

Somadutta Bhatta

List of Publications by Year in descending order

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57
papers

859
citations

516710

16
h-index

580821

25
g-index

58
all docs

58
docs citations

58
times ranked

4052
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	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, .	4.7	64
3	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
4	Search for heavy resonances decaying into a pair of Z bosons in the pp 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
5	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
6	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.	3.9	28
7	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
8	Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the pp final states in $\sqrt{s}=13$ TeV pp collisions with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	26
9	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	25
10	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.	4.7	23
11	AtlFast3: The Next Generation of Fast Simulation in ATLAS. Computing and Software for Big Science, 2022, 6, 1.	2.9	23
12	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
13	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
14	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.	4.7	18
15	Search for Displaced Leptons in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	7.8	17
16	Search for Higgs boson decays into a pair of pseudoscalar particles in the pp final state with the ATLAS detector in $\sqrt{s}=13$ TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	17
17	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
18	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

#	ARTICLE	IF	CITATIONS
19	Search for New Phenomena in Final States with Two Leptons and One or No b-Tagged Jets at $\sqrt{s}=13\text{ TeV}$ Using the ATLAS Detector. Physical Review Letters, 2021, 127, 141801.	7.8	14
20	Measurement of the c-jet mistagging efficiency in $\sqrt{s}=13\text{ TeV}$ events using pp collision data at $\sqrt{s}=13\text{ TeV}$ collected with the ATLAS detector. European Physical Journal C, 2022, 82, .	3.9	14
21	Search for new phenomena in $\sqrt{s}=13\text{ TeV}$ collisions in final states with tau leptons, b-jets, and missing transverse momentum with the ATLAS detector. Physical Review D, 2021, 104, .	4.7	14
22	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.	3.9	13
23	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, .	3.9	13
24	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.	4.7	12
25	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.	3.9	12
26	Search for dark matter in events with missing transverse momentum and a Higgs boson decaying into two photons in pp collisions at $\sqrt{s}=13\text{ TeV}$ with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	12
27	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.	3.9	12
28	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.	4.7	10
29	Non-flow effects in correlation between harmonic flow and transverse momentum in nuclear collisions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 822, 136702.	4.1	10
30	Measurement of the $t\bar{t}$ production cross section in pp collisions at $\sqrt{s}=13\text{ TeV}$ with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	10
31	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 $\sqrt{s}=13\text{ TeV}$. Journal of High Energy Physics, 2022, 2022, 1.	4.7	10
32	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.	4.7	10
33	Search for resonant pair production of Higgs bosons in the $b\bar{b}$ channel using the full Run 2 dataset from the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	10
34	Search for single production of a vectorlike top quark decaying into a Higgs boson and top quark with fully hadronic final states using the ATLAS detector. Physical Review D, 2022, 105, .	4.7	10
35	Search for dark matter produced in association with a single top quark in $\sqrt{s}=13\text{ TeV}$ pp collisions with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	9
36	Measurements of $W+W^{\pm}+1\text{ jet}$ production cross-sections in pp collisions at $\sqrt{s}=13\text{ TeV}$ with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	8

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37	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
38	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 13 TeV with the ATLAS detector. European Physical Journal C, 2022, 82, 1.	3.9	8
39	Search for Lepton-Flavor violation in Z -Boson Decays with $\tilde{L}_{\tau,\mu}$ Leptons with the ATLAS Detector. Physical Review Letters, 2021, 127, 271801.	7.8	8
40	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.	3.9	7
41	Configuration and performance of the ATLAS b-jet triggers in Run 2. European Physical Journal C, 2021, 81, 1.	3.9	7
42	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, .	3.9	7
43	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
44	Performance of the ATLAS RPC detector and Level-1 muon barrel trigger at $\sqrt{s}=13$ TeV. Journal of Instrumentation, 2021, 16, P07029.	1.2	6
45	Performance of the ATLAS Level-1 topological trigger in Run 2. European Physical Journal C, 2022, 82, 1.	3.9	6
46	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.	4.7	5
47	The ATLAS Fast Tracker system. Journal of Instrumentation, 2021, 16, P07006.	1.2	5
48	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.	2.9	5
49	The ATLAS inner detector trigger performance in pp collisions at 13 TeV during LHC Run 2. European Physical Journal C, 2022, 82, 1.	3.9	5
50	Higher-order transverse momentum fluctuations in heavy-ion collisions. Physical Review C, 2022, 105, .	2.9	4
51	Measurement of the energy response of the ATLAS calorimeter to charged pions from $W^{\pm} \rightarrow u^{\pm} \bar{u}^{\pm} \pi^{\pm} u^{\pm} \bar{u}^{\pm}$ events in Run 2 data. European Physical Journal C, 2022, 82, 1.	3.9	4
52	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.	4.7	4
53	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.	4.7	4
54	Measurements of sensor radiation damage in the ATLAS inner detector using leakage currents. Journal of Instrumentation, 2021, 16, P08025.	1.2	3

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55	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.	4.7	3
56	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.	4.7	2
57	Measurement of the energy asymmetry in $t\bar{t}$ production at $\sqrt{s} = 13, 14$ TeV with the ATLAS experiment and interpretation in the SMEFT framework. European Physical Journal C, 2022, 82, .	3.9	2