



Contribution ID: 209

Type: not specified

## Measuring the Higgs Boson Trilinear and Quartic Couplings at the LHC

*Thursday 7 July 2016 17:30 (20 minutes)*

Thus far the results from the LHC indicate that the couplings of the Higgs boson to other particles are consistent with the Standard Model (SM). However the ultimate test as to whether this particle is the SM Higgs boson will be the trilinear Higgs coupling that appears in Higgs pair production and the quartic Higgs coupling that shows up in triple Higgs production.

To gain some sense about the likelihood of measuring the Higgs boson self couplings, we calculate the cross section and interferences for Higgs pair production and triple Higgs production in pp collisions at the LHC.

**Authors:** KAO, Chung; Prof. DICUS, Duane (University of Texas)

**Co-author:** Prof. REPKO, Wayne (Michigan State University)

**Presenter:** KAO, Chung

**Session Classification:** Higgs Physics

**Track Classification:** Higgs Physics