

Alejandro Gomez Espinosa

List of Publications by Year in descending order

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133
papers

3,138
citations

136950

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48
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all docs

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docs citations

138
times ranked

5928
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#	ARTICLE	IF	CITATIONS
1	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. Journal of High Energy Physics, 2022, 2022, 1.	4.7	6
2	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. Journal of High Energy Physics, 2022, 2022, 1.	4.7	5
3	Search for long-lived particles decaying to leptons with large impact parameter in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2022, 82, 153.	3.9	14
4	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
5	Search for low-mass dilepton resonances in Higgs boson decays to four-lepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2022, 82, 290.	3.9	18
6	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. Journal of High Energy Physics, 2022, 2022, 1.	4.7	13
7	Search for long-lived particles decaying into muon pairs in proton-proton collisions at $\sqrt{s} = 13$ TeV collected with a dedicated high-rate data stream. Journal of High Energy Physics, 2022, 2022, 1.	4.7	5
8	Search for a right-handed W boson and a heavy neutrino in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	12
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. Journal of High Energy Physics, 2022, 2022, 1.	4.7	2
10	Search for heavy resonances decaying to ZZ or ZW and axion-like particles mediating nonresonant ZZ or ZH production at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	6
11	Measurement and QCD analysis of double-differential inclusive jet cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	5
12	Search for electroweak production of charginos and neutralinos in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	5
13	Measurement of the inclusive $\overline{t}t$ production cross section in proton-proton collisions at $\sqrt{s} = 5.02$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	2
14	Search for heavy resonances decaying to a pair of Lorentz-boosted Higgs bosons in final states with leptons and a bottom quark pair at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	2
15	Search for higgsinos decaying to two Higgs bosons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	4
16	Observation of $B^0 \rightarrow \mu^+ \mu^- (2S) K^0_{\text{S}}$ and $B^0_{\text{S}} \rightarrow \mu^+ \mu^- (2S) K^0_{\text{S}}$ decays. European Physical Journal C, 2022, 82, 1.	3.9	1
17	Search for the lepton flavor violating decay $\tilde{L} \rightarrow \ell \tau^3/4$ in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	3
18	Search for dark matter produced in association with a leptonically decaying \mathbb{Z} boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 13.	3.9	33

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19	Evidence for Higgs boson decay to a pair of muons. Journal of High Energy Physics, 2021, 2021, 1.	4.7	54
20	Search for top squark pair production using dilepton final states in pp collision data collected at $\sqrt{s}=13, \text{TeV}$. European Physical Journal C, 2021, 81, 3.	3.9	33
21	Search for dark photons in Higgs boson production via vector boson fusion in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	14
22	Measurements of $\text{pp} \rightarrow \text{pp} \text{Z} \text{Z}$ production cross sections and constraints on anomalous triple gauge couplings at $\sqrt{s} = 13, \text{TeV}$. European Physical Journal C, 2021, 81, 200.	3.9	24
23	Measurement of the inclusive and differential Higgs boson production cross sections in the leptonic WW decay mode at $\sqrt{s} = 13 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	15
24	Search for nonresonant Higgs boson pair production in final states with two bottom quarks and two photons in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	26
25	Search for new physics in top quark production with additional leptons in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ using effective field theory. Journal of High Energy Physics, 2021, 2021, 1.	4.7	12
26	Measurement of differential cross sections for Z bosons produced in association with charm jets in pp collisions at $\sqrt{s} = 13 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	5
27	Search for supersymmetry in final states with two oppositely charged same-flavor leptons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	28
28	Development and validation of HERWIG ⁷ tunes from CMS underlying-event measurements. European Physical Journal C, 2021, 81, 312.	3.9	12
29	Angular analysis of the decay $B^+ \rightarrow K^+ \pi^+ \pi^- \pi^0$ in proton-proton collisions at $\sqrt{s} = 8, 13 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	9
30	Measurement of the Higgs boson production rate in association with top quarks in final states with electrons, muons, and hadronically decaying tau leptons at $\sqrt{s} = 13, \text{TeV}$. European Physical Journal C, 2021, 81, 378.	3.9	40
31	Measurement of b jet shapes in proton-proton collisions at $\sqrt{s} = 5.02 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	4
32	First measurement of large area jet transverse momentum spectra in heavy-ion collisions. Journal of High Energy Physics, 2021, 2021, 1.	4.7	11
33	Study of Drell-Yan dimuon production in proton-lead collisions at $\sqrt{s_{\text{NN}}} = 8.16 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	3
34	Measurements of the differential cross sections of the production of Z + jets and $\tilde{\chi}^0 + \text{jets}$ and of Z boson emission collinear with a jet in pp collisions at $\sqrt{s} = 13 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	2
35	Measurement of the Z boson differential production cross section using its invisible decay mode (Z $\rightarrow \nu \bar{\nu}$) in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. Journal of High Energy Physics, 2021, 2021, 1.	4.7	2
36	Measurement of the $W^{\pm} \text{Z}$ Production Cross Section in Proton-Proton Collisions at $\sqrt{s} = 13 \text{ TeV}$ and Constraints on Effective Field Theory Coefficients. Physical Review Letters, 2021, 126, 252002.	7.8	13

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55	Observation of $t\bar{W}$ production in the single-lepton channel in pp collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	2
56	Measurement of prompt open-charm production cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	2
57	Measurement of the inclusive and differential $t\bar{t}$ cross sections in the single-lepton channel and EFT interpretation at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	3
58	Measurement of the top quark mass using events with a single reconstructed top quark in pp collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	5
59	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. Journal of High Energy Physics, 2021, 2021, 1.	4.7	8
60	Search for Long-Lived Particles Decaying in the CMS End Cap Muon Detectors in Proton-Proton Collisions at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2021, 127, 261804.	7.8	17
61	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. Journal of High Energy Physics, 2021, 2021, 1.	4.7	1
62	Observation of the Production of Three Massive Gauge Bosons at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2020, 125, 151802.	7.8	20
63	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
64	Investigation into the event-activity dependence of $\tilde{\gamma}(nS)$ relative production in proton-proton collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	12
65	Search for a light pseudoscalar Higgs boson in the boosted $t\bar{t}$ final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	23
66	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
67	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
68	Measurement of the cross section for $t\bar{t}$ 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
69	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
70	Observation of the $t\bar{t}B$ production in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2020, 125, 152001.	7.8	14
71	Study of central exclusive production in proton-proton collisions at $\sqrt{s} = 5.02$ TeV and 13 TeV. European Physical Journal C, 2020, 80, 718.	3.9	7
72	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 $\sqrt{s} = 13$ TeV. European Physical Journal C, 2020, 80, 752.	3.9	23

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73	Search for Charm Quark Diffusion inside Jets Using Ph-Ph and $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	7.8	9
74	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
75	Search for decays of the 125 GeV Higgs boson into a Z boson and a $\tilde{\nu}\tilde{\nu}^*$ meson. Journal of High Energy Physics, 2020, 2020, 1.	4.7	6
76	Evidence for Top Quark Production in Nucleus-Nucleus Collisions. Physical Review Letters, 2020, 125, 222001.	7.8	7
77	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
78	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
79	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
80	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
81	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 $\sqrt{s} = 13$ TeV. European Physical Journal C, 2020, 80, 3.	3.9	70
82	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
83	Search for dark matter particles produced in association with a Higgs boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	14
84	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
85	Inclusive search for highly boosted Higgs bosons decaying to bottom quark-antiquark pairs in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	13
86	Measurement of single-diffractive dijet production in proton-proton collisions at $\sqrt{s} = 8$ TeV with the CMS and TOTEM experiments. European Physical Journal C, 2020, 80, 1164.	3.9	5
87	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
88	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
89	Search for the pair production of light top squarks in the e^+e^- final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	5
90	Measurements of the $pp \rightarrow WZ$ inclusive and differential production cross sections and constraints on charged anomalous triple gauge couplings at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	14

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91	Measurement of the $\sigma(\text{t}\bar{\text{t}})$ 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
92	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
93	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
94	Search for $\text{t}\bar{\text{t}}\text{H}$ production in the $\text{H}\rightarrow\text{b}\bar{\text{b}}$ decay channel with leptonic $\text{t}\bar{\text{t}}$ decays in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	28
95	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. Journal of High Energy Physics, 2019, 2019, 1.	4.7	12
96	Measurement of the differential Drell-Yan cross section in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	18
97	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
98	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
99	Search for new physics in events with a leptonically decaying Z boson and a large transverse momentum imbalance in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2018, 78, 291.	3.9	27
100	Measurements of the $\text{pp}\rightarrow\text{ZZ}$ production cross section and the $\text{Z}\rightarrow 4\ell$ branching fraction, and constraints on anomalous triple gauge couplings at. European Physical Journal C, 2018, 78, 165.	3.9	52
101	Search for supersymmetry in events with at least three electrons or muons, jets, and missing transverse momentum in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	6
102	Search for electroweak production of charginos and neutralinos in multilepton final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	63
103	Search for $\text{t}\bar{\text{t}}\text{H}$ production in the all-jet final state in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	20
104	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. Journal of High Energy Physics, 2018, 2018, 1.	4.7	11
105	Search for decays of stopped exotic long-lived particles produced in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	12
106	Measurements of Higgs boson properties in the diphoton decay channel in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	57
107	Search for $Z^{\prime 3}$ resonances using leptonic and hadronic final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	17
108	Search for black holes and sphalerons in high-multiplicity final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	14

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109	Measurement of differential cross sections for Z boson production in association with jets in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2018, 78, 965.	3.9	39

110 Studies of $B^*_{(s)}$ and $B^0_{(s)}$ and $B^0_{(s)}$

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127	Measurement of the $t\bar{t}$ production cross section using events with one lepton and at least one jet in pp collisions at $s = 13 \sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	4.7	15
128	Search for physics beyond the standard model in events with two leptons of same sign, missing transverse momentum, and jets in proton-proton collisions at $\sqrt{s} = 13, \text{ext } \{\text{TeV}\}$ TeV. European Physical Journal C, 2017, 77, 578.	3.9	57
129	Search for light bosons in decays of the 125 GeV Higgs boson in proton-proton collisions at $s = 8 \sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	4.7	29
130	Search for heavy resonances that decay into a vector boson and a Higgs boson in hadronic final states at $\sqrt{s} = 13, s = 13, \text{ext } \{\text{TeV}\}$ TeV. European Physical Journal C, 2017, 77, 636.	3.9	38
131	Measurements of properties of the Higgs boson decaying into the four-lepton final state in pp collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	4.7	101
132	Measurement of the double-differential inclusive jet cross section in proton-proton collisions at $\sqrt{s} = 13, \text{ext } \{\text{TeV}\}$ $s = 13$ TeV. European Physical Journal C, 2016, 76, 451.	3.9	55
133	Search for new physics in same-sign dilepton events in proton-proton collisions at $\sqrt{s} = 13, \text{ext } \{\text{TeV}\}$ $s = 13$ TeV. European Physical Journal C, 2016, 76, 439.	3.9	64