



Searching for $t\bar{t}h$ production at ATLAS

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Observation and study of the production of Higgs bosons in association with pairs of top quarks is a key goal of the LHC Higgs physics program, as the process directly probes the interesting top quark Yukawa coupling. After further motivating searches for $t\bar{t}h$ production, I will show recent ATLAS analyses in the $h \rightarrow b\bar{b}$, $h \rightarrow \text{multilepton}$ and $h \rightarrow \text{diphoton}$ final states. I will conclude by discussing the combination of these searches, leading to evidence for observation of $t\bar{t}h$ production, and offer some thoughts on future directions for the analyses in these channels.

Tuesday

April 3

4:00 P.M.

Rm 415 NSH