

Combined results from searches for associated top-Higgs production at CMS

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Since the discovery and confirmation of a Higgs boson in 2012 and 2013, there has been a major push to measure its properties. Measuring how the boson couples to other fundamental particles may identify it as the Higgs boson of the Standard Model, or it may lead to a signal of new physics beyond the Standard Model. One way these couplings were investigated was through searches performed for the Higgs boson produced in association with a pair of top quarks. The searches involved different decay channels of both the top-quark pair and the Higgs boson. I will present the combination of these CMS analyses that target Higgs decays to bottom quarks, tau leptons, W and Z bosons, and photons. This combination presents the most sensitive search result for associated top-Higgs production to date.