

T 122: Hauptvorträge 6

Zeit: Freitag 9:00–10:30

Raum: RW 1

Hauptvortrag T 122.1 Fr 9:00 RW 1
Searches for supersymmetry at the LHC — ●LARS SONNENSCHEIN — RWTH Aachen University, III. Phys. Inst. A, Aachen, Germany

Searches for supersymmetry at the LHC are presented. The data are based on the Run I pp collision dataset and have been collected by the CMS and ATLAS experiments in 2011 at a centre of mass energy of 7 TeV and in 2012 at 8 TeV. The corresponding integrated luminosities reach up to 5 and 20/fb respectively. The results are interpreted in the constrained minimal and other popular supersymmetric models including R-parity-conserving and -violating scenarios. Prospects for the high luminosity run at 14 TeV centre of mass energy are given.

Hauptvortrag T 122.2 Fr 9:45 RW 1

Top physics and searches for new physics in $t\bar{t}$ final states — ●LUCIA MASETTI — PRISMA Cluster of Excellence and Institute for Physics, University of Mainz

The top quark is the heaviest known elementary particle: point-like but as heavy as a gold atom, the only fermion with a natural Yukawa coupling and a naked quark decaying before hadronising. Almost 20 years after the discovery, top quarks could be produced at a high rate only recently at the LHC, where a few millions have been collected, allowing for very precise measurements of their properties. The high centre-of-mass energy of the LHC could be as well exploited for dedicated searches for new heavy particles decaying preferentially to top quarks. This talk will review the latest searches for new physics in the production and decay of top quarks at the LHC as well as the precision measurements of top quark properties.