

# Matous Vozak

## 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.

92  
papers

562  
citations

11  
h-index

19  
g-index

105  
ext. papers

1,197  
ext. citations

4.8  
avg, IF

-1.21  
L-index

#	Paper	IF	Citations
92	Performance of the ATLAS Level-1 topological trigger in Run2. <i>European Physical Journal C</i> , <b>2022</b> , 82, 1	4.2	0
91	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> , <b>2022</b> , 2022, 1	5.4	0
90	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. <i>European Physical Journal C</i> , <b>2022</b> , 82, 1	4.2	0
89	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 <sup>-1</sup> of pp collision data at $\sqrt{s} = 13$ TeV. <i>Journal of High Energy Physics</i> , <b>2022</b> , 2022, 1	5.4	0
88	AtlFast3: The Next Generation of Fast Simulation in ATLAS. <i>Computing and Software for Big Science</i> , <b>2022</b> , 6, 1	6	0
87	Measurement of the energy response of the ATLAS calorimeter to charged pions from $W^{\pm} \rightarrow \tau^{\pm} \rightarrow \pi^{\pm} \nu_{\tau} \nu_{\tau}$ events in Run2 data. <i>European Physical Journal C</i> , <b>2022</b> , 82, 1	4.2	0
86	The ATLAS inner detector trigger performance in pp collisions at 13 TeV during LHC Run 2. <i>European Physical Journal C</i> , <b>2022</b> , 82, 1	4.2	
85	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> , <b>2022</b> , 82, 1	4.2	1
84	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> , <b>2021</b> , 81, 1	4.2	2
83	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> , <b>2021</b> , 2021, 1	5.4	0
82	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> , <b>2021</b> , 2021, 1	5.4	2
81	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> , <b>2021</b> , 81, 1	4.2	7
80	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. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	5
79	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> , <b>2021</b> , 2021, 1	5.4	1
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. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	6
77	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> , <b>2021</b> , 2021, 1	5.4	8
76	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> , <b>2021</b> , 81, 1	4.2	5

75	Optimisation of large-radius jet reconstruction for the ATLAS detector in 13 TeV proton-proton collisions. <i>European Physical Journal C</i> , <b>2021</b> , 81, 1	4.2	2
74	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 <sup>-1</sup> of proton-proton collisions at ( $\sqrt{s} = 13$ ) TeV with the ATLAS detector. <i>European Physical Journal C</i> , <b>2021</b> , 81, 1	4.2	8
73	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> , <b>2021</b> , 2021, 1	5.4	6
72	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> , <b>2021</b> , 81, 1	4.2	7
71	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> , <b>2021</b> , 2021, 1	5.4	3
70	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> , <b>2021</b> , 2021, 1	5.4	0
69	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> , <b>2021</b> , 2021, 1	5.4	8
68	Measurements of Higgs bosons decaying to bottom quarks from vector boson fusion production with the ATLAS experiment at ( $\sqrt{s}=13$ ,text {TeV}). <i>European Physical Journal C</i> , <b>2021</b> , 81, 1	4.2	0
67	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> , <b>2021</b> , 2021, 1	5.4	6
66	Search for supersymmetry in events with four or more charged leptons in 139 fb <sup>-1</sup> of ( $\sqrt{s} = 13$ TeV) pp collisions with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	2
65	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> , <b>2021</b> , 2021, 1	5.4	1
64	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> , <b>2021</b> , 2021, 1	5.4	0
63	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> , <b>2021</b> , 2021, 1	5.4	1
62	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> , <b>2021</b> , 81, 1	4.2	13
61	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> , <b>2021</b> , 2021, 1	5.4	3
60	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. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	8
59	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> , <b>2021</b> , 81, 1	4.2	5
58	Measurements of WH and ZH production in the $(H \rightarrow b\bar{b})$ decay channel in pp collisions at (13,text {TeV}) with the ATLAS detector. <i>European Physical Journal C</i> , <b>2021</b> , 81, 1	4.2	7

57	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> , <b>2021</b> , 2021, 1	5.4	5
56	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> , <b>2021</b> , 81, 1	4.2	0
55	Measurement of single top-quark production in association with a W boson in the single-lepton channel at $(\sqrt{s} = 8, \text{TeV})$ with the ATLAS detector. <i>European Physical Journal C</i> , <b>2021</b> , 81, 1	4.2	1
54	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> , <b>2021</b> , 81, 1	4.2	11
53	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> , <b>2021</b> , 81, 1	4.2	1
52	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> , <b>2021</b> , 81, 1	4.2	4
51	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. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	2
50	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> , <b>2021</b> , 81, 1	4.2	1
49	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> , <b>2021</b> , 2021, 1	5.4	0
48	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> , <b>2021</b> , 2021, 1	5.4	0
47	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> , <b>2021</b> , 2021, 1	5.4	0
46	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> , <b>2021</b> , 81, 1	4.2	1
45	Configuration and performance of the ATLAS b-jet triggers in Run 2. <i>European Physical Journal C</i> , <b>2021</b> , 81, 1	4.2	1
44	Measurement of b-quark fragmentation properties in jets using the decay $B \rightarrow \mu \bar{\nu}_\mu$ in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	0
43	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> , <b>2020</b> , 2020, 1	5.4	7
42	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. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	12
41	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> , <b>2020</b> , 2020, 1	5.4	8
40	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. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	8

39	Search for dijet resonances in events with an isolated charged lepton using $(\sqrt{s}) = 13$ TeV proton-proton collision data collected by the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	3
38	Measurement of the $Z(\rightarrow \mu\mu)$ production cross-section in pp collisions at $(\sqrt{s}) = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	2
37	Transverse momentum and process dependent azimuthal anisotropies in $(\sqrt{s_{\text{NN}}})=8.16$ TeV p+Pb collisions with the ATLAS detector. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	7
36	Performance of electron and photon triggers in ATLAS during LHC Run 2. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	30
35	Search for electroweak production of charginos and sleptons decaying into final states with two leptons and missing transverse momentum in $(\sqrt{s}=13)$ (text {TeV}) pp collisions using the ATLAS detector. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	50
34	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. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	1
33	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> , <b>2020</b> , 80, 1	4.2	8
32	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> , <b>2020</b> , 80, 1	4.2	4
31	Search for light long-lived neutral particles produced in pp collisions at $(\sqrt{s} = 13\text{-}\text{TeV})$ and decaying into collimated leptons or light hadrons with the ATLAS detector. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	8
30	Search for a scalar partner of the top quark in the all-hadronic $(\bar{t}t)$ plus missing transverse momentum final state at $(\sqrt{s}=13)$ TeV with the ATLAS detector. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	17
29	Alignment of the ATLAS Inner Detector in Run 2. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	4
28	Search for new resonances in mass distributions of jet pairs using 139 fb <sup>-1</sup> of pp collisions at $(\sqrt{s}) = 13$ TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	20
27	Search for $(\bar{t}t)$ 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> , <b>2020</b> , 2020, 1	5.4	6
26	Reconstruction and identification of boosted di- $\tau$ systems in a search for Higgs boson pairs using 13 TeV proton-proton collision data in ATLAS. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	3
25	Measurements of inclusive and differential cross-sections of combined $(\bar{t}t\gamma)$ and $tW$ production in the $e\bar{\nu}_e$ channel at 13 TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	2
24	Performance of the missing transverse momentum triggers for the ATLAS detector during Run-2 data taking. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	8
23	Search for new non-resonant phenomena in high-mass dilepton final states with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5.4	9
22	Measurements of the Higgs boson inclusive and differential fiducial cross sections in the $4(\ell\ell)$ decay channel at $(\sqrt{s}) = 13$ TeV. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	9

21	Measurement of differential cross sections for single diffractive dissociation in ( $\sqrt{s}$ ) = 8 TeV pp collisions using the ATLAS ALFA spectrometer. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	1
20	Measurement of isolated-photon plus two-jet production in pp collisions at ( $\sqrt{s}$ ) = 13 TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	2
19	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. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	5
18	Search for the HH $\rightarrow$ ( $\bar{b}b$ ) process via vector-boson fusion production using proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	5
17	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. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	5
16	Measurement of the transverse momentum distribution of Drell-Yan lepton pairs in proton-proton collisions at ( $\sqrt{s}$ ) = 13 TeV with the ATLAS detector. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4-2	7
15	Search for direct production of electroweakinos in final states with missing transverse momentum and a Higgs boson decaying into photons in pp collisions at ( $\sqrt{s}$ ) = 13 TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2020</b> , 2020, 1	5-4	1
14	Measurement of distributions sensitive to the underlying event in inclusive Z boson production in pp collisions at ( $\sqrt{s}$ ) = 13 TeV with the ATLAS detector. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4-2	2
13	Search for diboson resonances in hadronic final states in 139 fb <sup>-1</sup> of pp collisions at ( $\sqrt{s}$ ) = 13 TeV with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	10
12	Identification of boosted Higgs bosons decaying into b-quark pairs with the ATLAS detector at 13 TeV. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4-2	11
11	Measurement of $K_S^0$ and $\Lambda^0$ production in $t\bar{t}$ dileptonic events in pp collisions at $\sqrt{s}$ = 7 TeV with the ATLAS detector. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4-2	3
10	Measurement of the inclusive isolated-photon cross section in pp collisions at ( $\sqrt{s}$ ) = 13 TeV using 36 fb <sup>-1</sup> of ATLAS data. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	2
9	Measurement of the top-quark mass in ( $t$ ) + 1-jet events collected with the ATLAS detector in pp collisions at ( $\sqrt{s}$ ) = 8 TeV. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	12
8	Measurement of ( $W^{\pm}$ )-boson and Z-boson production cross-sections in pp collisions at ( $\sqrt{s}$ ) = 2.76 TeV with the ATLAS detector. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4-2	2
7	Measurement of the inclusive cross-section for the production of jets in association with a Z boson in proton-proton collisions at 8 TeV using the ATLAS detector. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4-2	4
6	Search for heavy neutral leptons in decays of W bosons produced in 13 TeV pp collisions using prompt and displaced signatures with the ATLAS detector. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5-4	21
5	Measurement of ( $W^{\pm}$ ) boson production in Pb+Pb collisions at ( $\sqrt{s_{\text{NN}}}$ ) = 5.02 TeV with the ATLAS detector. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4-2	7
4	ATLAS b-jet identification performance and efficiency measurement with ( $t\bar{t}$ ) events in pp collisions at ( $\sqrt{s}$ ) = 13 TeV. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4-2	43



3	Measurement of flow harmonics correlations with mean transverse momentum in lead-lead and proton-lead collisions at $(\sqrt{s_{\mathrm{NN}}}) = 5.02 \sim 8.76$ (TeV) with the ATLAS detector. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4.2	16
2	Measurements of top-quark pair differential and double-differential cross-sections in the $(\ell\ell)+\text{jets}$ channel with pp collisions at $(\sqrt{s})=13$ TeV using the ATLAS detector. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4.2	13
1	Search for bottom-squark pair production with the ATLAS detector in final states containing Higgs bosons, b-jets and missing transverse momentum. <i>Journal of High Energy Physics</i> , <b>2019</b> , 2019, 1	5.4	7