

Callum Birch-Sykes

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

61

papers

244

citations

8

h-index

10

g-index

70

ext. papers

627

ext. citations

4.7

avg, IF

0.63

L-index

#	Paper	IF	Citations
61	Performance of the ATLAS Level-1 topological trigger in Run2. <i>European Physical Journal C</i> , 2022 , 82, 1	4.2	0
60	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. <i>Journal of High Energy Physics</i> , 2022 , 2022, 1	5.4	0
59	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. <i>European Physical Journal C</i> , 2022 , 82, 1	4.2	0
58	Search for Higgs bosons decaying into new spin-0 or spin-1 particles in four-lepton final states with the ATLAS detector with 139 fb ⁻¹ of pp collision data at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , 2022 , 2022, 1	5.4	0
57	AtlFast3: The Next Generation of Fast Simulation in ATLAS. <i>Computing and Software for Big Science</i> , 2022 , 6, 1	6	0
56	Measurement of the energy response of the ATLAS calorimeter to charged pions from $W \rightarrow \tau \rightarrow \pi \nu_{\tau} \nu_{\tau}$ events in Run2 data. <i>European Physical Journal C</i> , 2022 , 82, 1	4.2	0
55	The ATLAS inner detector trigger performance in pp collisions at $\sqrt{s} = 13$ TeV during LHC Run 2. <i>European Physical Journal C</i> , 2022 , 82, 1	4.2	
54	Determination of the parton distribution functions of the proton using diverse ATLAS data from pp collisions at $\sqrt{s} = 7, 8$ and 13 TeV. <i>European Physical Journal C</i> , 2022 , 82, 1	4.2	1
53	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. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	2
52	Measurement of the $t(\bar{t})t(\bar{t})$ production cross section in pp collisions at ($\sqrt{s} = 13$ TeV) with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	0
51	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	2
50	Search for type-III seesaw heavy leptons in dilepton final states in pp collisions at ($\sqrt{s} = 13$ TeV) with the ATLAS detector. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	7
49	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	5
48	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	1
47	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	6
46	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	8
45	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. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	5

44	Optimisation of large-radius jet reconstruction for the ATLAS detector in 13 TeV proton-proton collisions. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	2
43	Search for heavy resonances decaying into a pair of Z bosons in the $(e^+e^- \mu^+\mu^-)$ and $(e^+e^- \nu \bar{\nu})$ final states using 139 fb^{-1} of proton-proton collisions at $(\sqrt{s} = 13)$ TeV with the ATLAS detector. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	8
42	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	6
41	Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the $(e^+e^- b\bar{b})$ and $(e^+e^- WW)$ final states in pp collisions at $(\sqrt{s}=13)$ (text {TeV}) with the ATLAS detector. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	7
40	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	3
39	Measurements of $W+W$ jet production cross-sections in pp collisions at $(\sqrt{s}) = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	0
38	Search for charged Higgs bosons decaying into a top quark and a bottom quark at $(\sqrt{s}) = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	8
37	Measurements of Higgs bosons decaying to bottom quarks from vector boson fusion production with the ATLAS experiment at $(\sqrt{s}=13, \text{text {TeV}})$. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	0
36	Search for pair production of third-generation scalar leptoquarks decaying into a top quark and a lepton in pp collisions at $(\sqrt{s}) = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	6
35	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	2
34	Determination of the parton distribution functions of the proton from ATLAS measurements of differential W and Z boson production in association with jets. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	1
33	Measurements of differential cross-sections in four-lepton events in 13 TeV proton-proton collisions with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	0
32	A search for the decays of stopped long-lived particles at $(\sqrt{s}) = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	1
31	Muon reconstruction and identification efficiency in ATLAS using the full Run 2 pp collision data set at $(\sqrt{s}=13)$ TeV. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	13
30	Measurement of hadronic event shapes in high-pT multijet final states at $(\sqrt{s}) = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	3
29	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	8
28	Differential cross-section measurements for the electroweak production of dijets in association with a Z boson in proton-proton collisions at ATLAS. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	5
27	Measurements of WH and ZH production in the $(H \rightarrow b\bar{b})$ decay channel in pp collisions at $(13, \text{text {Te}}\text{text {V}})$ with the ATLAS detector. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	7

26	Search for dark matter in association with an energetic photon in pp collisions at $(\sqrt{s}) = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	5
25	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. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	0
24	Jet energy scale and resolution measured in proton-proton collisions at $(\sqrt{s}=13)$ TeV with the ATLAS detector. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	11
23	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. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	1
22	Search for dark matter produced in association with a single top quark in $(\sqrt{s}=13)$ TeV (pp) collisions with the ATLAS detector. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	4
21	Search for phenomena beyond the Standard Model in events with large b-jet multiplicity using the ATLAS detector at the LHC. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	1
20	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	0
19	Measurement of the production cross section of pairs of isolated photons in pp collisions at 13 TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	0
18	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. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	0
17	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. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	1
16	Configuration and performance of the ATLAS b-jet triggers in Run 2. <i>European Physical Journal C</i> , 2021 , 81, 1	4.2	1
15	Measurement of b-quark fragmentation properties in jets using the decay $B \rightarrow J/\psi K$ in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	0
14	Search for new phenomena in final states with large jet multiplicities and missing transverse momentum using $(\sqrt{s}) = 13$ TeV proton-proton collisions recorded by ATLAS in Run 2 of the LHC. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	7
13	Accidental symmetries in the 2HDMEFT. <i>Nuclear Physics B</i> , 2020 , 960, 115171	2.8	5
12	Higgs boson production cross-section measurements and their EFT interpretation in the $(4\ell\ell)$ decay channel at $(\sqrt{s}=13)$ TeV with the ATLAS detector. <i>European Physical Journal C</i> , 2020 , 80, 1	4.2	12
11	Search for pairs of scalar leptoquarks decaying into quarks and electrons or muons in $(\sqrt{s}) = 13$ TeV pp collisions with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	8
10	Search for top squarks in events with a Higgs or Z boson using 139 fb ⁻¹ of pp collision data at $(\sqrt{s}=13)$ TeV with the ATLAS detector. <i>European Physical Journal C</i> , 2020 , 80, 1	4.2	1
9	Evidence for $(\bar{t}t)$ production in the multilepton final state in proton-proton collisions at $(\sqrt{s}=13)$ (text {TeV}) with the ATLAS detector. <i>European Physical Journal C</i> , 2020 , 80, 1	4.2	8

8	Search for heavy diboson resonances in semileptonic final states in pp collisions at ($\sqrt{s}=13$) TeV with the ATLAS detector. <i>European Physical Journal C</i> , 2020 , 80, 1	4.2	4
7	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. <i>European Physical Journal C</i> , 2020 , 80, 1	4.2	17
6	Alignment of the ATLAS Inner Detector in Run 2. <i>European Physical Journal C</i> , 2020 , 80, 1	4.2	4
5	Search for (\overline{t}) resonances in fully hadronic final states in pp collisions at (\sqrt{s}) = 13 TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	6
4	Reconstruction and identification of boosted di- τ systems in a search for Higgs boson pairs using 13 TeV proton-proton collision data in ATLAS. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	3
3	Measurements of inclusive and differential cross-sections of combined ($\overline{t}\gamma$) and tW production in the $e\bar{\nu}$ channel at 13 TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	2
2	Search for new non-resonant phenomena in high-mass dilepton final states with the ATLAS detector. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	9
1	Measurements of the Higgs boson inclusive and differential fiducial cross sections in the $4(e\bar{\nu})$ decay channel at (\sqrt{s}) = 13 TeV. <i>European Physical Journal C</i> , 2020 , 80, 1	4.2	9