



# LHC Seminar

SPEAKER: Dr. Rebeca Gonzalez Suarez (University of Nebraska (US))

TITLE: **Recent top physics results from CMS**

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## ABSTRACT

The top quark, discovered in 1995 at the Tevatron, is the heaviest known elementary particle. The largeness of its mass gives rise to a number of peculiar properties: top quarks decay before they would hadronize and the measurement of their decay products provides direct access to its properties such as spin, charge, or polarization. The top quark couples most strongly with the Higgs boson, and plays a key role in the electro-weak symmetry breaking and in many scenarios of physics beyond the Standard Model.

With its large center-of-mass energy and luminosity, the LHC produces top quarks in copious quantities, giving access to many new precision measurements. In this seminar, I will present recent measurements from the CMS experiment. I will focus in particular on the results on single-top quark production, where results are available in all production modes, the  $t$ -, the  $s$ - and the  $tW$ -channels. Furthermore, I will present recent measurements of top quark properties as well as searches for anomalous couplings involving top quarks.