

Publications with CMS

As a member of the CMS Collaboration, I am author of all CMS papers. As of 10.12.2021, I have co-authored 469 CMS publications (426 published) [\[ORCID\]](#) [\[INSPIRE\]](#)

Selected peer-reviewed publications with CMS

1: Search for a W' boson decaying to a top and a bottom quark at $\sqrt{s} = 13$ TeV

CMS Collaboration

[Phys. Lett. B 820 \(2021\) 136535](#)

Most stringent limits published to date on right- and left-handed W' bosons decaying to a top and a bottom quark.

2: Dependence of inclusive jet production on the anti- k_T distance parameter in pp collisions at $\sqrt{s} = 13$ TeV

CMS Collaboration

[JHEP 12 \(2020\) 082](#)

First public results from colliders on the dependence of inclusive jet cross section on jet size.

3: Calibration of the CMS hadron calorimeters using proton-proton collision data at $\sqrt{s} = 13$ TeV

CMS Collaboration

[JINST 15 \(2020\) P05002](#)

The first derivation of absolute calibration of outer hadron calorimeter in particle-flow algorithm in CMS using collider data.

4: Dose rate effects in the radiation damage of the plastic scintillators of the CMS hadron endcap calorimeter

CMS Collaboration

[JINST 11 \(2016\) T10004](#)

Measurements of change in light output by plastic scintillators in the CMS hadron endcap due to irradiation during the collisions at LHC at $\sqrt{s} = 8$ TeV.

Publications outside CMS

1: Jets with electrons from boosted top quarks

Suman Chatterjee, Rohini Godbole, and Tuhin S. Roy

[JHEP 01 \(2020\) 170](#)

A new algorithm to identify boosted top quarks where W boson from top quark decays to an electron using jet substructure techniques.

2: Mixed WIMP-axion dark matter

Suman Chatterjee, Anirban Das, Tousik Samui, and Manibrata Sen

[Phys. Rev. D 100, 115050](#)

A detailed study of the phenomenology of a multi-component dark matter scenario with a scalar WIMP and the QCD axion in the light of the latest data from dark matter detection experiments

and LHC results.

Selected non-peer-reviewed publications

1: Search for W' bosons decaying to a top and a bottom quark at $\sqrt{s} = 13$ TeV in the hadronic final state with CMS

Suman Chatterjee

[PoS LHCP2021 \(2021\) 207](#)

2: Tree boosting for learning EFT parameters

Suman Chatterjee, Nikolaus Frohner, Lukas Lechner, Robert Schöfbeck, Dennis Schwarz

[arXiv:2107.10859](#)

3: Search for a W' boson decaying to a top and a bottom quark at $\sqrt{s} = 13$ TeV

CMS Collaboration

[CMS-PAS-B2G-20-005](#)

4: Inclusive jet results from the CMS experiment

Suman Chatterjee

[PoS EPS-HEP2019 \(2020\) 504](#)

5: Tagging top in leptonic decay

Suman Chatterjee, Rohini Godbole, Tuhin S. Roy

[PoS EPS-HEP2019 \(2020\) 672](#)

6: Measurement of the dependence of inclusive jet production cross sections on the anti- k_T distance parameter in proton-proton collisions at $\sqrt{s} = 13$ TeV

CMS Collaboration

[CMS-PAS-SMP-19-003](#)

7: Les Houches 2017: Physics at TeV Colliders Standard Model Working Group Report

[arXiv:1803.07977](#)

8: HO weight factor in particle-flow algorithm in CMS experiment

Suman Chatterjee, Gobinda Majumder

[Springer Proc.Phys. 203 \(2018\) 829-831](#)