

# Inspecting The Higgs sector via $H$ to $H(bb)H(\tau\tau)$ decay at ATLAS

*Friday, 3 November 2023 14:50 (20 minutes)*

Double-Higgs (HH) production is one of the most sought-after measurements at the LHC, as it is a direct probe of the Higgs self-coupling coming from the Higgs potential which will shed light on the Higgs sector. I will present the search for HH production in the bottom-quark and tau-lepton pairs decay channel. I focus on the ongoing analysis of the LHC Run-2 dataset, discussing the strategy to distinguish this complex final state from the Standard Model background processes. I also present up-to-date public results on the self-coupling measurement and discuss their relation to an extended Higgs sector and electroweak baryogenesis.

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