



# LHC Seminar

SPEAKER: YAZGAN, E. (Ghent University (BE))  
TITLE: **Recent results on top quark physics with the CMS detector**  
DATE: Tue 31/05/2016 11:00  
PLACE: 4-3-006 - TH Conference Room

## ABSTRACT

The dawn of the LHC Run II brings the prospect of pushing precision in top quark physics to a new level probing further the standard model and beyond. The inclusive production of top quark pairs and single top quarks has been rapidly established with as much as 42/pb of integrated luminosity and has been further probed with increased precision using up to 2.7/fb of proton-proton collision data acquired by the CMS detector during 2015. Inclusive and differential production cross sections of top-quark pairs and single-top quarks have been measured using new selection and top kinematics reconstruction techniques. The results have been compared to several predictions which include the state of the art next-to-leading order matched to parton shower generators as well as several fixed-order theory calculations. In addition the associated production of top quark pairs with a Z boson has also been re-established at 13 TeV. These results re-open the door to an exciting top quark physics programme ahead of us during the next years and are reviewed in this talk.