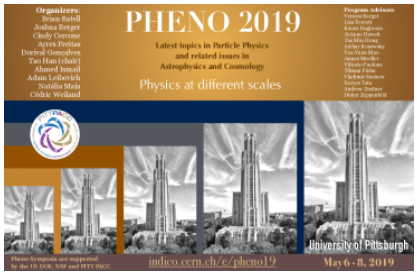

Contribution ID: **738** Type: **parallel talk**

Top-quark pair production cross-section measurements with the ATLAS detector

Monday 6 May 2019 16:30 (15 minutes)

Measurements of the inclusive and differential top-quark pair production cross sections in proton-proton collisions at a centre-of-mass energy of 13 TeV with the ATLAS detector at the Large Hadron Collider are presented. The investigated final states include ttbar+jets events, in particular ttbar+heavy flavour jets. The process of a ttbar pair produced in association with jets originating from b-quarks (b-jets) is particularly important to measure, as there are many uncertainties in the calculation of the process due to the relevance of multiple energy scales. The differential measurements reach high precision and are compared to the best available theoretical calculations. These measurements probe our understanding of top-pair production in the TeV regime. The results are compared to Monte Carlo generators implementing LO and NLO matrix elements matched with parton showers and NLO fixed-order QCD calculations.

Summary

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Session Classification: Top