

# Prasant Kumar Rout

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

202  
papers

1,891  
citations

20  
h-index

31  
g-index

215  
ext. papers

2,949  
ext. citations

5.1  
avg, IF

-0.22  
L-index

#	Paper	IF	Citations
202	Combined measurements of Higgs boson couplings in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 421	4.2	153
201	Search for high-mass resonances in dilepton final states in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	63
200	Extraction and validation of a new set of CMS pythia8 tunes from underlying-event measurements. <i>European Physical Journal C</i> , <b>2020</b> , 80, 4	4.2	61
199	Search for narrow and broad dijet resonances in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV and constraints on dark matter mediators and other new particles. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	50
198	Search for additional neutral MSSM Higgs bosons in the $\tau\tau$ final state in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	42
197	Measurement of the inelastic proton-proton cross section at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	41
196	Search for natural and split supersymmetry in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV in final states with jets and missing transverse momentum. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	39
195	Measurements of Higgs boson properties in the diphoton decay channel in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	37
194	Search for vector-like T and B quark pairs in final states with leptons at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	29
193	Measurement of the production cross section, the top quark mass, and the strong coupling constant using dilepton events in pp collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 368	4.2	27
192	Measurement of the weak mixing angle using the forward-backward asymmetry of Drell-Yan events in collisions at 8. <i>European Physical Journal C</i> , <b>2018</b> , 78, 701	4.2	25
191	Search for charged Higgs bosons in the $H\tau^+\tau^-$ decay channel in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	24
190	Search for production of four top quarks in final states with same-sign or multiple leptons in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2020</b> , 80, 75	4.2	24
189	Search for disappearing tracks as a signature of new long-lived particles in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	24
188	Search for third-generation scalar leptoquarks decaying to a top quark and a lepton at. <i>European Physical Journal C</i> , <b>2018</b> , 78, 707	4.2	23
187	Evidence for associated production of a Higgs boson with a top quark pair in final states with electrons, muons, and hadronically decaying $\tau$ leptons at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	23
186	Search for a new scalar resonance decaying to a pair of Z bosons in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	22

185	Search for supersymmetry in proton-proton collisions at 13 TeV in final states with jets and missing transverse momentum. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	21
184	Search for high mass dijet resonances with a new background prediction method in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	20
183	Search for a heavy pseudoscalar boson decaying to a Z and a Higgs boson at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 564	4.2	20
182	Search for a heavy right-handed W boson and a heavy neutrino in events with two same-flavor leptons and two jets at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	20
181	Search for the flavor-changing neutral current interactions of the top quark and the Higgs boson which decays into a pair of b quarks at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	20
180	Measurement of exclusive photoproduction from protons in Pb collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 277	4.2	19
179	Measurement of differential cross sections for boson production in association with jets in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2018</b> , 78, 965	4.2	19
178	Search for new physics in dijet angular distributions using proton-proton collisions at and constraints on dark matter and other models. <i>European Physical Journal C</i> , <b>2018</b> , 78, 789	4.2	19
177	Search for vector-like quarks in events with two oppositely charged leptons and jets in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 364	4.2	18
176	Search for heavy neutrinos and third-generation leptoquarks in hadronic states of two $\tau$ leptons and two jets in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	18
175	Search for heavy Higgs bosons decaying to a top quark pair in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	18
174	Search for ( $\overline{\text{t}}\text{H}$ ) production in the ( $\text{H}$ to $\overline{\text{b}}\text{b}$ ) decay channel with leptonic ( $\overline{\text{t}}$ ) decays in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	17
173	Searches for physics beyond the standard model with the variable in hadronic final states with and without disappearing tracks in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2020</b> , 80, 3	4.2	16
172	Search for a charged Higgs boson decaying into top and bottom quarks in events with electrons or muons in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	16
171	Search for a charged Higgs boson decaying to charm and bottom quarks in proton-proton collisions at ( $\sqrt{s}$ )=8 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	16
170	Measurements of ( $\overline{\text{t}}$ ) differential cross sections in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV using events containing two leptons. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	15
169	Search for new particles decaying to a jet and an emerging jet. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	15
168	Search for high-mass resonances in final states with a lepton and missing transverse momentum at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	15

167	Search for heavy Majorana neutrinos in same-sign dilepton channels in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	14
166	Evidence for Higgs boson decay to a pair of muons. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	14
165	Search for an exotic decay of the Higgs boson to a pair of light pseudoscalars in the final state of two muons and two $\tau$ leptons in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	14
164	Measurements of the differential jet cross section as a function of the jet mass in dijet events from proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	14
163	Search for supersymmetry in events with a $\tau$ lepton pair and missing transverse momentum in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	14
162	Observation of proton-tagged, central (semi)exclusive production of high-mass lepton pairs in pp collisions at 13 TeV with the CMS-TOTEM precision proton spectrometer. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	14
161	Search for resonant ( $\overline{\text{t}}\text{t}$ ) production in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	13
160	Measurement of exclusive $\tau$ photoproduction in ultraperipheral pPb collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 702	4-2	13
159	Measurement of the top quark mass in the all-jets final state at and combination with the lepton+jets channel. <i>European Physical Journal C</i> , <b>2019</b> , 79, 313	4-2	13
158	Measurement of ( $\bar{t}t$ ) normalised multi-differential cross sections in ( $pp$ ) collisions at ( $\sqrt{s}=13$ , TeV), and simultaneous determination of the strong coupling strength, top quark pole mass, and parton distribution functions. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4-2	13
157	Search for charged Higgs bosons decaying into a top and a bottom quark in the all-jet final state of pp collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	13
156	Search for ( $\overline{\text{t}}\text{t}\text{H}$ ) production in the all-jet final state in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	13
155	Measurement of the top quark mass with lepton+jets final states using collisions at. <i>European Physical Journal C</i> , <b>2018</b> , 78, 891	4-2	13
154	Search for dark matter produced in association with a Higgs boson decaying to a pair of bottom quarks in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 280	4-2	12
153	Search for direct top squark pair production in events with one lepton, jets, and missing transverse momentum at 13 TeV with the CMS experiment. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	12
152	Searches for pair production of charginos and top squarks in final states with two oppositely charged leptons in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	12
151	Studies of $\eta$ and mesons including the observation of the decay in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2018</b> , 78, 939	4-2	12
150	Electroweak production of two jets in association with a Z boson in proton-proton collisions at ( $\sqrt{s}=13$ , TeV). <i>European Physical Journal C</i> , <b>2018</b> , 78, 1	4-2	12

149	Search for single production of vector-like quarks decaying to a b quark and a Higgs boson. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	12
148	Search for a heavy Higgs boson decaying to a pair of W bosons in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	11
147	Measurements of differential Z boson production cross sections in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	11
146	Charged-particle nuclear modification factors in XeXe collisions at ( $\sqrt{s_{\mathrm{NN}}}$ ) = 5.44 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	11
145	Search for the decay of a Higgs boson in the $\Upsilon$ channel in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	11
144	Search for beyond the standard model Higgs bosons decaying into a ( $\overline{\mathrm{b}}\mathrm{b}$ ) pair in pp collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	11
143	Measurements of the pp $\gamma$ WZ inclusive and differential production cross sections and constraints on charged anomalous triple gauge couplings at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	10
142	Search for new neutral Higgs bosons through the ( $\mathrm{H}$ to $\mathrm{ZA}$ to $\ell\ell^+\ell^-\overline{\mathrm{b}}\mathrm{b}$ ) process in pp collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	10
141	A multi-dimensional search for new heavy resonances decaying to boosted $\gamma\gamma$ or boson pairs in the dijet final state at 13 TeV. <i>European Physical Journal C</i> , <b>2020</b> , 80, 237	4.2	10
140	Measurement of properties of ( $\mathrm{B}_s^0 \rightarrow \mu^+\mu^-$ ) decays and search for $\mathrm{B}_0 \rightarrow \mu^+\mu^-$ with the CMS experiment. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	10
139	Search for resonant pair production of Higgs bosons decaying to bottom quark-antiquark pairs in proton-proton collisions at 13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	10
138	Measurements of differential cross sections of top quark pair production as a function of kinematic event variables in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	10
137	Search for new physics in final states with a single photon and missing transverse momentum in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	9
136	A search for the standard model Higgs boson decaying to charm quarks. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	9
135	Search for top quark partners with charge 5/3 in the same-sign dilepton and single-lepton final states in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	9
134	Search for anomalous triple gauge couplings in WW and WZ production in lepton + jet events in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	9
133	Search for a light pseudoscalar Higgs boson in the boosted $\Upsilon$ final state in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	9
132	Search for black holes and sphalerons in high-multiplicity final states in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	9

131	Measurement of charged particle spectra in minimum-bias events from proton-proton collisions at. <i>European Physical Journal C</i> , <b>2018</b> , 78, 697	4.2	9
130	Search for a singly produced third-generation scalar leptoquark decaying to a lepton and a bottom quark in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	9
129	Search for supersymmetry with a compressed mass spectrum in the vector boson fusion topology with 1-lepton and 0-lepton final states in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	8
128	Search for contact interactions and large extra dimensions in the dilepton mass spectra from proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	8
127	Measurement of inclusive and differential Higgs boson production cross sections in the diphoton decay channel in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	8
126	Measurement of top quark pair production in association with a Z boson in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	8
125	Comparing transverse momentum balance of b jet pairs in pp and PbPb collisions at ( $\sqrt{s_{\text{NN}}}=5.02$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	8
124	Search for dark matter produced in association with a single top quark or a top quark pair in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	8
123	Search for electroweak production of a vector-like T quark using fully hadronic final states. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	8
122	Search for physics beyond the standard model in multilepton final states in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	8
121	Measurement of the energy density as a function of pseudorapidity in proton-proton collisions at ( $\sqrt{s}=13$ ,text {TeV}). <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4.2	7
120	Search for rare decays of and Higgs bosons to and a photon in proton-proton collisions at = 13. <i>European Physical Journal C</i> , <b>2019</b> , 79, 94	4.2	7
119	Search for production of Higgs boson pairs in the four b quark final state using large-area jets in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	7
118	Search for heavy resonances decaying into two Higgs bosons or into a Higgs boson and a W or Z boson in proton-proton collisions at 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	7
117	Measurement of the cross section for electroweak production of a Z boson, a photon and two jets in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV and constraints on anomalous quartic couplings. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	7
116	Search for dark matter particles produced in association with a Higgs boson in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	7
115	Jet properties in PbPb and pp collisions at ( $\sqrt{s_{\text{NN}}}=5.02$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	7
114	Search for dark photons in decays of Higgs bosons produced in association with Z bosons in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	7

113	Search for dark matter produced in association with a leptonically decaying boson in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2021</b> , 81, 13	4.2	7
112	Search for resonances in the mass spectrum of muon pairs produced in association with b quark jets in proton-proton collisions at ( $\sqrt{s}=8$ ) and 13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	7
111	Search for heavy resonances decaying into a vector boson and a Higgs boson in final states with charged leptons, neutrinos and b quarks at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	7
110	Search for a heavy resonance decaying into a Z boson and a Z or W boson in $2\bar{q}q$ final states at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	7
109	Search for dark matter produced in association with a Higgs boson decaying to $\bar{b}b$ or $\tau\tau$ at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	7
108	Search for a heavy resonance decaying to a pair of vector bosons in the lepton plus merged jet final state at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	7
107	Precision luminosity measurement in proton-proton collisions at in 2015 and 2016 at CMS. <i>European Physical Journal C</i> , <b>2021</b> , 81, 800	4.2	7
106	Search for single production of vector-like quarks decaying to a top quark and a boson in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 90	4.2	6
105	Mixed higher-order anisotropic flow and nonlinear response coefficients of charged particles in collisions at and 5.02. <i>European Physical Journal C</i> , <b>2020</b> , 80, 534	4.2	6
104	Measurement of electroweak production of a boson in association with two jets in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2020</b> , 80, 43	4.2	6
103	Search for lepton flavour violating decays of a neutral heavy Higgs boson to $\bar{b}b$ and $e\bar{\nu}_e$ in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	6
102	Search for a heavy resonance decaying to a top quark and a vector-like top quark in the lepton + jets final state in pp collisions at ( $\sqrt{s} = 13, \text{TeV}$ ). <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4.2	6
101	Search for supersymmetry in final states with two oppositely charged same-flavor leptons and missing transverse momentum in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	6
100	Measurement of the differential Drell-Yan cross section in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	6
99	Measurement of the average very forward energy as a function of the track multiplicity at central pseudorapidities in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 893	4.2	6
98	Search for new physics in top quark production in dilepton final states in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 886	4.2	6
97	Search for decays of stopped exotic long-lived particles produced in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	6
96	Search for top squarks decaying via four-body or chargino-mediated modes in single-lepton final states in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	6

95	Search for supersymmetry in final states with photons and missing transverse momentum in proton-proton collisions at 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	5
94	Search for a heavy pseudoscalar Higgs boson decaying into a 125 GeV Higgs boson and a Z boson in final states with two tau and two light leptons at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	5
93	Measurements of production cross sections and constraints on anomalous triple gauge couplings at. <i>European Physical Journal C</i> , <b>2021</b> , 81, 200	4-2	5
92	Measurement of the Higgs boson production rate in association with top quarks in final states with electrons, muons, and hadronically decaying tau leptons at. <i>European Physical Journal C</i> , <b>2021</b> , 81, 378	4-2	5
91	Measurements of production cross sections of the Higgs boson in the four-lepton final state in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2021</b> , 81, 488	4-2	5
90	Search for resonant and nonresonant new phenomena in high-mass dilepton final states at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	5
89	Search for resonances decaying to a pair of Higgs bosons in the $b(\overline{\text{b}})q(\overline{\text{q}})$ final state in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	5
88	Search for top squark pair production using dilepton final states in collision data collected at. <i>European Physical Journal C</i> , <b>2021</b> , 81, 3	4-2	5
87	Measurement of the groomed jet mass in PbPb and pp collisions at ( $\sqrt{s_{\text{NN}}}$ )=5.02 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	5
86	Measurement of the production cross section for single top quarks in association with W bosons in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	5
85	Search for a low-mass $\chi$ resonance in association with a bottom quark in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	4
84	Search for the pair production of light top squarks in the $e\chi\chi$ final state in proton-proton collisions at ( $\sqrt{s}$ )=13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	4
83	Search for nonresonant Higgs boson pair production in the $(\text{b}\overline{\text{b}}\text{b}\overline{\text{b}})$ final state at ( $\sqrt{s}$ ) = 13 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	4
82	Study of the underlying event in top quark pair production in collisions at 13. <i>European Physical Journal C</i> , <b>2019</b> , 79, 123	4-2	4
81	Measurement of differential cross sections for inclusive isolated-photon and photon+jet production in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 20	4-2	4
80	Evidence for $(\text{W}\text{W})$ production from double-parton interactions in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4-2	4
79	Search for a $W'$ boson decaying to a vector-like quark and a top or bottom quark in the all-jets final state. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	4
78	Measurement of differential cross sections and charge ratios for $s$ -channel single top quark production in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2020</b> , 80, 370	4-2	4



77	Measurement of quark- and gluon-like jet fractions using jet charge in PbPb and pp collisions at 5.02 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	4
76	Search for nonresonant Higgs boson pair production in final states with two bottom quarks and two photons in proton-proton collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	4
75	Search for new physics in top quark production with additional leptons in proton-proton collisions at $(\sqrt{s}) = 13$ TeV using effective field theory. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	4
74	MUSiC: a model-unspecific search for new physics in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2021</b> , 81, 629	4-2	4
73	Search for the associated production of the Higgs boson and a vector boson in proton-proton collisions at $(\sqrt{s}) = 13$ TeV via Higgs boson decays to $\ell$ leptons. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	3
72	Search for direct pair production of supersymmetric partners to the lepton in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2020</b> , 80, 189	4-2	3
71	Measurement of the top quark forward-backward production asymmetry and the anomalous chromoelectric and chromomagnetic moments in pp collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	3
70	Combined searches for the production of supersymmetric top quark partners in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2021</b> , 81, 970	4-2	3
69	Search for new particles in events with energetic jets and large missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	3
68	Dependence of inclusive jet production on the anti-kT distance parameter in pp collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	3
67	Investigation into the event-activity dependence of $\langle n \rangle$ relative production in proton-proton collisions at $(\sqrt{s}) = 7$ TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	3
66	A Deep Neural Network for Simultaneous Estimation of b Jet Energy and Resolution. <i>Computing and Software for Big Science</i> , <b>2020</b> , 4, 10	6	3
65	Measurement of the inclusive and differential Higgs boson production cross sections in the leptonic WW decay mode at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	3
64	Measurements of Higgs boson production cross sections and couplings in the diphoton decay channel at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	3
63	Event shape variables measured using multijet final states in proton-proton collisions at $(\sqrt{s}=13)$ TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	3
62	Search for lepton-flavor violating decays of heavy resonances and quantum black holes to $e\ell$ final states in proton-proton collisions at $(\sqrt{s}=13)$ TeV. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5-4	3
61	Search for charged Higgs bosons produced in vector boson fusion processes and decaying into vector boson pairs in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2021</b> , 81, 723	4-2	3
60	Search for resonant production of second-generation sleptons with same-sign dimuon events in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 305	4-2	2

59	Search for supersymmetry in events with a photon, a lepton, and missing transverse momentum in proton-proton collisions at ( $\sqrt{s} = 13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	2
58	Search for decays of the 125 GeV Higgs boson into a Z boson and a $\tau$ meson. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	2
57	Determination of the strong coupling constant $\alpha_S(m_Z)$ from measurements of inclusive $W$ and Z boson production cross sections in proton-proton collisions at ( $\sqrt{s} = 7$ and 8 TeV). <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	2
56	Inclusive search for supersymmetry in pp collisions at ( $\sqrt{s}=13$ ) TeV using razor variables and boosted object identification in zero and one lepton final states. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	2
55	Search for excited leptons in final states in proton-proton collisions at ( $\sqrt{s}=13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	2
54	Search for a heavy Higgs boson decaying into two lighter Higgs bosons in the $B\bar{B}$ final state at 13 TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	2
53	Search for supersymmetry using Higgs boson to diphoton decays at ( $\sqrt{s} = 13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	2
52	The production of isolated photons in PbPb and pp collisions at ( $\sqrt{s_{\text{NN}}}$ ) = 5.02 TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	2
51	Bose-Einstein correlations of charged hadrons in proton-proton collisions at ( $\sqrt{s} = 13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	2
50	Study of central exclusive production in proton-proton collisions at and 13TeV. <i>European Physical Journal C</i> , <b>2020</b> , 80, 718	4-2	2
49	Search for physics beyond the standard model in events with jets and two same-sign or at least three charged leptons in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2020</b> , 80, 752	4-2	2
48	Search for dark photons in Higgs boson production via vector boson fusion in proton-proton collisions at ( $\sqrt{s} = 13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	2
47	Angular analysis of the decay $B^+ \rightarrow jK^*(892) + \mu^+\mu^-$ in proton-proton collisions at ( $\sqrt{s} = 8$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	2
46	First measurement of large area jet transverse momentum spectra in heavy-ion collisions. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	2
45	Search for the production of four top quarks in the single-lepton and opposite-sign dilepton final states in proton-proton collisions at ( $\sqrt{s} = 13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	2
44	Search for supersymmetry in events with a photon, jets, $\tau$ -jets, and missing transverse momentum in proton-proton collisions at 13. <i>European Physical Journal C</i> , <b>2019</b> , 79, 444	4-2	1
43	Search for supersymmetry in proton-proton collisions at ( $\sqrt{s} = 13$ ) TeV in events with high-momentum Z bosons and missing transverse momentum. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	1
42	Search for an excited lepton that decays via a contact interaction to a lepton and two jets in proton-proton collisions at ( $\sqrt{s} = 13$ ) TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	1

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40	Search for chargino-neutralino production in events with Higgs and W bosons using 137 fb <sup>-1</sup> of proton-proton collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	1
39	Measurements of the $pp \rightarrow W\mu\mu$ and $pp \rightarrow Z\mu\mu$ cross sections at $(\sqrt{s}) = 13$ TeV and limits on anomalous quartic gauge couplings. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	1
38	Study of the $(\mathbf{B}^+ \rightarrow \mathbf{J}/\psi \overline{\Lambda} \mathbf{p})$ decay in proton-proton collisions at $(\sqrt{s}) = 8$ TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	1
37	Inclusive search for highly boosted Higgs bosons decaying to bottom quark-antiquark pairs in proton-proton collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	1
36	Measurement of the cross section for $(\mathbf{t} \overline{\mathbf{t}})$ production with additional jets and b jets in pp collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	1
35	Measurement of differential cross sections for Z bosons produced in association with charm jets in pp collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	1
34	Development and validation of HERWIG <sup>++</sup> tunes from CMS underlying-event measurements. <i>European Physical Journal C</i> , <b>2021</b> , 81, 312	4-2	1
33	Measurements of triple-differential cross sections for inclusive isolated-photon+jet events in collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 969	4-2	1
32	Search for the lepton flavor violating decay $\mu \rightarrow e \gamma$ in proton-proton collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	1
31	Search for flavor-changing neutral current interactions of the top quark and the Higgs boson decaying to a bottom quark-antiquark pair at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5-4	1
30	Search for a heavy resonance decaying to a top quark and a W boson at $\sqrt{s} = 13$ TeV in the fully hadronic final state. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	1
29	Azimuthal separation in nearly back-to-back jet topologies in inclusive 2- and 3-jet events in collisions at. <i>European Physical Journal C</i> , <b>2019</b> , 79, 773	4-2	0
28	Measurement of double-parton scattering in inclusive production of four jets with low transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5-4	0
27	Study of quark and gluon jet substructure in Z+jet and dijet events from pp collisions. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5-4	0
26	Measurement of single-diffractive dijet production in proton-proton collisions at with the CMS and TOTEM experiments. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1164	4-2	0
25	Observation of $tW$ production in the single-lepton channel in pp collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	0
24	Measurement of b jet shapes in proton-proton collisions at $(\sqrt{s}) = 5.02$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5-4	0

23	Study of Drell-Yan dimuon production in proton-lead collisions at $(\sqrt{s_{\mathrm{NN}}}) = 8.16$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	○
22	In-medium modification of dijets in PbPb collisions at $(\sqrt{s_{\mathrm{NN}}}) = 5.02$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	○
21	Measurement of the top quark pair production cross section in dilepton final states containing one lepton in pp collisions at $(\sqrt{s}) = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	○
20	Search for a heavy vector resonance decaying to a $\Upsilon$ boson and a Higgs boson in proton-proton collisions at. <i>European Physical Journal C</i> , <b>2021</b> , 81, 688	4.2	○
19	Measurements of angular distance and momentum ratio distributions in three-jet and + two-jet final states in collisions. <i>European Physical Journal C</i> , <b>2021</b> , 81, 852	4.2	○
18	Inclusive and differential cross section measurements of single top quark production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5.4	○
17	Search for long-lived particles decaying to leptons with large impact parameter in proton-proton collisions at .. <i>European Physical Journal C</i> , <b>2022</b> , 82, 153	4.2	○
16	Search for long-lived particles produced in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5.4	○
15	Search for low-mass dilepton resonances in Higgs boson decays to four-lepton final states in proton-proton collisions at .. <i>European Physical Journal C</i> , <b>2022</b> , 82, 290	4.2	○
14	Measurement of the inclusive and differential $t\bar{t}$ cross sections in the single-lepton channel and EFT interpretation at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	○
13	Measurement of the top quark mass using events with a single reconstructed top quark in pp collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	○
12	Probing effective field theory operators in the associated production of top quarks with a Z boson in multilepton final states at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	○
11	Search for supersymmetry in final states with two or three soft leptons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5.4	○
10	Search for a right-handed W boson and a heavy neutrino in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5.4	○
9	Search for a heavy resonance decaying into a top quark and a W boson in the lepton+jets final state at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5.4	○
8	Search for heavy resonances decaying to ZZ or ZW and axion-like particles mediating nonresonant ZZ or ZH production at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5.4	○
7	Measurement and QCD analysis of double-differential inclusive jet cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5.4	○
6	Search for electroweak production of charginos and neutralinos in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5.4	○

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- 1 Measurement of the inclusive  $\overline{\text{t}}\text{t}$  production cross section in proton-proton collisions at  $\sqrt{s} = 5.02$  TeV. *Journal of High Energy Physics*, **2022**, 2022, 1 5-4