Contribution ID: **11** Type: **not specified**

Three-loop anomalous dimensions for squarks in SUSY QCD

In this talk the calculation of the three-loop DRbar renormalization constants for the squark wave function and mass are discussed in the framework of supersymmetric QCD.
We introduce the general framework and describe in detail the reconstruction of the exact mass-dependence of the dimension-two scalar correlators.
From the renormalization constants the results for the corresponding anomalous dimensions are extracted. The calculation was done with non-zero epsilon scalar mass. As far as the renormalization of the epsilon scalar mass is concerned we have evaluated our results for three different schemes: DRbar, DRbarPrime and on-shell.

Primary authors: Dr MIHAILA, Luminita (Institut für Theoretische Teilchenphysik Karlsruhe); Prof. STEINHAUSER, Matthias (Institut für Theoretische Teilchenphysik Karlsruhe); Mr HERMANN, Thomas (Institut für Theoretische Teilchenphysik Karlsruhe)

Presenter: Mr HERMANN, Thomas (Institut für Theoretische Teilchenphysik Karlsruhe)