1 Publications in Refereed Journals

There are more than 800 journal publications from CMS where I have been listed as an author. In the following, I include only those ones where I have made major contributions.

   https://cds.cern.ch/record/2637646

   https://cds.cern.ch/record/2312113

   https://cds.cern.ch/record/2308650

   http://cds.cern.ch/record/2059396

   https://cds.cern.ch/record/2137232

   http://cds.cern.ch/record/2062435

   http://cds.cern.ch/record/1644807
   [http://cds.cern.ch/record/1643937](http://cds.cern.ch/record/1643937)

   [https://cds.cern.ch/record/1749925](https://cds.cern.ch/record/1749925)

    [http://dx.doi.org/10.1007/JHEP07(2012)143](http://dx.doi.org/10.1007/JHEP07(2012)143)


    [http://cds.cern.ch/record/1455219](http://cds.cern.ch/record/1455219)

    [http://cdsweb.cern.ch/record/1385560](http://cdsweb.cern.ch/record/1385560)

14. The CMS Collaboration, *Measurement of the \( t\bar{t} \) production cross section and the top quark mass in the dilepton channel in pp collisions at \( \sqrt{s} = 7 \text{ TeV} \)*, JHEP 07 (2011) 049; arXiv:1105.5661 [hep-ex].
    [http://cdsweb.cern.ch/record/1354223](http://cdsweb.cern.ch/record/1354223)

    [http://cdsweb.cern.ch/record/1303021](http://cdsweb.cern.ch/record/1303021)

## 2 Publications as CMS Physics Analysis Summary

These are public documents containing preliminary results approved by the CMS collaboration. In the following, I include only those ones where I have made major contributions

1. The CMS Collaboration, *Measurement of the associated production of a Higgs boson with a top quark pair in final states with electrons, muons and hadronically decaying \( \tau \) leptons in data recorded in 2017 at \( \sqrt{(s)} = 13 \text{ TeV} \)*, CMS-PAS-HIG-18-019
2. The CMS Collaboration, *Search for the associated production of a Higgs boson with a top quark pair in final states with a tau lepton at sqrt(s) = 13 TeV*, CMS-PAS-HIG-17-003. [http://cds.cern.ch/record/2257067](http://cds.cern.ch/record/2257067)


4. The CMS Collaboration, *Search for additional neutral Higgs bosons decaying to a pair of tau leptons in pp collisions at sqrt(s) = 7 and 8 TeV*, CMS-PAS-HIG-14-029. [https://cds.cern.ch/record/2041463](https://cds.cern.ch/record/2041463)


12. The CMS Collaboration, *Search for the charged Higgs boson with H^+ \rightarrow \tau\nu decay mode in top quark decays*, CMS-PAS-HIG-11-008. [http://cdsweb.cern.ch/record/1370056](http://cdsweb.cern.ch/record/1370056)

13. The CMS Collaboration, *First measurement of the t\bar{t} production cross section in the dilepton channel with tau leptons in the final state in pp collisions at sqrt(s) = 7 TeV*, CMS-PAS-TOP-11-006. [http://cdsweb.cern.ch/record/1371010](http://cdsweb.cern.ch/record/1371010)
14. The CMS Collaboration, *Search for the charged Higgs boson in the \( \tau \) and \( \mu \tau \) dilepton channels of Top quark pair decays in pp collisions at \( \sqrt{s} = 7 \) TeV*, CMS-PAS-HIG-11-002. [http://cdsweb.cern.ch/record/1336784/]


19. The CMS Collaboration, *Measurement of the \( Z \bar{b}b \), \( Z \rightarrow \ell^+\ell^- \) cross section with 100 \( pb^{-1} \) of early CMS data at the LHC*, CMS-PAS-EWK-08-001. [http://cdsweb.cern.ch/record/1152574]


### 3 Publications in Conference Proceedings


2. A.K. Nayak [On behalf of the ATLAS and CMS Collaborations], *Recent inclusive \( t\bar{t} \) cross section measurements*, Proceedings of 9th International Workshop on the CKM Unitarity Triangle (CKM2016); PoS(CKM2016)117; CMS CR-2017/094. [https://cds.cern.ch/record/2262949]

http://cds.cern.ch/record/1610610

http://cds.cern.ch/record/1510132

http://cds.cern.ch/record/1399487

http://cds.cern.ch/record/1166262


4 CMS Internal Notes

These password-protected documents are internal to the CMS Collaboration.

1. ..., A. Nayak et al., *Search for the associated production of Higgs boson with top-quark pair in final states with electrons, muons, and taus with data recorded in 2017*, CMS AN-2018/098

2. ..., A. Nayak et al., *Tau Reconstruction and Performance using the 2016 Dataset*, CMS-AN-2017-094

3. ..., A. Nayak et al., *Search for ttH in final states containing one tau lepton*, CMS-AN-2016-372
4. ..., A. Nayak et al., *Search for $ttH$ in $H \to \tau\tau$ channel at 13 TeV with matrix element method*, CMS-AN-2016-273

5. ..., A. Nayak et al., *Tau reconstruction and identification performance in run 2*, CMS AN-2015/229


7. A. Nayak, A. Raspereza, C. Veelken, *Resolution study of observables for measurement of the Higgs CP properties in $H \to \tau\tau$ events*, CMS AN-2015/169

8. ..., A. Nayak et al., *Search for MSSM Neutral Higgs Bosons Decaying to Tau Pairs in pp Collisions with improved Tau ID and Tau $P_T$ Categories*, CMS AN-2014/074


10. G. Kole, G.B. Mohanty, A. Nayak and A. Nikitenko, *Search for a light charged Higgs boson in the $H^+ \to c\bar{s}$ channel with lepton + jets final states at CMS*, CMS AN-2014/252.

11. ..., A. Nayak, G. Kole, G.B. Mohanty and A. Nikitenko, *Search for a light charged Higgs boson in the $H^+ \to c\bar{s}$ channel at CMS*, CMS AN-2013/056.

12. ..., A. Nayak et al., *Search for MSSM Neutral Higgs Bosons Decaying to Tau Pairs in pp Collisions*, CMS AN-2013/171.

13. ..., A. Nayak et al., *Search for the Standard-Model Higgs boson decaying to tau pairs in proton-proton collisions at $\sqrt{s} = 7$ and 8 TeV*, CMS AN-2013/206.

14. ..., A. Nayak et al., *Search for Higgs to Tau Tau in the Muon-Tau and Electron-Tau Channels*, CMS AN-2013/178.

15. ..., A. Nayak et al., *Search for Higgs to Tau Tau in the Electron-Muon Channel*, CMS AN-2013/190.

16. ..., A. Nayak et al., *Search for the Higgs boson decaying into TauTau in the full hadronic channel*, CMS AN-2013/189.

17. ..., A. Nayak et al., *Physics Objects in the Higgs to Tau Tau Analysis*, CMS AN-2013/188.

18. ..., A. Nayak et al., *Search for a Standard Model Higgs boson decaying to tau pairs produced in association with a $W$ or $Z$ boson*, CMS AN-2013/187.

19. ..., A. Nayak et al., *Search for Neutral Higgs Bosons in Di-Tau Final States with the full 2011 and 2012 Dataset*, CMS AN-2013/011.


22. B. Parida, A. Nikitenko, G.B. Mohanty, A. Nayak and T. Aziz, *Jet energy resolution with $Z \rightarrow \mu\mu + \text{jet}$ events at $\sqrt{s} = 7$ TeV*, CMS AN-2012/366.

23. ..., A. Nayak et al., *Measurement of the $t\bar{t}$ production cross section in the $e\tau$ and $\mu\tau$ dilepton channels in pp collisions at $\sqrt{s}=7$ TeV*, CMS AN-2011/421.

24. ..., A. Nayak et al., *Search for the charged Higgs boson in the decays of top quark pairs in pp collisions at $\sqrt{s}=7$ TeV*, CMS AN-2011/422.


26. ..., A. Nayak et al., *Measurement of the $t\bar{t}$ production cross section in the $e\tau$ and $\mu\tau$ dilepton channels in pp collisions at $\sqrt{s}=7$ TeV*, CMS AN-2011/245.

27. ..., A. Nayak et al., *Search for the charged Higgs boson in the decays of top quark pairs in pp collisions at $\sqrt{s}=7$ TeV*, CMS AN-2011/175.

28. ..., A. Nayak et al., *Search for the charged Higgs boson in the $e\tau$ and $\mu\tau$ dilepton channels of Top quark pair decays in pp collisions at $\sqrt{s}=7$ TeV*, CMS AN-2011/015.


30. ..., A. Nayak et al., *Measurement of the $t\bar{t}$ production cross section in the dilepton channel at $\sqrt{s}=7$ TeV*, CMS AN-2010/414.

31. ..., A. Nayak et al., *Study of tau reconstruction algorithms using pp collisions data collected at $\sqrt{s} = 7$ TeV*, CMS AN-2010/257.


33. ..., A. Nayak et al., *Study of Top quark events in the dilepton channel with early data CMS AN-2010/200.*


35. A. Nayak, T. Aziz and A. Nikitenko, *Measurement of the $b\bar{b}Z$, $Z \rightarrow \ell^+\ell^-$ cross section with 100 pb$^{-1}$ of early CMS data at the LHC*, CMS AN-2008/020.

36. A. Nayak, T. Aziz and A. Nikitenko, *Search for the $t \rightarrow bH^+, H^+ \rightarrow H_1W, H_1 \rightarrow b\bar{b}$ channel in CPV MSSM scenario in CMS*, CMS AN-2008/025.

37. A. Nayak, T. Aziz and A. Nikitenko, *$b$-Jet Correction using $b\bar{b}Z$, $Z \rightarrow \ell^+\ell^-$ process*, CMS AN-2006/106.