



Contribution ID: 137

Type: **Parallel session talk**

Combined measurement of Higgs coupling, cross section measurement and interpretation at the ATLAS experiment

Tuesday 22 August 2023 08:30 (20 minutes)

Simplified template cross-sections provide a detailed description of the properties of Higgs boson production at the LHC. They are most precisely determined in the combination of the measurements performed in the different Higgs boson decay channels. This talk presents these combined measurements, as well as their interpretations in the context of specific scenarios of physics beyond the Standard Model, as well as generic extensions within the framework of the Standard Model Effective Field Theory. A combination of measurements of the branching fraction of Higgs boson decays into invisible particles is also presented, and interpreted as constraints on the cross section of WIMP dark matter interactions with nucleons.

Collaboration / Activity

ATLAS

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Session Classification: T09 Higgs Physics

Track Classification: Higgs Physics