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## Search for resonant and nonresonant di-Higgs boson production at CMS using jet substructure techniques

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The measurement of pair-production of Higgs bosons is one of the key goals of the LHC. Also, beyond the standard model theories involving extra spatial dimensions predict resonances with large branching fractions in a pair of Higgs bosons with negligible branching fractions to light fermions. We present an overview of searches for resonant and nonresonant Higgs boson pair production at high transverse momentum, using proton-proton collision data collected with the CMS detector at the CERN LHC. These results use novel analysis techniques to identify and reconstruct highly boosted final states that are created in these topologies.

### In-person participation

Yes

**Primary author:** D'AMANTE, Valeria (Istituto Nazionale di Fisica Nucleare)**Co-author:** MEYER, Arnd**Presenter:** D'AMANTE, Valeria (Istituto Nazionale di Fisica Nucleare)**Session Classification:** Higgs Physics**Track Classification:** Higgs Physics