

Aran Garcia-Bellido

List of Publications by Year in descending order

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Version: 2024-02-01

102
papers

6,250
citations

61984

43
h-index

66911

78
g-index

103
all docs

103
docs citations

103
times ranked

6534
citing authors

#	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	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
4	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
5	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
6	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, .	4.7	5
7	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
8	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
9	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
10	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
11	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
12	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, .	4.7	2
13	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, .	4.7	4
14	Observation of $B^0 \rightarrow \text{supersymmetry}(2S)K^0_{\text{lepton}} + \text{lepton}$ and $B^0_{\text{lepton}} \rightarrow \text{supersymmetry}(2S)K^0_{\text{lepton}}$ decays. European Physical Journal C, 2022, 82, .	3.9	1
15	Measurements of production cross sections of the Higgs boson in the four-lepton final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 488.	3.9	35
16	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
17	Precision luminosity measurement in proton-proton collisions at $\sqrt{s} = 13$ TeV in 2015 and 2016 at CMS. European Physical Journal C, 2021, 81, 800.	3.9	123
18	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

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19	Searches for physics beyond the standard model with the $M_{\mathcal{T}2}$ 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
20	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
21	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
22	Measurement of differential cross sections and charge ratios for t-channel single top quark production in proton-proton collisions at $\sqrt{s}=13$, TeV . European Physical Journal C, 2020, 80, 370.	3.9	22
23	Search for a heavy pseudoscalar boson decaying to a Z and a Higgs boson at $\sqrt{s}=13$, TeV . European Physical Journal C, 2019, 79, 564.	3.9	50
24	Measurement of the top quark mass in the all-jets final state at $\sqrt{s}=13$, TeV and combination with the lepton+jets channel. European Physical Journal C, 2019, 79, 313.	3.9	40
25	Azimuthal separation in nearly back-to-back jet topologies in inclusive 2- and 3-jet events in pp collisions at $\sqrt{s}=13$, TeV . European Physical Journal C, 2019, 79, 773.	3.9	8
26	Search for resonant production of second-generation sleptons with same-sign dimuon events in proton-proton collisions at $\sqrt{s}=13$, TeV . European Physical Journal C, 2019, 79, 305.	3.9	4
27	Measurement of the $t\bar{t}$ 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
28	Search for vector-like quarks in events with two oppositely charged leptons and jets in proton-proton collisions at $\sqrt{s}=13$, TeV . European Physical Journal C, 2019, 79, 364.	3.9	48
29	Search for natural and split supersymmetry in proton-proton collisions at $\sqrt{s}=13$, TeV in final states with jets and missing transverse momentum. Journal of High Energy Physics, 2018, 2018, 1.	4.7	43
30	Search for third-generation scalar leptoquarks decaying to a top quark and a τ , lepton at $\sqrt{s}=13$, TeV . European Physical Journal C, 2018, 78, 707.	3.9	46
31	Search for new physics in dijet angular distributions using proton-proton collisions at $\sqrt{s}=13$, TeV and constraints on dark matter and other models. European Physical Journal C, 2018, 78, 789.	3.9	40
32	Measurement of the $Z/\gamma \rightarrow \mu\mu$ cross section in pp collisions at $\sqrt{s}=13$, TeV and validation of $Z/\gamma \rightarrow \mu\mu$, $Z/\gamma \rightarrow \tau\tau$, cross section in pp collisions at $\sqrt{s}=13$, TeV . European Physical Journal C, 2018, 78, 708.	3.9	10
33	A search for new phenomena in pp collisions at $\sqrt{s}=13$, TeV in final states with missing transverse momentum and at least one jet using the α_T variable. European Physical Journal C, 2017, 77, 294.	3.9	29
34	Search for new phenomena with the $M_{\mathcal{T}2}$ variable in the all-hadronic final state produced in proton-proton collisions at $\sqrt{s}=13$, TeV . European Physical Journal C, 2017, 77, 710.	3.9	98
35	Searches for pair production of third-generation squarks in $\sqrt{s}=13$, TeV pp collisions. European Physical Journal C, 2017, 77, 327.	3.9	32
36	Search for light bosons in decays of the 125 GeV Higgs boson in proton-proton collisions at $s=8$, TeV . Journal of High Energy Physics, 2017, 2017, 1.	4.7	29

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37	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
38	Search for new physics with the M T2 variable in all-jets final states produced in pp collisions at $s = 13$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	17
39	Search for direct pair production of supersymmetric top quarks decaying to all-hadronic final states in pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2016, 76, 460.	3.9	18
40	Event generator tunes obtained from underlying event and multiparton scattering measurements. European Physical Journal C, 2016, 76, 155.	3.9	499
41	Search for a very light NMSSM Higgs boson produced in decays of the 125 GeV scalar boson and decaying into $\tilde{l}, \tilde{\nu}$, leptons in pp collisions at $s = 8$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	19
42	Precision measurement of the top-quark mass in $\ell\ell + \text{jets}$ final states. Physical Review D, 2015, 92, 072002.	4.7	16
43	Tevatron Combination of Single-Top-Quark Cross Sections and Determination of the Magnitude of the Cabibbo-Kobayashi-Maskawa Matrix Element $ V_{cb} $. Physical Review Letters, 2015, 115, 152002.	7.8	45
44	Searches for supersymmetry using the M T2 variable in hadronic events produced in pp collisions at 8 TeV. Journal of High Energy Physics, 2015, 2015, 1.	4.7	34
45	Searches for third-generation squark production in fully hadronic final states in proton-proton collisions at $s = 8$ TeV. Journal of High Energy Physics, 2015, 2015, 1.	4.7	37
46	Measurement of the differential cross section for top quark pair production in pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2015, 75, 542.	3.9	191
47	Measurement of the W boson helicity in events with a single reconstructed top quark in pp collisions at $s = 8$ TeV. Journal of High Energy Physics, 2015, 2015, 1.	4.7	26
48	Combination of measurements of the top-quark pair production cross section from the Tevatron Collider. Physical Review D, 2014, 89, .	4.7	69
49	Observation of the diphoton decay of the Higgs boson and measurement of its properties. European Physical Journal C, 2014, 74, 3076.	3.9	342
50	Improved b quark jet identification at the DO experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 763, 290-303.	1.6	18
51	Search for $W \rightarrow tb$ decays in the lepton + jets final state in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	4.7	26
52	Search for new physics in the multijet and missing transverse momentum final state in proton-proton collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	4.7	100
53	Measurement of the t-channel single-top-quark production cross section and of the $ V_{tb} $ CKM matrix element in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	4.7	70
54	Observation of s-Channel Production of Single Top Quarks at the Tevatron. Physical Review Letters, 2014, 112, 231803.	7.8	56

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55	Observation of a new boson with mass near 125 GeV in pp collisions at $\sqrt{s}=7$ and 8 TeV. Journal of High Energy Physics, 2013, 2013, 1.	4.7	320
56	Search for supersymmetry in hadronic final states with missing transverse energy using the variables $\hat{\pm}T$ and b-quark multiplicity in pp collisions at $\sqrt{s} = 8 \text{ TeV}$. European Physical Journal C, 2013, 73, 2568.	3.9	147

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73	Measurement of the ratio of inclusive cross sections $\sigma(pp \rightarrow t\bar{t} + Z + b\bar{b} + \text{quark jet}) / \sigma(pp \rightarrow t\bar{t} + Z + \text{jet})$ at $\sqrt{s} = 1.96$ TeV. Physical Review D, 2011, 83, .	4.7	14
74	Measurement of the top quark pair production cross section in the $l\bar{l} + \text{jets}$ channel in proton-antiproton collisions at $\sqrt{s} = 1.96$ TeV. Physical Review Letters, 2011, 106, 022001.	4.7	48
75	Determination of the Width of the Top Quark. Physical Review Letters, 2011, 106, 022001.	7.8	33
76	Measurement of Spin Correlation in $t\bar{t}$ Production Using a Matrix Element Approach. Physical Review Letters, 2011, 107, 032001.	7.8	34
77	Measurement of the t-channel single top quark production cross section. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 682, 363-369.	4.1	39
78	Search for single top quarks in the $\tau + \text{jets}$ channel using 4.8 fb^{-1} of collision data. Search for Anomalous Wtb Couplings in Single Top Quark Production Using 2.3 fb^{-1} of $pp \rightarrow t\bar{t}$ Collisions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 682, 81-87.	4.1	11
79	Search for Anomalous Wtb Couplings in Single Top Quark Production Using 2.3 fb^{-1} of $pp \rightarrow t\bar{t}$ Collisions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 682, 81-87.	4.1	48
80	b-Jet identification in the D0 experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 620, 490-517.	1.6	92
81	Search for a Resonance Decaying into WZ Boson Pairs in $pp \rightarrow t\bar{t}$ Collisions. Physical Review Letters, 2010, 104, 061801.	7.8	16
82	Measurement of the $t\bar{t}$ -cross section using high-multiplicity jet events. Physical Review D, 2010, 82, .	4.7	12
83	Search for Charged Higgs Bosons Decaying into Top and Bottom Quarks in $pp \rightarrow t\bar{t}$ Collisions. Physical Review Letters, 2009, 102, 191802.	7.8	35
84	Observation of Single Top-Quark Production. Physical Review Letters, 2009, 103, 092001.	7.8	199
85	Search for Anomalous Top-Quark Couplings with the D0 Detector. Physical Review Letters, 2009, 102, 092002.	7.8	20
86	Search for charged Higgs bosons in decays of top quarks. Physical Review D, 2009, 80, .	4.7	25
87	Measurement of the ratio of the $\sigma(pp \rightarrow t\bar{t} + Z + b\bar{b} + \text{quark jet}) / \sigma(pp \rightarrow t\bar{t} + Z + \text{jet})$ at $\sqrt{s} = 1.96$ TeV. Physical Review D, 2011, 83, .	4.1	27
88	Evidence for production of single top quarks. Physical Review D, 2008, 78, .	4.7	79
89	Simultaneous Measurement of the Ratio $R = \sigma(pp \rightarrow t\bar{t} + Z + b\bar{b} + \text{quark jet}) / \sigma(pp \rightarrow t\bar{t} + Z + \text{jet})$ at $\sqrt{s} = 1.96$ TeV. Physical Review Letters, 2011, 106, 022001.	7.8	30
90	Search for Anomalous Wtb Couplings in Single Top Quark Production. Physical Review Letters, 2008, 101, 221801.	7.8	28

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91	Model-Independent Measurement of the W-Boson Helicity in Top-Quark Decays at D0. Physical Review Letters, 2008, 100, 062004.	7.8	33
92	Search for $W \rightarrow e \nu_e$ Bosons Decaying to an Electron and a Neutrino with the D0 Detector. Physical Review Letters, 2008, 100, 031804.	7.8	44
93	Search for $W \rightarrow u \bar{c}$ Boson Resonances Decaying to a Top Quark and a Bottom Quark. Physical Review Letters, 2008, 100, 211803.	7.8	51
94	Evidence for Production of Single Top Quarks and First Direct Measurement of $ V_{tb} $. Physical Review Letters, 2007, 98, 181802.	7.8	100
95	Search for Production of Single Top Quarks Via $t \rightarrow c g$ and $t \rightarrow u g$ Flavor-Changing-Neutral-Current Couplings. Physical Review Letters, 2007, 99, 191802.	7.8	45
96	Multivariate searches for single top quark production with the D0 detector. Physical Review D, 2007, 75, .	4.7	18
97	Measurement of the $t \rightarrow c \gamma$ production cross section in $p \bar{p} \rightarrow t \bar{c} \gamma$ collisions at $\sqrt{s} = 1.96$ TeV. Physical Review Letters, 2007, 99, 191802.	4.7	50
98	The upgraded DØ detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 565, 463-537.	1.6	549
99	Search for $W \rightarrow e \nu_e$ boson production in the $t \rightarrow b \bar{c} \gamma$ decay channel. Physical Review Letters, 2007, 99, 191802.	4.1	27
100	Measurement of the top quark mass in the lepton+jets final state with the matrix element method. Physical Review D, 2006, 74, .	4.7	47
101	Search for single top quark production in $e^+e^- \rightarrow t \bar{t} \gamma$ collisions at $\sqrt{s} = 1.89$ TeV. Physical Review Letters, 2007, 99, 191802.	4.1	37
102	Search for charged Higgs bosons in $e^+e^- \rightarrow H^\pm \nu_e$ collisions at energies up to $\sqrt{s} = 1.89$ TeV. Nuclear, Elementary Particle and High-Energy Physics, 2002, 543, 1-13.	4.1	60