

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	The upgraded DÃ~ detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 565, 463-537.	1.6	549
2	Event generator tunes obtained from underlying event and multiparton scattering measurements. European Physical Journal C, 2016, 76, 155.	3.9	499
3	Observation of the diphoton decay of the Higgs boson and measurement of its properties. European Physical Journal C, 2014, 74, 3076.	3.9	342
4	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
5	Observation of Single Top-Quark Production. Physical Review Letters, 2009, 103, 092001.	7.8	199
6	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
7	Measurement of the differential cross section for top quark pair production in pp collisions at $\sqrt{s} = 8, \text{ext } \{ \text{TeV} \}$ $s = 8$ TeV. European Physical Journal C, 2015, 75, 542.	3.9	191
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#	ARTICLE	IF	CITATIONS
19	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
20	Measurement of the single-top-quark t-channel cross section in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	4.7	83
21	Evidence for production of single top quarks. Physical Review D, 2008, 78, .	4.7	79
22	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
23	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
24	Combination of measurements of the top-quark pair production cross section from the Tevatron Collider. Physical Review D, 2014, 89, .	4.7	69
25	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 $\sqrt{s} = 8$ TeV. European Physical Journal C, 2019, 79, 368.	3.9	68
26	Measurement of the inclusive jet cross section in pp collisions at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2012, 108, 032004.	4.7	64
27	Search for charged Higgs bosons in e^+e^- collisions at energies up to 46 GeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 543, 1-13.	4.1	60
28	Improved determination of the width of the top quark. Physical Review D, 2012, 85, .	4.7	56
29	Observation of s-channel Production of Single Top Quarks at the Tevatron. Physical Review Letters, 2014, 112, 231803.	7.8	56
30	Search for W Boson Resonances Decaying to a Top Quark and a Bottom Quark. Physical Review Letters, 2008, 100, 211803.	7.8	51
31	Measurement of the top quark production cross section in pp collisions at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2012, 108, 032004.	4.7	50
32	Evidence for Spin Correlation in $t\bar{t}$ Production. Physical Review Letters, 2012, 108, 032004.	7.8	50
33	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
34	Search for leptonic decays of W bosons in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	4.7	49
35	Search for flavor changing neutral currents via quark-gluon couplings in single top quark production using $t\bar{t}$ of $\sqrt{s} = 13$ TeV. Physical Review Letters, 2010, 105, 011803.	4.1	48
36	Measurement of the top quark pair production cross section in the $t\bar{t}$ channel in proton-antiproton collisions at $\sqrt{s} = 1.96$ TeV. Physical Review Letters, 2002, 89, 111803.	4.7	48

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37	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
38	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
39	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
40	Search for Production of Single Top Quarks Via Flavor-Changing-Neutral-Current Couplings. Physical Review Letters, 2007, 99, 191802.	7.8	45
41	Combination of Single-Top-Quark Cross Sections and Determination of the Magnitude of the Cabibbo-Kobayashi-Maskawa Matrix Element. Physical Review Letters, 2015, 115, 152002.	7.8	45
42	Search for Bosons Decaying to an Electron and a Neutrino with the D0 Detector. Physical Review Letters, 2008, 100, 031804.	7.8	44
43	Search for resonances with left- and right-handed couplings to fermions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 699, 145-150.	4.1	44
44	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
45	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.	4.1	42
46	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
47	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
48	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
49	Search for single top quark production in the t-channel. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 682, 363-369.	4.1	37
50	Searches for third-generation squark production in fully hadronic final states in proton-proton collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2015, 2015, 1.	4.7	37
51	Search for Charged Higgs Bosons Decaying into Top and Bottom Quarks in the t-channel. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 682, 363-369.	7.8	35
52	Evidence for t-channel single top quark production in the t-channel. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 682, 363-369.	4.1	35
53	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
54	Measurement of Spin Correlation in the t-channel Production Using a Matrix Element Approach. Physical Review Letters, 2011, 107, 032001.	7.8	34

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55	Search for supersymmetry in final states with missing transverse energy and 0, 1, 2, or 3 b-quark jets in 7 TeV pp collisions using the variable $\hat{\perp}_T$. Journal of High Energy Physics, 2013, 2013, 1.	4.7	34
56	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
57	Model-Independent Measurement of the W-Boson Helicity in Top-Quark Decays at D0. Physical Review Letters, 2008, 100, 062004.	7.8	33
58	Determination of the Width of the Top Quark. Physical Review Letters, 2011, 106, 022001.	7.8	33
59	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
60	Measurements of single top quark production cross sections and $ V_{tb} $ in pp collisions at $\sqrt{s} = 1.96$ TeV. Physical Review D, 2011, 84, .	4.7	31
61	A multi-dimensional search for new heavy resonances decaying to boosted W or Z boson pairs in the dijet final state at 13 TeV. European Physical Journal C, 2020, 80, 237.	3.9	31
62	Simultaneous Measurement of the Ratio R . $R = \frac{\sigma(\text{pp} \rightarrow Wb) + \sigma(\text{pp} \rightarrow Wc)}{\sigma(\text{pp} \rightarrow Wt)}$	7.8	30
63	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 $\alpha_{\perp T}$ variable. European Physical Journal C, 2017, 77, 294.	3.9	29
64	Search for light bosons in decays of the 125 GeV Higgs boson in proton-proton collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	4.7	29
65	Search for Anomalous Wtb Couplings in Single Top Quark Production. Physical Review Letters, 2008, 101, 221801.	7.8	28
66	Search for anomalous Wtb couplings in the $W \rightarrow b\bar{c}$ decay channel. $W \rightarrow b\bar{c}$	4.1	27
67	Search for anomalous Wtb couplings in the $W \rightarrow b\bar{c}$ decay channel. $W \rightarrow b\bar{c}$	4.1	27
68	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
69	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
70	Measurement of the W boson helicity in events with a single reconstructed top quark in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2015, 2015, 1.	4.7	26
71	Search for charged Higgs bosons in decays of top quarks. Physical Review D, 2009, 80, .	4.7	25
72	Combination of searches for anomalous top quark couplings with $W \rightarrow b\bar{c}$ decay channel.	4.1	23

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73	Search for anomalous Wtb couplings in single top quark production in pp collisions at $\sqrt{s} = 8$ TeV. <i>Journal of High Energy Physics</i> , 2016, 2016, 1.	4.1	22
74	Measurement of differential cross sections and charge ratios for t-channel single top quark production in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>European Physical Journal C</i> , 2020, 80, 370.	3.9	22
75	Search for Anomalous Top-Quark Couplings with the D0 Detector. <i>Physical Review Letters</i> , 2009, 102, 092002.	7.8	20
76	Search for a very light NMSSM Higgs boson produced in decays of the 125 GeV scalar boson and decaying into $\tilde{l}, \tilde{\nu}_\tau$ leptons in pp collisions at $\sqrt{s} = 8$ TeV. <i>Journal of High Energy Physics</i> , 2016, 2016, 1.	4.7	19
77	Multivariate searches for single top quark production with the D0 detector. <i>Physical Review D</i> , 2007, 75, .	4.7	18
78	Improved b quark jet identification at the D0 experiment. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 763, 290-303.	1.6	18
79	Search for direct pair production of supersymmetric top quarks decaying to all-hadronic final states in pp collisions at $\sqrt{s} = 8$ TeV. <i>European Physical Journal C</i> , 2016, 76, 460.	3.9	18
80	Search for low-mass dilepton resonances in Higgs boson decays to four-lepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV. <i>European Physical Journal C</i> , 2022, 82, 290.	3.9	18
81	Search for new physics with the M_{T2} variable in all-jets final states produced in pp collisions at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , 2016, 2016, 1.	4.7	17
82	Search for a Resonance Decaying into WZ Boson Pairs in pp Collisions. <i>Physical Review Letters</i> , 2010, 104, 061801.	7.8	16
83	Precision measurement of the top-quark mass in pp collisions at $\sqrt{s} = 7$ TeV. <i>Physical Review D</i> , 2015, 91, .	4.7	16
84	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. <i>Physical Review D</i> , 2011, 83, .	4.7	14
85	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> , 2022, 2022, 1.	4.7	13
86	Measurement of $\sigma_{\text{th}}^{\text{jet}}$ cross section using high-multiplicity jet events. <i>Physical Review D</i> , 2010, 82, .	4.7	12
87	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> , 2022, 2022, 1.	4.7	12
88	Search for single top quarks in the $\tau + \text{jets}$ channel using 4.8 fb^{-1} of pp collision data. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2010, 690, 5-14.	4.1	11
89	Measurement of the $\sigma(\text{pp} \rightarrow Z/\gamma^* \rightarrow \tau^+\tau^- \tilde{l}, \tilde{\nu}_\tau)$ cross section in pp collisions at $\sqrt{s} = 13$ TeV and validation of $\sigma(\text{pp} \rightarrow Z/\gamma^* \rightarrow \tau^+\tau^- \tilde{l}, \tilde{\nu}_\tau)$. <i>European Physical Journal C</i> , 2018, 78, 708.	3.9	10
90	Azimuthal separation in nearly back-to-back jet topologies in inclusive 2- and 3-jet events in pp collisions at $\sqrt{s} = 13$ TeV. <i>European Physical Journal C</i> , 2019, 79, 773.	3.9	8

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91	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
92	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
93	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
94	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
95	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
96	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
97	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
98	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
99	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
100	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
101	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
102	Observation of $B^0 \rightarrow \psi(2S)K^0_{\text{S}} \psi^+ \psi^-$ and $B^0_{\text{S}} \rightarrow \psi(2S)K^0_{\text{S}} \psi^+ \psi^-$ decays. European Physical Journal C, 2022, 82, .	3.9	1