

Mateo Ramírez García

List of Publications by Year in descending order

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Version: 2024-02-01

123
papers

2,960
citations

201674

27
h-index

206112

48
g-index

123
all docs

123
docs citations

123
times ranked

5943
citing authors

#	ARTICLE	IF	CITATIONS
1	Combined measurements of Higgs boson couplings in proton-proton collisions at $\sqrt{s}=13$, $\text{ext } \{V\}$ TeV. European Physical Journal C, 2019, 79, 421.	3.9	355
2	Extraction and validation of a new set of CMS pythia8 tunes from underlying-event measurements. European Physical Journal C, 2020, 80, 4.	3.9	198
3	Precision luminosity measurement in proton-proton collisions at $\sqrt{s} = 13$, $\text{hbox } \{TeV\}$ in 2015 and 2016 at CMS. European Physical Journal C, 2021, 81, 800.	3.9	123
4	Performance of the CMS Level-1 trigger in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2020, 15, P10017-P10017.	1.2	84
5	Search for production of four top quarks in final states with same-sign or multiple leptons in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2020, 80, 75.	3.9	78
6	Searches for physics beyond the standard model with the M_{T2} variable in hadronic final states with and without disappearing tracks in proton-proton collisions at $\sqrt{s}=13$, $\text{ext } \{V\}$ TeV. European Physical Journal C, 2020, 80, 3.	3.9	70
7	Measurement of the $\sigma(t\bar{t})$ production cross section, the top quark mass, and the strong coupling constant using dilepton events in pp collisions at. European Physical Journal C, 2019, 79, 368.	3.9	68
8	Search for high mass dijet resonances with a new background prediction method in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	66
9	Search for charged Higgs bosons in the $H \rightarrow \tau^+ \tau^-$ decay channel in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	54
10	Search for supersymmetry in proton-proton collisions at 13 TeV in final states with jets and missing transverse momentum. Journal of High Energy Physics, 2019, 2019, 1.	4.7	54
11	Evidence for Higgs boson decay to a pair of muons. Journal of High Energy Physics, 2021, 2021, 1.	4.7	54
12	Search for a heavy pseudoscalar boson decaying to a Z and a Higgs boson at $\sqrt{s}=13$, $\text{ext } \{V\}$ TeV. European Physical Journal C, 2019, 79, 564.	3.9	50
13	Search for vector-like quarks in events with two oppositely charged leptons and jets in proton-proton collisions at $\sqrt{s} = 13$, $\text{ext } \{V\}$ TeV. European Physical Journal C, 2019, 79, 364.	3.9	48
14	Measurement of properties of $B_s^0 \rightarrow \tau^+ \tau^-$ decays and search for $B_s^0 \rightarrow \tau^+ \tau^-$ with the CMS experiment. Journal of High Energy Physics, 2020, 2020, 1.	4.7	41
15	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. Journal of High Energy Physics, 2020, 2020, 1.	4.7	41
16	Measurement of the top quark mass in the all-jets final state at $\sqrt{s}=13$, $\text{ext } \{TeV\}$ $s = 13$ TeV and combination with the lepton+jets channel. European Physical Journal C, 2019, 79, 313.	3.9	40
17	Search for heavy Higgs bosons decaying to a top quark pair in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	37
18	Measurements of production cross sections of the Higgs boson in the four-lepton final state in proton-proton collisions at $\sqrt{s} = 13$, $\text{ext } \{TeV\}$ TeV. European Physical Journal C, 2021, 81, 488.	3.9	35

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19	Search for an exotic decay of the Higgs boson to a pair of light pseudoscalars in the final state of two muons and two \bar{l} , leptons in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	34
20	Search for single production of vector-like quarks decaying to a top quark and a W boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2019, 79, 90.	3.9	34
21	Search for heavy neutrinos and third-generation leptoquarks in hadronic states of two \bar{l} , leptons and two jets in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	33
22	Search for dark matter produced in association with a leptonically decaying Z boson in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 13.	3.9	33
23	Search for top squark pair production using dilepton final states in collision data collected at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 3.	3.9	33
24	Measurement of 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. European Physical Journal C, 2020, 80, 1.	3.9	33
25	A multi-dimensional search for new heavy resonances decaying to boosted W , Z , or Z boson pairs in the dijet final state at $\sqrt{s}=13$ TeV. European Physical Journal C, 2020, 80, 237.	3.9	31
26	Search for dark matter produced in association with a Higgs boson decaying to a pair of bottom quarks in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2019, 79, 280.	3.9	29
27	Measurements of differential cross sections in proton-proton collisions at $\sqrt{s}=13$ TeV using events containing two leptons. Journal of High Energy Physics, 2019, 2019, 1.	4.7	28
28	Search for $\overline{t}tH$ production in the $H \rightarrow b\bar{b}$ decay channel with leptonic t decays in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	28
29	Measurements of differential Z boson production cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	28
30	Performance of the reconstruction and identification of high-momentum muons in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2020, 15, P02027-P02027.	1.2	27
31	Search for new neutral Higgs bosons through the $H \rightarrow Z A \rightarrow e^+e^- b\bar{b}$ process in pp collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	27
32	Measurements of Higgs boson production cross sections and couplings in the diphoton decay channel at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	27
33	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. Journal of High Energy Physics, 2021, 2021, 1.	4.7	26
34	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. Journal of High Energy Physics, 2020, 2020, 1.	4.7	26
35	Search for physics beyond the standard model in multilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	25
36	Search for a heavy Higgs boson decaying to a pair of W bosons in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	25

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37	Search for new particles decaying to a jet and an emerging jet. Journal of High Energy Physics, 2019, 2019, 1.	4.7	24
38	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. Journal of High Energy Physics, 2018, 2018, 1.	4.7	23
39	Search for resonant $\overline{t}t$ production in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	23
40	Search for a light pseudoscalar Higgs boson in the boosted $\hat{1}/4\hat{1}/4\hat{1},\hat{1}$, final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	23
41	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 $\sqrt{s}=13,\text{TeV}$. European Physical Journal C, 2020, 80, 752.	3.9	23
42	Search for direct pair production of supersymmetric partners to the τ^{\pm} lepton in proton-proton collisions at $\sqrt{s}=13,\text{TeV}$. European Physical Journal C, 2020, 80, 189.	3.9	22
43	Measurement of differential cross sections and charge ratios for t-channel single top quark production in proton-proton collisions at $\sqrt{s}=13\text{TeV}$. European Physical Journal C, 2020, 80, 370.	3.9	22
44	A Deep Neural Network for Simultaneous Estimation of b Jet Energy and Resolution. Computing and Software for Big Science, 2020, 4, 10.	2.9	21
45	Search for direct top squark pair production in events with one lepton, jets, and missing transverse momentum at 13 TeV with the CMS experiment. Journal of High Energy Physics, 2020, 2020, 1.	4.7	21
46	Search for rare decays of Z and Higgs bosons to $J/\psi/\psi'$ and a photon in proton-proton collisions at $\sqrt{s} = 13\text{TeV}$. European Physical Journal C, 2019, 79, 94.	3.9	20
47	Measurement of top quark pair production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	20
48	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. Journal of High Energy Physics, 2020, 2020, 1.	4.7	20
49	A search for the standard model Higgs boson decaying to charm quarks. Journal of High Energy Physics, 2020, 2020, 1.	4.7	20
50	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. Journal of High Energy Physics, 2018, 2018, 1.	4.7	18
51	Search for low-mass dilepton resonances in Higgs boson decays to four-lepton final states in proton-proton collisions at $\sqrt{s}=13,\text{TeV}$. European Physical Journal C, 2022, 82, 290.	3.9	18
52	Charged-particle nuclear modification factors in XeXe collisions at $\sqrt{s_{NN}} = 5.44$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	17
53	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. Journal of High Energy Physics, 2019, 2019, 1.	4.7	17
54	Search for new physics in top quark production in dilepton final states in proton-proton collisions at $\sqrt{s} = 13,\text{TeV}$. European Physical Journal C, 2019, 79, 886.	3.9	16

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55	Search for new physics in final states with a single photon and missing transverse momentum in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	15
56	Search for lepton flavour violating decays of a neutral heavy Higgs boson to $\hat{1}/4\tilde{l}$, and $e\tilde{l}$, in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	15
57	Measurement of the inclusive and differential Higgs boson production cross sections in the leptonic WW decay mode at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	15
58	Search for anomalous triple gauge couplings in WW and WZ production in lepton + jet events in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	15
59	Studies of $\mathcal{B}(\tilde{B} \rightarrow \tilde{B} + \gamma)$ and $\mathcal{B}(\tilde{B} \rightarrow \tilde{B} + e\gamma)$		

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73	Measurement of the groomed jet mass in PbPb and pp collisions at $\sqrt{s_{\mathrm{NN}}}=5.02$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	12
74	Search for dark matter produced in association with a Higgs boson decaying to $\tilde{\chi}_1^0$ or $\tilde{\chi}_1^\pm, \tilde{\chi}_2^0$ at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	12
75	Measurement of the energy density as a function of pseudorapidity in proton-proton collisions at $\sqrt{s}=13$, ext {TeV} TeV. European Physical Journal C, 2019, 79, 1.	3.9	12
76	Measurement of the average very forward energy as a function of the track multiplicity at central pseudorapidities in proton-proton collisions at $\sqrt{s}=13$, ext {TeV} TeV. European Physical Journal C, 2019, 79, 893.	3.9	12
77	Investigation into the event-activity dependence of $\tilde{Y}(nS)$ relative production in proton-proton collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	12
78	Search for new physics in top quark production with additional leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV using effective field theory. Journal of High Energy Physics, 2021, 2021, 1.	4.7	12
79	Search for supersymmetry in events with a photon, jets, \mathcal{E}_T -jets, and missing transverse momentum in proton-proton collisions at 13 , ext {TeV} TeV. European Physical Journal C, 2019, 79, 444.	3.9	11
80	Search for nonresonant Higgs boson pair production in the \mathcal{E}_T final state at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	11
81	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. Journal of High Energy Physics, 2019, 2019, 1.	4.7	11
82	Bose-Einstein correlations of charged hadrons in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	11
83	Measurement of electroweak production of a W boson in association with two jets in proton-proton collisions at $\sqrt{s}=13$, ext {TeV} TeV. European Physical Journal C, 2020, 80, 43.	3.9	11
84	Search for resonances decaying to a pair of Higgs bosons in the $b\overline{b}q\overline{q}$ final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	10
85	Measurement of quark- and gluon-like jet fractions using jet charge in PbPb and pp collisions at 5.02 TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	10
86	Evidence for W production from double-parton interactions in proton-proton collisions at $\sqrt{s} = 13$, ext {TeV} TeV. European Physical Journal C, 2020, 80, 1.	3.9	10
87	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. Journal of High Energy Physics, 2018, 2018, 1.	4.7	9
88	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 $\sqrt{s} = 13$, ext {TeV} TeV s = 13 TeV. European Physical Journal C, 2019, 79, 1.	3.9	9
89	Search for a low-mass $\tilde{\chi}_1^0, \tilde{\chi}_1^\pm$ resonance in association with a bottom quark in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	9
90	Search for supersymmetry in final states with photons and missing transverse momentum in proton-proton collisions at 13 TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	8

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91	Dependence of inclusive jet production on the anti-kT distance parameter in pp collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	8
92	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 \tilde{l}, \tilde{l}^* , leptons. Journal of High Energy Physics, 2019, 2019, 1.	4.7	7
93	The CMS RPC detector performance and stability during LHC RUN-2. Journal of Instrumentation, 2019, 14, C11012-C11012.	1.2	7
94	Study of central exclusive "Equation missing" \leftarrow No EquationSource Format="TEX", only image \rightarrow production in proton-proton collisions at $\sqrt{s} = 5.02$ TeV and 13 TeV. European Physical Journal C, 2020, 80, 718.	3.9	7
95	Measurement of the top quark forward-backward production asymmetry and the anomalous chromoelectric and chromomagnetic moments in pp collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	7
96	Search for supersymmetry in events with a photon, a lepton, and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	6
97	Measurements of triple-differential cross sections for inclusive isolated-photon+jet events in pp collisions at $\sqrt{s} = 8, \text{ext } \{TeV\}$. European Physical Journal C, 2019, 79, 969.	3.9	6
98	Search for decays of the 125 GeV Higgs boson into a Z boson and a $\tilde{l} \cdot \tilde{l}^*$ meson. Journal of High Energy Physics, 2020, 2020, 1.	4.7	6
99	Determination of the strong coupling constant $\hat{\alpha}_S(m_Z)$ from measurements of inclusive W_{\pm} and Z boson production cross sections in proton-proton collisions at $\sqrt{s} = 7$ and 8 TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	6
100	Search for a $W_{\pm} \epsilon^2$ boson decaying to a vector-like quark and a top or bottom quark in the all-jets final state. Journal of High Energy Physics, 2019, 2019, 1.	4.7	5
101	Search for the pair production of light top squarks in the $e_{\pm} \tilde{l}^{\pm} \tilde{l}^{\pm}$ final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	5
102	Measurement of the cross section for $\mathcal{M}(\overline{t}t)$ production with additional jets and b jets in pp collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	5
103	Event shape variables measured using multijet final states in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	4
104	Long-term performance and longevity studies of the CMS Resistive Plate Chambers. Journal of Instrumentation, 2018, 13, P08024-P08024.	1.2	4
105	Search for resonant production of second-generation sleptons with same-sign dimuon events in proton-proton collisions at $\sqrt{s} = 13, \text{ext } \{TeV\}$ $s = 13$ TeV. European Physical Journal C, 2019, 79, 305.	3.9	4
106	The production of isolated photons in PbPb and pp collisions at $\sqrt{s_{NN}} = 5.02$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	4
107	Search for supersymmetry in proton-proton collisions at $\sqrt{s} = 13$ TeV in events with high-momentum Z bosons and missing transverse momentum. Journal of High Energy Physics, 2020, 2020, 1.	4.7	4
108	Search for supersymmetry using Higgs boson to diphoton decays at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	4

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109	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. Journal of High Energy Physics, 2019, 2019, 1.	4.7	3
110	Search for excited leptons in $\hat{e}, \hat{\mu}, \hat{\tau}$ final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	3
111	RPC radiation background simulations for the high luminosity phase in the CMS experiment. Journal of Instrumentation, 2019, 14, C09045-C09045.	1.2	3
112	Calibration of the CMS hadron calorimeters using proton-proton collision data at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2020, 15, P05002-P05002.	1.2	3
113	Search for the lepton flavor violating decay $\tilde{l}_i \rightarrow l_j \gamma$ in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	3
114	Study of the $\mathcal{B}(\mathcal{B}_s^0 \rightarrow \mu^+ \mu^- \overline{\Lambda} p)$ decay in proton-proton collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	3
115	Fast timing measurement for CMS RPC Phase-II upgrade. Journal of Instrumentation, 2018, 13, C09001-C09001.	1.2	2
116	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. Journal of High Energy Physics, 2020, 2020, 1.	4.7	2
117	Measurement of the top quark pair production cross section in dilepton final states containing one \tilde{l}_i lepton in pp collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	2
118	High voltage calibration method for the CMS RPC detector. Journal of Instrumentation, 2019, 14, C09046-C09046.	1.2	1
119	Longevity studies on the CMS-RPC system. Journal of Instrumentation, 2019, 14, C05012-C05012.	1.2	1
120	Search for top squark pair production in a final state with two tau leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	1
121	Study of dijet events with large rapidity separation in proton-proton collisions at $\sqrt{s} = 2.76$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	1
122	CMS RPC efficiency measurement using the tag-and-probe method. Journal of Instrumentation, 2019, 14, C10020-C10020.	1.2	0
123	Search for Heavy Stable Charged Particles in the CMS Experiment using the RPC Phase II upgraded detectors. Journal of Instrumentation, 2019, 14, C11011-C11011.	1.2	0