the calculations should be used in the analysis of the
data.

Presenter: Dr KULESZA, Anna (RWTH Aachen University)

Session Classification: Parallel Session 5