

J C Hill

List of Publications by Year in descending order

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102
papers

7,916
citations

66343

42
h-index

48315

88
g-index

108
all docs

108
docs citations

108
times ranked

6873
citing authors

#	ARTICLE	IF	CITATIONS
1	The ATLAS Simulation Infrastructure. European Physical Journal C, 2010, 70, 823-874.	3.9	1,187
2	Performance of the ATLAS trigger system in 2015. European Physical Journal C, 2017, 77, 317.	3.9	489
3	Muon reconstruction performance of the ATLAS detector in proton-proton collision data at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2016, 76, 292.	3.9	453
4	Topological cell clustering in the ATLAS calorimeters and its performance in LHC Run 1. European Physical Journal C, 2017, 77, 490.	3.9	325
5	Performance of pile-up mitigation techniques for jets in pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2016, 76, 581.	3.9	298
6	Luminosity determination in pp collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector at the LHC. European Physical Journal C, 2016, 76, 653.	3.9	279
7	Measurements of the Higgs boson production and decay rates and coupling strengths using pp collision data at $\sqrt{s} = 7$ and 8 TeV in the ATLAS experiment. European Physical Journal C, 2016, 76, 6.	3.9	274
8	Performance of the ATLAS Trigger System in 2010. European Physical Journal C, 2012, 72, 1.	3.9	259
9			

#	ARTICLE	IF	CITATIONS
19	Performance of electron and photon triggers in ATLAS during LHC Run 2. European Physical Journal C, 2020, 80, 1.	3.9	93
20	Search for the $b\bar{b}$ decay of the Standard Model Higgs boson in associated (W/Z)H production with the ATLAS detector. Journal of High Energy Physics, 2015, 2015, 1.	4.7	89
21	Muon reconstruction and identification efficiency in ATLAS using the full Run 2 pp collision data set at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 1.	3.9	82
22	The barrel modules of the ATLAS semiconductor tracker. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 568, 642-671.	1.6	79
23	Electron reconstruction and identification in the ATLAS experiment using the 2015 and 2016 LHC proton-proton collision data at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2019, 79, 1.	3.9	77
24	Measurement of the inclusive and dijet cross-sections of b-jets in pp collisions at $\sqrt{s}=7$ TeV with the ATLAS detector. European Physical Journal C, 2011, 71, 1.	3.9	73
25	Reconstruction of primary vertices at the ATLAS experiment in Run 1 proton-proton collisions at the LHC. European Physical Journal C, 2017, 77, 332.	3.9	71
26	The ATLAS semiconductor tracker end-cap module. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 575, 353-389.	1.6	65
27	Evidence for the $H \rightarrow b\bar{b}$ decay with the ATLAS detector. Journal of High Energy Physics, 2017, 2017, 1.	4.7	64
28	Jet energy scale and resolution measured in proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	64
29	The silicon microstrip sensors of the ATLAS semiconductor tracker. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 578, 98-118.	1.6	63
30	Prompt and non-prompt J/ψ and $\psi(2S)$ suppression at high transverse momentum in $5.02 < \sqrt{s} < 5.02$ TeV Pb+Pb collisions with the ATLAS experiment. European Physical Journal C, 2018, 78, 762.	3.9	61
31	Search for direct top squark pair production in events with a Z boson, b-jets and missing transverse momentum in $\sqrt{s}=8$ TeV pp collisions with the ATLAS detector. European Physical Journal C, 2014, 74, 2883.	3.9	55
32	Search for pair production of Higgs bosons in the $b\bar{b}$ final state using proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2019, 2019, 1.	4.7	55
33	Performance of jet substructure techniques for large-R jets in proton-proton collisions at $\sqrt{s}=7$ TeV using the ATLAS detector. Journal of High Energy Physics, 2013, 2013, 1.	4.7	52
34	Reconstruction of hadronic decay products of tau leptons with the ATLAS experiment. European Physical Journal C, 2016, 76, 295.	3.9	50
35	Search for direct top squark pair production in final states with two leptons in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. European Physical Journal C, 2017, 77, 898.	3.9	50
36	Constraints on mediator-based dark matter and scalar dark energy models using $\sqrt{s} = 13$ TeV pp collision data collected by the ATLAS detector. Journal of High Energy Physics, 2019, 2019, 1.	4.7	49

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37	Test of CP invariance in vector-boson fusion production of the Higgs boson using the Optimal Observable method in the ditau decay channel with the ATLAS detector. European Physical Journal C, 2016, 76, 658.	3.9	48
38	Search for top-squark pair production in final states with one lepton, jets, and missing transverse momentum using 36 fb ⁻¹ of $\sqrt{s}=13$ TeV pp collision data with the ATLAS detector. Journal of High Energy Physics, 2018, 2018, 1.	4.7	48
39	Measurement of the Higgs boson coupling properties in the H \rightarrow ZZ \rightarrow $\tau^+\tau^-4\mu$ decay channel at $\sqrt{s}=13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2018, 2018, 1.	4.7	46
40	Measurement of the photon identification efficiencies with the ATLAS detector using LHC Run 2 data collected in 2015 and 2016. European Physical Journal C, 2019, 79, 1.	3.9	46
41	Search for charged Higgs bosons decaying into a top quark and a bottom quark at $\sqrt{s}=13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	46
42	Search for supersymmetry at $\sqrt{s}=8$ TeV in final states with jets and two same-sign leptons or three leptons with the ATLAS detector. Journal of High Energy Physics, 2014, 2014, 1.	4.7	45
43	Higgs boson production cross-section measurements and their EFT interpretation in the $\ell\ell$ decay channel at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	41
44	Measurements of b-jet tagging efficiency with the ATLAS detector using $t\bar{t}$ events at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	40
45	Search for heavy resonances decaying into a pair of Z bosons in the $\ell\ell^+\ell^-\ell^+$ and $\ell\ell^+\ell^-\nu\bar{\nu}$ final states using 139 fb ⁻¹ of proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	40
46	Measurements of WH and ZH production in the $H\rightarrow\bar{b}b$ decay channel in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	38
47	Electron and photon energy calibration with the ATLAS detector using 2015–2016 LHC proton-proton collision data. Journal of Instrumentation, 2019, 14, P03017-P03017.	1.2	37
48	Search for squarks and gluinos in final states with jets and missing transverse momentum using 139 fb ⁻¹ of $\sqrt{s}=13$ TeV pp collision data with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	37
49	Search for pairs of scalar leptoquarks decaying into quarks and electrons or muons in $\sqrt{s}=13$ TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	4.7	36
50	Search for a scalar partner of the top quark in the all-hadronic $t\bar{t}$ plus missing transverse momentum final state at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	36
51	Measurements of top-quark pair differential and double-differential cross-sections in the $\ell\ell$ + jets channel with pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector. European Physical Journal C, 2019, 79, 1.	3.9	34
52	Search for direct production of electroweakinos in final states with one lepton, missing transverse momentum and a Higgs boson decaying into two b-jets in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	34
53	Measurements of the Higgs boson inclusive and differential fiducial cross sections in the $\ell\ell$ decay channel at $\sqrt{s}=13$ TeV. European Physical Journal C, 2020, 80, 1.	3.9	32
54	Measurement of inclusive and differential cross sections in the H \rightarrow ZZ \rightarrow $\tau^+\tau^-4\mu$ decay channel in pp collisions at $s=13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2017, 2017, 1.	4.7	31

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55	Search for new phenomena in events with same-charge leptons and b-jets in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2018, 2018, 1.	4.7	30
56	Evidence for $\tau\tau$ production in the multilepton final state in proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	30
57	Search for heavy diboson resonances in semileptonic final states in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	29
58	Search for pair production of third-generation scalar leptoquarks decaying into a top quark and a τ -lepton in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	27
59	Measurements of electroweak Wjj production and constraints on anomalous gauge couplings with the ATLAS detector. European Physical Journal C, 2017, 77, 474.	3.9	26
60	Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the $\ell\ell b\bar{b}$ and $\ell\ell WW$ final states in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	26
61	Measurement of fiducial and differential W^+W^- production cross-sections at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2019, 79, 1.	3.9	24
62	Search for new non-resonant phenomena in high-mass dilepton final states with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	4.7	24
63	Measurement of the electroweak production of dijets in association with a Z-boson and distributions sensitive to vector boson fusion in proton-proton collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector. Journal of High Energy Physics, 2014, 2014, 1.	4.7	22
64	Measurements of top-quark pair spin correlations in the $e\mu$ channel at $\sqrt{s} = 13$ TeV using pp collisions in the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	22
65	Search for new phenomena in events with two opposite-charge leptons, jets and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	22
66	The performance of the jet trigger for the ATLAS detector during 2011 data taking. European Physical Journal C, 2016, 76, 526.	3.9	21
67	Search for the Standard Model Higgs boson decaying into $b\bar{b}$ produced in association with top quarks decaying hadronically in pp collisions at $\sqrt{s}=8$ TeV with the ATLAS detector. Journal of High Energy Physics, 2016, 2016, 1.	4.7	21
68	Measurement of k_T splitting scales in $W\tau^+\tau^-$ events at $\sqrt{s} = 7$ TeV with the ATLAS detector. European Physical Journal C, 2013, 73, 2432.	3.9	19
69	Search for squarks and gluinos in final states with same-sign leptons and jets using 139 fb $^{-1}$ of data collected with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	4.7	19
70	Measurement of light-by-light scattering and search for axion-like particles with 2.2 nb $^{-1}$ of Pb+Pb data with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	19
71	Search for dark matter in association with an energetic photon in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	18
72	Search for pair production of scalar leptoquarks decaying into first- or second-generation leptons and top quarks in proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	18

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73	Search for the $HH \rightarrow b\bar{b}$ process via vector-boson fusion production using proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	4.7	17
74	Search for type-III seesaw heavy leptons in dilepton final states in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	17
75	Optimisation of large-radius jet reconstruction for the ATLAS detector in 13 TeV proton-proton collisions. European Physical Journal C, 2021, 81, 1.	3.9	15
76	Determination of jet calibration and energy resolution in proton-proton collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	15
77	Measurement of $VH \rightarrow Hb\bar{b}$ production as a function of the vector-boson transverse momentum in 13 TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2019, 2019, 1.	4.7	14
78	Search for new phenomena with top quark pairs in final states with one lepton, jets, and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	14
79	Measurements of Higgs bosons decaying to bottom quarks from vector boson fusion production with the ATLAS experiment at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 1.	3.9	14
80	Measurements of top-quark pair single- and double-differential cross-sections in the all-hadronic channel in pp collisions at $\sqrt{s} = 13$ TeV using the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	14
81	Search for $t\bar{t}$ resonances in fully hadronic final states in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	4.7	14
82	Search for squarks and gluinos in final states with one isolated lepton, jets, and missing transverse momentum at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	13
83	Observation of the associated production of a top quark and a Z boson in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	4.7	12
84	Differential cross-section measurements for the electroweak production of dijets in association with a Z boson in proton-proton collisions at ATLAS. European Physical Journal C, 2021, 81, 1.	3.9	12
85	Search for supersymmetry in events with four or more charged leptons in 139 fb ⁻¹ of $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	12
86	Measurements of the inclusive and differential production cross sections of a top-quark-antiquark pair in association with a Z boson at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	12
87	Search for dark matter in events with missing transverse momentum and a Higgs boson decaying into two photons in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	12
88	Alignment of the ATLAS Inner Detector in Run 2. European Physical Journal C, 2020, 80, 1.	3.9	12
89	Measurements of the production cross-section for a Z boson in association with b-jets in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	4.7	11
90	Search for dark matter produced in association with a single top quark in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	9

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91	Search for direct top squark pair production in events with a Higgs or Z boson, and missing transverse momentum in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2017, 2017, 1.	4.7	8
92	Measurements of differential cross-sections in four-lepton events in 13 TeV proton-proton collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	8
93	Reconstruction and identification of boosted di- τ , systems in a search for Higgs boson pairs using 13 TeV proton-proton collision data in ATLAS. Journal of High Energy Physics, 2020, 2020, 1.	4.7	8
94	Configuration and performance of the ATLAS b-jet triggers in Run 2. European Physical Journal C, 2021, 81, 1.	3.9	7
95	Search for Higgs boson production in association with a high-energy photon via vector-boson fusion with decay into bottom quark pairs at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	6
96	Search for phenomena beyond the Standard Model in events with large b-jet multiplicity using the ATLAS detector at the LHC. European Physical Journal C, 2021, 81, 1.	3.9	5
97	The ATLAS inner detector trigger performance in pp collisions at $\sqrt{s} = 13$ TeV during LHC Run 2. European Physical Journal C, 2022, 82, 1.	3.9	5
98	Measurement of hadronic event shapes in high-pT multijet final states at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	4
99	Search for top squarks in events with a Higgs or Z boson using $\sqrt{s} = 13$ TeV of pp collision data at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	4
100	Measurement of single top-quark production in association with a W boson in the single-lepton channel at $\sqrt{s} = 8$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	3
101	Study of the spin and parity of the Higgs boson in diboson decays with the ATLAS detector. , 2015, 75, 1.		3
102	ATLAS Run 1 searches for direct pair production of third-generation squarks at the Large Hadron Collider. , 2015, 75, 1.		3