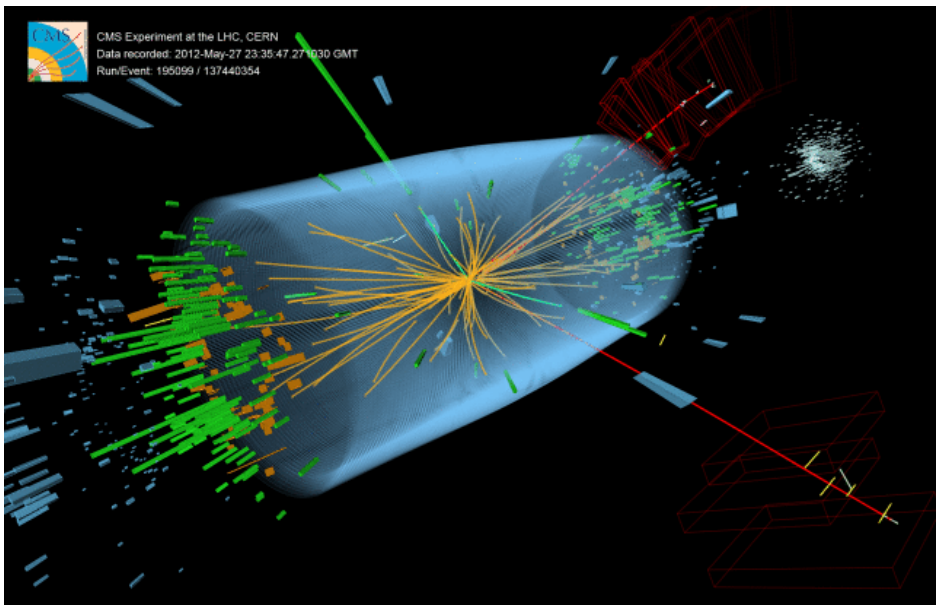
DESY

Physics Seminar

Exploring the Mechanism of Electroweak Symmetry Breaking at LHC.

Alexei Raspereza (DESY)

Tuesday, 10 July 2012, 16:45 h
Buildg. 1b / Sem. room 4a/b



The Standard Model (SM) has been extremely successful in describing a wide range of phenomena in particle physics. However, SM would be incomplete without a mechanism explaining Electroweak Symmetry Breaking (EWSB), which generates masses of fermions and weak bosons. The most favoured scenario is provided by the Higgs mechanism which gives rise to one additional scalar particle in theory – the Higgs boson. Over the past decades, the Higgs boson has been searched for at lepton and hadron colliders. In parallel to the SM Higgs boson searches, searches for Higgs bosons, predicted by extensions of the SM, e.g. the Minimal Supersymmetric Standard Model (MSSM), are also underway.
The advent of the Large Hadron Collider (LHC) opened a new era of the Higgs boson searches at energies and luminosities significantly exceeding those of previous collider experiments. The seminar is intended to review recent results of the Higgs boson searches with the CMS Experiment at LHC and discuss prospects of establishing the Higgs mechanism at LHC and the future International Linear Collider.

- Coffee, tea and cookies will be served at 16.30h

- After the seminar there is a chance for private discussions with the speaker over wine and pretzels

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