

30th International Symposium on Lepton Photon Interactions at High Energies



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Type: **Parallel session talk**

Searches for Higgs boson pair production with the full LHC Run 2 dataset in ATLAS

Tuesday, January 11, 2022 2:00 PM (20 minutes)

The latest results on the production of Higgs boson pairs (HH) in the ATLAS experiment are reported, with emphasis on searches based on the full LHC Run 2 dataset at 13 TeV. In the case of non-resonant HH searches, results are interpreted both in terms of sensitivity to the Standard Model and as limits on the Higgs boson self-coupling. Search results on new resonances decaying into pairs of Higgs bosons are also reported. Prospects of testing the Higgs boson self-coupling at the High Luminosity LHC (HL-LHC) will also be presented.

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Session Classification: Beyond the Standard Model

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