

# Nicolas Berger

## List of Publications by Year in descending order

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Version: 2024-02-01

219  
papers

22,652  
citations

23544

58  
h-index

8156

148  
g-index

226  
all docs

226  
docs citations

226  
times ranked

10759  
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of a new particle in the search for the Standard Model Higgs boson with the ATLAS detector at the LHC. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 716, 1-29.	1.5	6,386
2	The ATLAS Experiment at the CERN Large Hadron Collider. Journal of Instrumentation, 2008, 3, S08003-S08003.	0.5	1,752
3	The ATLAS Simulation Infrastructure. European Physical Journal C, 2010, 70, 823-874.	1.4	1,187
4	Combined Measurement of the Higgs Boson Mass in $pp$ Collisions at $\sqrt{s}=7$ and $8$ TeV with the ATLAS and CMS Experiments. Physical Review Letters, 2015, 114, 191803.	2.9	1,062
5	Performance of the ATLAS trigger system in 2015. European Physical Journal C, 2017, 77, 317.	1.4	489
6	Measurements of the Higgs boson production and decay rates and constraints on its couplings from a combined ATLAS and CMS analysis of the LHC $pp$ collision data at $s = 7$ and $8$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	1.6	473
7	Muon reconstruction performance of the ATLAS detector in proton-proton collision data at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2016, 76, 292.	1.4	453
8	Topological cell clustering in the ATLAS calorimeters and its performance in LHC Run 1. European Physical Journal C, 2017, 77, 490.	1.4	325
9	Evidence for the spin-0 nature of the Higgs boson using ATLAS data. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 726, 120-144.	1.5	307
10	Performance of pile-up mitigation techniques for jets in $pp$ collisions at $\sqrt{s}=8$ . European Physical Journal C, 2016, 76, 581.	1.4	298
11	Luminosity determination in $pp$ collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector at the LHC. European Physical Journal C, 2016, 76, 653.	1.4	279
12	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.	1.4	274
13	Jet energy measurement and its systematic uncertainty in proton-proton collisions at $\sqrt{s}=7$ TeV with the ATLAS detector. European Physical Journal C, 2015, 75, 17.	1.4	268
14	Performance of the ATLAS Trigger System in 2010. European Physical Journal C, 2012, 72, 1.	1.4	259
15	Combined measurements of Higgs boson production and decay using up to $80$ fb $^{-1}$ of proton-proton collision data at $\sqrt{s}=7$ and $8$ TeV in the ATLAS experiment. Physical Review D, 2020, 101, 113005.	2.4	241
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#	ARTICLE	IF	CITATIONS
19	Jet energy resolution in proton-proton collisions at $\sqrt{s}=7$ TeV recorded in 2010 with the ATLAS detector. European Physical Journal C, 2013, 73, 2306.	1.4	209
20	Measurement of the jet radius and transverse momentum dependence of inclusive jet suppression in lead-lead collisions at $\sqrt{s}=2.76$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 354, 298-302.	2.76	195
21	Measurement of the inelastic Proton-Proton Cross Section at $\sqrt{s}=13$ TeV with the ATLAS Detector at the LHC. Physical Review Letters, 2016, 117, 182002.	2.9	185
22	Performance of missing transverse momentum reconstruction with the ATLAS detector using proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2018, 78, 903.	1.4	181
23	Study of the spin and parity of the Higgs boson in diboson decays with the ATLAS detector. European Physical Journal C, 2015, 75, 476.	1.4	174
24	Observation of Higgs boson production in association with a top quark pair at the LHC with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 784, 173-191.	1.5	169
25	Measurements of Higgs boson production and couplings in the four-lepton channel in $\sqrt{s}=7$ and $8$ TeV with the ATLAS detector. Physical Review D, 2015, 91, 072002.	1.6	158
26	Jet energy scale measurements and their systematic uncertainties in proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. Physical Review D, 2017, 96, 012002.	1.6	157
27	Measurement of the top quark-pair production cross section with ATLAS in pp collisions at $\sqrt{s}=7$ TeV. European Physical Journal C, 2011, 71, 1.	1.4	146
28	Jet reconstruction and performance using particle flow with the ATLAS Detector. European Physical Journal C, 2017, 77, 466.	1.4	145
29	Precision measurement and interpretation of inclusive $W^+W^-$ production. European Physical Journal C, 2017, 77, 367.	1.4	145
30	Observation of $H \rightarrow b\bar{b}$ decays and VH production with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 798, 135101.	1.5	138
31	Combination of Searches for Invisible Higgs Boson Decays with the ATLAS Experiment. Physical Review Letters, 2019, 122, 231801.	2.9	133
32	Measurement of the $Z/\bar{\nu}$ boson transverse momentum distribution in pp collisions at $\sqrt{s}=7$ TeV with the ATLAS detector. Journal of High Energy Physics, 2014, 2014, 1.	1.6	131
33	Search for Invisible Decays of a Higgs Boson Produced in Association with a $Z$ Boson in ATLAS. Physical Review Letters, 2014, 112, 121801.	2.9	130
34	ATLAS b-jet identification performance and efficiency measurement with $t\bar{t}$ events in pp collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2019, 79, 1.	1.4	130
35	Electron and photon performance measurements with the ATLAS detector using the 2015-2017 LHC proton-proton collision data. Journal of Instrumentation, 2019, 14, P12006-P12006.	0.5	124
36	Measurement of the inclusive isolated prompt photon cross section in $\sqrt{s}=7$ TeV pp collisions at the ATLAS detector. Physical Review D, 2011, 83, 012002.	1.6	121

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37	Measurements of top-quark pair differential cross-sections in the lepton+jets channel in pp collisions at $\sqrt{s}=8, \sqrt{s}=8$ TeV using the ATLAS detector. European Physical Journal C, 2016, 76, 538.	1.4	115
38	Measurements of Higgs boson properties in the diphoton decay channel with $\langle \mathcal{M} \rangle = 36$ GeV. Journal of High Energy Physics, 2015, 2015, 1.	1.6	115
39	Observation and measurement of Higgs boson decays to $WZ$ and $WW$ in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector. Physical Review D, 2015, 92, 111011.	1.6	110
40	Performance of electron and photon triggers in ATLAS during LHC Run 2. European Physical Journal C, 2020, 80, 1.	1.4	93
41	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.	1.6	89
42	Measurement of $W\mu\tau$ and Z-boson production cross sections in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 759, 601-621.	1.4	88
43	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.	1.4	82
44	Search for dark matter at $\sqrt{s}=13$ TeV in final states containing an energetic photon and large missing transverse momentum with the ATLAS detector. European Physical Journal C, 2017, 77, 393.	1.4	80
45	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.	1.4	77
46	Performance of the ATLAS track reconstruction algorithms in dense environments in LHC Run 2. European Physical Journal C, 2017, 77, 673.	1.4	75
47	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.	1.4	73
48	Reconstruction of primary vertices at the ATLAS experiment in Run 1 proton-proton collisions at the LHC. European Physical Journal C, 2017, 77, 332.	1.4	71
49	Identification and energy calibration of hadronically decaying tau leptons with the ATLAS experiment in pp collisions at $\sqrt{s}=8$ TeV. European Physical Journal C, 2015, 75, 303.	1.4	70
50	ATLAS data quality operations and performance for 2015-2018 data-taking. Journal of Instrumentation, 2020, 15, P04003-P04003.	0.5	68
51	Evidence for the $H \rightarrow b\bar{b}$ decay with the ATLAS detector. Journal of High Energy Physics, 2017, 2017, 1.	1.6	64
52	Search for new phenomena in events with an energetic jet and missing transverse momentum in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. Physical Review D, 2021, 103, 014011.	1.6	64
53	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.	1.4	64
54	Measurement of the Higgs boson mass in the $H \rightarrow \tau\tau$ and $H \rightarrow \tau\tau$ channels with $\langle \mathcal{M} \rangle = 126.5$ GeV in pp collisions using the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 784, 345-366.	1.6	63

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55	Observation of Higgs boson production measurements of the Higgs boson decaying into a pair of $\tau$ -leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physical Review D, 2019, 99, .	1.6	63
56	Performance of the ATLAS muon triggers in Run 2. Journal of Instrumentation, 2020, 15, P09015-P09015.	0.5	62
57	Prompt and non-prompt $\psi(2S)$ suppression at high transverse momentum in $\sqrt{s} = 5.02$ TeV Pb+Pb collisions with the ATLAS experiment. European Physical Journal C, 2018, 78, 762.	1.4	61
58	A search for the dimuon decay of the Standard Model Higgs boson with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 812, 135980.	1.5	61
59	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.	1.4	55
60	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.	1.6	55
61	Search for the Decay of the Higgs Boson to Charm Quarks with the ATLAS Experiment. Physical Review Letters, 2018, 120, 211802.	2.9	53
62	Observation of Electroweak Production of a Same-Sign $W$ Boson Pair in Association with Two Jets in $pp$ Collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physical Review Letters, 2018, 120, 211802.	2.9	53
63	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.	1.6	52
64	Measurement of the top quark mass in the $t\bar{t} + \tau^+\tau^-$ channel from $pp$ collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physical Review D, 2018, 97, .	1.5	52
65	Evidence for the associated production of the Higgs boson and a top quark pair with the ATLAS detector. Physical Review D, 2018, 97, .	1.6	51
66	Reconstruction of hadronic decay products of tau leptons with the ATLAS experiment. European Physical Journal C, 2016, 76, 295.	1.4	50
67	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.	1.4	50
68	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.	1.6	49
69	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.	1.4	48
70	Search for top-squark pair production in final states with one lepton, jets, and missing transverse momentum using $36 \text{ fb}^{-1}$ of $\sqrt{s} = 13$ TeV $pp$ collision data with the ATLAS detector. Journal of High Energy Physics, 2018, 2018, 1.	1.6	48
71	Measurement of the Higgs boson coupling properties in the $H \rightarrow Z\bar{\nu}\nu$ decay channel at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2018, 2018, 1.	1.6	46
72	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.	1.4	46



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73	Measurement of gluon fusion and vector boson fusion Higgs boson production cross-sections in the $H \rightarrow \tau^+ \tau^- W W \rightarrow \tau^+ \tau^- e \mu \nu \nu$ decay channel in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 789, 508-529.	1.5	46
74	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.	1.6	46
75	Measurement of the top quark pair production cross section in pp collisions at $\sqrt{s} = 13$ TeV in dilepton final states with ATLAS. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 707, 459-477.	1.5	45
76	Single hadron response measurement and calorimeter jet energy scale uncertainty with the ATLAS detector at the LHC. European Physical Journal C, 2013, 73, 1.	1.4	45
77	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.	1.6	45
78	Constraints on off-shell Higgs boson production and the Higgs boson total width in $ZZ \rightarrow 4\mu$ and $ZZ \rightarrow 2\mu 2\tau$ final states with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 786, 223-244.	1.5	43
79	Combined measurement of differential and total cross sections in the $H \rightarrow \tau^+ \tau^- Z Z \rightarrow \tau^+ \tau^- 4\mu$ decay channel at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 786, 114-123.	1.6	42
80	Performance of top-quark and $W$ -boson tagging with ATLAS in Run 2 of the LHC. European Physical Journal C, 2019, 79, 1.	1.4	42
81	Higgs boson production cross-section measurements and their EFT interpretation in the $4\ell$ decay channel at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	1.4	41
82	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.	1.6	40
83	Search for heavy resonances decaying into a pair of Z bosons in the $e^+e^- \rightarrow e^+e^- Z Z$ and $e^+e^- \rightarrow \mu^+\mu^- Z Z$ final states using 139 fb <sup>-1</sup> of proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	1.4	40
84	Search for invisible decays of the Higgs boson produced in association with a hadronically decaying vector boson in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. European Physical Journal C, 2015, 75, 337.	1.4	39
85	Measurement of the charge asymmetry in top-quark pair production in the lepton-plus-jets final state in pp collision data at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2016, 76, 87.	1.4	39
86	Combination of searches for heavy resonances decaying into bosonic and leptonic final states using proton-proton collision data at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 793, 459-477.	1.5	38
87	Search for squarks and gluinos in final states with jets and missing transverse momentum using 139 fb <sup>-1</sup> of $\sqrt{s} = 13$ TeV pp collision data with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.5	38
88	Measurements of WH and ZH production in the $H \rightarrow b\bar{b}$ decay channel in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	1.4	38
89	Electron and photon energy calibration with the ATLAS detector using 2015-2016 LHC proton-proton collision data. Journal of Instrumentation, 2019, 14, P03017-P03017.	0.5	37
90	Search for squarks and gluinos in final states with jets and missing transverse momentum using 139 fb <sup>-1</sup> of $\sqrt{s} = 13$ TeV pp collision data with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	37

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91	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.	1.6	36
92	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.	1.4	36
93	Performance of the electronic readout of the ATLAS liquid argon calorimeters. Journal of Instrumentation, 2010, 5, P09003-P09003.	0.5	35
94	Measurement of the inclusive jet cross-section in proton-proton collisions at $s = 7$ TeV using 4.5 fb <sup>-1</sup> of data with the ATLAS detector. Journal of High Energy Physics, 2015, 2015, 1.	1.6	35
95	Measurements of top-quark pair differential and double-differential cross-sections in the $t\bar{t} + \text{jets}$ channel with pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector. European Physical Journal C, 2019, 79, 1.	1.4	34
96	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.	1.4	34
97	Collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 793, 499-519.	2.9	33
98	Search for invisible Higgs boson decays in vector boson fusion at $\sqrt{s}=13$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 793, 499-519.	1.4	33
99	Measurements of the Higgs boson inclusive and differential fiducial cross sections in the $H \rightarrow b\bar{b}$ decay channel at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2020, 80, 1.	1.4	32
100	Measurement of inclusive and differential cross sections in the $H \rightarrow ZZ^* 4\ell$ decay channel in pp collisions at $s = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2017, 2017, 1.	1.6	31
101	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.	1.6	30
102	Evidence for $t\bar{t}$ 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.	1.4	30
103	A measurement of the calorimeter response to single hadrons and determination of the jet energy scale uncertainty using LHC Run-1 pp-collision data with the ATLAS detector. European Physical Journal C, 2017, 77, 26.	1.4	29
104	Study of the material of the ATLAS inner detector for Run 2 of the LHC. Journal of Instrumentation, 2017, 12, P12009-P12009.	0.5	29
105	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.	1.4	29
106	Measurement of the Drell-Yan triple-differential cross section in pp collisions at $s = 8$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	28
107	Measurement of the $t\bar{t} + Z$ cross sections in proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	1.6	28
108	In situ calibration of large-radius jet energy and mass in $13$ TeV proton-proton collisions with the ATLAS detector. European Physical Journal C, 2019, 79, 1.	1.4	28

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109	Search for chargino-neutralino pair production in final states with three leptons and missing transverse momentum in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	1.4	28
110	Search for pair production of third-generation scalar leptoquarks decaying into a top quark and a $\tau$ -lepton in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	27
111	Measurements of electroweak $W_{jj}$ production and constraints on anomalous gauge couplings with the ATLAS detector. European Physical Journal C, 2017, 77, 474.	1.4	26
112	Search for Higgs bosons produced via vector-boson fusion and decaying into bottom quark pairs in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Physical Review D, 2018, 98, 113005.	1.6	26
113	Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the $W\ell\ell$ final states in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	1.4	26
114	Search for charginos and neutralinos in final states with two boosted hadronically decaying bosons and missing transverse momentum in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Physical Review D, 2021, 104, 014005.	1.6	25
115	Measurement of the cross-section and charge asymmetry of W bosons produced in proton-proton collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. European Physical Journal C, 2019, 79, 1.	1.4	24
116	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.	1.4	24
117	Search for new non-resonant phenomena in high-mass dilepton final states with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	1.6	24
118	Measurement of the inclusive jet cross-sections in proton-proton collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. Journal of High Energy Physics, 2017, 2017, 1.	1.6	23
119	Search for doubly and singly charged Higgs bosons decaying into vector bosons in multi-lepton final states with the ATLAS detector using proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	1.6	23
120	AtlFast3: The Next Generation of Fast Simulation in ATLAS. Computing and Software for Big Science, 2022, 6, 1.	1.3	23
121	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.	1.6	22
122	Measurement of top quark pair differential cross sections in the dilepton channel in pp collisions at $\sqrt{s} = 7$ and $8$ TeV with ATLAS. Physical Review D, 2016, 94, .	1.6	22
123	Measurements of top-quark pair spin correlations in the $\mu\mu$ channel at $\sqrt{s} = 13$ TeV using pp collisions in the ATLAS detector. European Physical Journal C, 2020, 80, 1.	1.4	22
124	Search for heavy neutral Higgs bosons produced in association with $b$ -quarks and decaying into $b$ -quarks at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	22
125	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.	1.6	22
126	The performance of the jet trigger for the ATLAS detector during 2011 data taking. European Physical Journal C, 2016, 76, 526.	1.4	21



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127	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.	1.6	21
128	Measurement of $k_T$ splitting scales in $W\ell^+\ell^-$ events at $\sqrt{s} = 7$ TeV with the ATLAS detector. European Physical Journal C, 2013, 73, 2432.	1.4	19
129	Measurement of the production cross-section of a single top quark in association with a Z boson in proton-proton collisions at 13 TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 780, 557-577.	1.5	19
130	Search for squarks and gluinos in final states with same-sign leptons and jets using 139 fb <sup>-1</sup> of data collected with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	1.6	19
131	Measurement of light-by-light scattering and search for axion-like particles with 2.2 nb <sup>-1</sup> of Pb+Pb data with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	19
132	Measurements of inclusive and differential fiducial cross-sections of $t\bar{t}$ production with additional heavy-flavour jets in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2019, 2019, 1.	1.6	18
133	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.	1.6	18
134	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.	1.4	18
135	Search for new phenomena in final states with b-jets and missing transverse momentum in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	18
136	Measurement of inclusive jet and dijet cross-sections in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2018, 2018, 1.	1.6	17
137	Performance of the missing transverse momentum triggers for the ATLAS detector during Run-2 data taking. Journal of High Energy Physics, 2020, 2020, 1.	1.6	17
138	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.	1.6	17
139	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.	1.4	17
140	Search for Higgs boson decays into a pair of pseudoscalar particles in the $b\bar{b}\gamma\gamma$ final state with the ATLAS detector in $pp$ collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	17
141	Measurement of differential cross sections and $W^+W^-$ cross-section ratios for W boson production in association with jets at $\sqrt{s} = 8$ TeV with the ATLAS detector. Journal of High Energy Physics, 2018, 2018, 1.	1.6	16
142	Measurement of the cross-section for electroweak production of dijets in association with a Z boson in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 775, 206-228.	1.6	15
143	Optimisation of large-radius jet reconstruction for the ATLAS detector in 13 TeV proton-proton collisions. European Physical Journal C, 2021, 81, 1.	1.4	15
144	Test of the universality of $\tilde{l}_i$ , and $\tilde{l}_i^2$ lepton couplings in W-boson decays with the ATLAS detector. Nature Physics, 2021, 17, 813-818.	6.5	15

#	ARTICLE	IF	CITATIONS
145	Determination of jet calibration and energy resolution in proton-proton collisions at $\sqrt{s} = 8\text{-}\sqrt{\text{TeV}}$ using the ATLAS detector. European Physical Journal C, 2020, 80, 1.	1.4	15
146	Measurement of $VH, \mathbb{H}o\overline{\mathbb{H}}$ 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.	1.6	14
147	Search for new phenomena with top quark pairs in final states with one lepton, jets, and missing transverse momentum in pp collisions at $\sqrt{s} = 13\text{ TeV}$ with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	14
148	Measurements of Higgs bosons decaying to bottom quarks from vector boson fusion production with the ATLAS experiment at $\sqrt{s}=13\text{ TeV}$ . European Physical Journal C, 2021, 81, 1.	1.4	14
149	Search for New Phenomena in Final States with Two Leptons and One or No b-Tagged Jets at $s=13\text{ TeV}$ Using the ATLAS Detector. Physical Review Letters, 2021, 127, 141801.	2.9	14
150	Measurements of top-quark pair single- and double-differential cross-sections in the all-hadronic channel in pp collisions at $\sqrt{s} = 13\text{ TeV}$ using the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	14
151	Search for $\overline{t}$ resonances in fully hadronic final states in pp collisions at $\sqrt{s} = 13\text{ TeV}$ with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	1.6	14
152	Measurement of the c-jet mistagging efficiency in $t$ events using pp collision data at $\sqrt{s}=13\text{ TeV}$ collected with the ATLAS detector. European Physical Journal C, 2022, 82, .	1.4	14
153	Search for new phenomena in $p$ collisions in final states with tau leptons, $b$ jets, and missing transverse momentum with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	14
154	Search for four-top-quark production in the single-lepton and opposite-sign dilepton final states in $p$ collisions at $\sqrt{s} = 13\text{ TeV}$ with the ATLAS detector. Physical Review D, 2019, 99, .	1.6	13
155	Measurement of the CP-violating phase $\phi_{sB}$ in $B_{s^0} \rightarrow J/\psi \phi$ decays in ATLAS at $13\text{ TeV}$ . European Physical Journal C, 2021, 81, .	1.4	13
156	Search for squarks and gluinos in final states with one isolated lepton, jets, and missing transverse momentum at $\sqrt{s}=13\text{ TeV}$ with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	1.4	13
157	Search for long-lived charginos based on a disappearing-track signature using 136 fb $^{-1}$ of pp collisions at $\sqrt{s}=13\text{ TeV}$ with the ATLAS detector. European Physical Journal C, 2022, 82, .	1.4	13
158	Measurement of the four-lepton invariant mass spectrum in 13 TeV proton-proton collisions with the ATLAS detector. Journal of High Energy Physics, 2019, 2019, 1.	1.6	12
159	Observation of the associated production of a top quark and a Z boson in pp collisions at $\sqrt{s} = 13\text{ TeV}$ with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	1.6	12
160	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.	1.4	12
161	Search for supersymmetry in events with four or more charged leptons in 139 fb $^{-1}$ of $\sqrt{s} = 13\text{ TeV}$ pp collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	12
162	Measurements of the inclusive and differential production cross sections of a top-quark-antiquark pair in association with a Z boson at $\sqrt{s} = 13\text{ TeV}$ with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	1.4	12

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163	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.	1.6	12
164	Alignment of the ATLAS Inner Detector in Run 2. European Physical Journal C, 2020, 80, 1.	1.4	12
165	Determination of the parton distribution functions of the proton using diverse ATLAS data from pp collisions at $\sqrt{s} = 7, 8$ and $13$ TeV. European Physical Journal C, 2022, 82, 1.	1.4	12
166	The ATLAS high level trigger steering. Journal of Physics: Conference Series, 2008, 119, 022013.	0.3	11
167	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.	1.6	11
168	Two-particle azimuthal correlations in photonuclear ultraperipheral collisions at 5.02 TeV with ATLAS. Physical Review C, 2021, 104, .		
169	Exclusive dimuon production in ultraperipheral collisions at $\sqrt{s} = 5.02$ TeV with ATLAS. Physical Review C, 2021, 104, .	1.1	11
170	A measurement of material in the ATLAS tracker using secondary hadronic interactions in 7 TeV pp collisions. Journal of Instrumentation, 2016, 11, P11020-P11020.	0.5	10
171	Determination of the parton distribution functions of the proton from ATLAS measurements of differential $W_{\pm}$ and Z boson production in association with jets. Journal of High Energy Physics, 2021, 2021, 1.	1.6	10
172	Performance of the ATLAS Transition Radiation Tracker in Run 1 of the LHC: tracker properties. Journal of Instrumentation, 2017, 12, P05002-P05002.	0.5	10
173	Measurement of the $t\bar{t}$ production cross section in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	10
174	Search for Higgs bosons decaying into new spin-0 or spin-1 particles in four-lepton final states with the ATLAS detector with $139 \text{ fb}^{-1}$ of pp collision data at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	1.6	10
175	Search for dark matter produced in association with a Standard Model Higgs boson decaying into b-quarks using the full Run 2 dataset from the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	10
176	Search for resonant pair production of Higgs bosons in the $b\bar{b}$ final state using $\sqrt{s} = 13$ TeV pp collision data with the ATLAS detector. Journal of High Energy Physics, 2022, 2022, 1.	1.6	10
177	Search for single production of a vectorlike quark decaying into a Higgs boson and top quark with fully hadronic final states using the ATLAS detector. Physical Review D, 2022, 105, .	1.6	10
178	Combinations of single-top-quark production cross-section measurements and $ f_{LVVtb} $ determinations at $\sqrt{s} = 7$ and 8 TeV with the ATLAS and CMS experiments. Journal of High Energy Physics, 2019, 2019, 1.	1.6	9
179	Measurement of the inclusive cross-section for the production of jets in association with a Z boson in proton-proton collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector. European Physical Journal C, 2019, 79, 1.	1.4	9
180	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.	1.4	9

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181	Search for electroweak production of two jets in association with a $Z\bar{\nu}\nu$ pair in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High Energy Physics, 2017, 2017, 1.	1.5	9
182	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.	1.6	8
183	Measurements of $W+W\bar{\nu} + \text{1 jet}$ production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	8
184	Search for charged-lepton-flavour violation in Z-boson decays with the ATLAS detector. Nature Physics, 2021, 17, 819-825.	6.5	8
185	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.	1.6	8
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187	Observation of electroweak production of two jets in association with an isolated photon and missing transverse momentum, and search for a Higgs boson decaying into invisible particles at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2022, 82, 1.	1.4	8
188	Search for associated production of a Z boson with an invisibly decaying Higgs boson or dark matter candidates at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High Energy Physics, 2021, 857, 1187066.	1.5	8
189	Search for Lepton-Flavor Violation in Z-Boson Decays with $\sqrt{s} = 13$ TeV. Physical Review Letters, 2021, 127, 271801.	2.9	8
190	Combination of inclusive and differential $\overline{\text{t}}\text{t}$ charge asymmetry measurements using ATLAS and CMS data at $\sqrt{s} = 7$ and 8 TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	7
191	Search for R-parity-violating supersymmetry in a final state containing leptons and many jets with the ATLAS experiment using $\sqrt{s} = 13$ TeV proton-proton collision data. European Physical Journal C, 2021, 81, 1.	1.4	7
192	Configuration and performance of the ATLAS b-jet triggers in Run 2. European Physical Journal C, 2021, 81, 1.	1.4	7
193	Search for flavour-changing neutral-current interactions of a top quark and a gluon in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2022, 82, .	1.4	7
194	Measurement of the ratio of cross sections for inclusive isolated-photon production in pp collisions at $\sqrt{s} = 13$ and 8 TeV with the ATLAS detector. Journal of High Energy Physics, 2019, 2019, 1.	1.6	6
195	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.	1.6	6
196	Performance of the ATLAS RPC detector and Level-1 muon barrel trigger at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2021, 16, P07029.	0.5	6
197	Performance of the ATLAS Level-1 topological trigger in Run 2. European Physical Journal C, 2022, 82, 1.	1.4	6
198	A search for the decays of stopped long-lived particles at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	5

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199	The ATLAS Fast Tracker system. Journal of Instrumentation, 2021, 16, P07006.	0.5	5
200	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.	1.4	5
201	Emulating the impact of additional proton-proton interactions in the ATLAS simulation by presampling sets of inelastic Monte Carlo events. Computing and Software for Big Science, 2022, 6, 1.	1.3	5
202	The ATLAS inner detector trigger performance in pp collisions at 13 TeV during LHC Run 2. European Physical Journal C, 2022, 82, 1.	1.4	5
203	Constraints on Higgs boson production with large transverse momentum using $H \rightarrow b\bar{b}$ decays in the ATLAS detector. Physical Review D, 2022, 105, .	1.6	5
204	Performance of the upgraded PreProcessor of the ATLAS Level-1 Calorimeter Trigger. Journal of Instrumentation, 2020, 15, P11016-P11016.	0.5	4
205	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.	1.6	4
206	Search for top squarks in events with a Higgs or Z boson using 139 fb <sup>-1</sup> of pp collision data at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	1.4	4
207	Measurement of the energy response of the ATLAS calorimeter to charged pions from $W^{\pm} \rightarrow \mu^{\pm} \nu_{\mu} \rightarrow \mu^{\pm} \pi^{\pm} \nu_{\mu} \nu_{\tau}$ events in Run 2 data. European Physical Journal C, 2022, 82, 1.	1.4	4
208	Measurement of the production cross section of pairs of isolated photons in pp collisions at 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	4
209	Search for exotic decays of the Higgs boson into long-lived particles in pp collisions at $\sqrt{s} = 13$ TeV using displaced vertices in the ATLAS inner detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	4
210	Measurement of single top-quark production in association with a W boson in the single-lepton channel at $\sqrt{s} = 8$ , ext [TeV] with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	1.4	3
211	Measurements of sensor radiation damage in the ATLAS inner detector using leakage currents. Journal of Instrumentation, 2021, 16, P08025.	0.5	3
212	Measurement of the inclusive jet cross-section in proton-proton collisions at ( $\sqrt{s} = 7$ ) TeV using 4.5 fb <sup>-1</sup> of data with the ATLAS detector. , 2015, 2015, 1.		3
213	Measurement of b-quark fragmentation properties in jets using the decay $B^{\pm} \rightarrow J/\psi K^{\pm}$ in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	1.6	3
214	Two-particle Bose-Einstein correlations in $\{pp\}$ collisions at $\sqrt{s} = 13$ TeV measured with the ATLAS detector at the LHC. European Physical Journal C, 2022, 82, .	1.4	3
215	Search for heavy particles in the b -tagged dijet mass distribution with additional b -tagged jets in proton-proton collisions at $s = 13$ TeV with the ATLAS experiment. Physical Review D, 2022, 105, .	1.6	2
216	Search for exotic decays of the Higgs boson into $b\bar{b}$ and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2022, 2022, 1.	1.6	2



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217	Measurement of the energy asymmetry in $t\bar{t}$ production at $\sqrt{s}=13$ TeV with the ATLAS experiment and interpretation in the SMEFT framework. European Physical Journal C, 2022, 82, .	1.4	2
218	Operation and performance of the ATLAS semiconductor tracker in LHC Run 2. Journal of Instrumentation, 2022, 17, P01013. A search for an unexpected asymmetry in the production of $e^+e^- \rightarrow \mu^+\mu^-$ and $e^+e^- \rightarrow \mu^+\mu^+$ pairs in proton-proton collisions recorded by the ATLAS detector at $\sqrt{s}=13$ TeV.	0.5	1
219	A search for an unexpected asymmetry in the production of $e^+e^- \rightarrow \mu^+\mu^-$ and $e^+e^- \rightarrow \mu^+\mu^+$ pairs in proton-proton collisions recorded by the ATLAS detector at $\sqrt{s}=13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2022, 830, 137106.	1.5	1