

## **CMS di-Higgs searches in final states with two photons**

*Wednesday 9 November 2022 17:10 (15 minutes)*

This talk will present the latest CMS results on the search of non-resonant and resonant di-Higgs production, with one of the Higgs boson decaying to a pair of photons. The search for resonant di-Higgs production covers both the final state with two 125 GeV Higgs bosons as well as the final state with a 125 GeV Higgs boson and a different new scalar. The diphoton decay channel has excellent mass resolution and relatively low background and is hence the most sensitive or amongst the most sensitive final states for these searches.

### **Type of talk**

Experimental measurements

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**Session Classification:** Wednesday Session B

**Track Classification:** Physics Topics: Double Higgs