



Multivariate Analysis using a Neural Network to improve sensitivity in the ATLAS $t\bar{t}H$ ($b\bar{b}$) search

Simon Kirchhof, University of Heidelberg, Germany

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Abstract

Discovering the associate higgs production with two top quarks gives direct access to the Yukawa coupling between the mentioned. In comparison to other higgs processes that have already been confirmed at the LHC, the $t\bar{t}H$ is even more covered by QCD-background processes. Thus any possibility to improve the signal significance has to be investigated.

This work describes an analysis chain for $t\bar{t}H$ ($b\bar{b}$) events, including an event categorisation and a multivariate analysis. Therefore 13 TeV Monte-Carlo samples were used.

Contents

1	Introduction	3
2	Theory	3
3	Pre-Analysis	3
4	Neural Network Studies	3
5	Conclusion	3
6	Outlook	3

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- 3 Pre-Analysis**
- 4 Neural Network Studies**
- 5 Conclusion**
- 6 Outlook**

References

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