

David Fehling

List of Publications by Year in descending order

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73
papers

4,815
citations

117571

34
h-index

91828

69
g-index

74
all docs

74
docs citations

74
times ranked

7317
citing authors

#	ARTICLE	IF	CITATIONS
1	Precise determination of the mass of the Higgs boson and tests of compatibility of its couplings with the standard model predictions using proton collisions at 7 and 8 TeV. European Physical Journal C, 2015, 75, 212.	1.4	541
2	Event generator tunes obtained from underlying event and multiparton scattering measurements. European Physical Journal C, 2016, 76, 155.	1.4	499
3	Combined measurements of Higgs boson couplings in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2019, 79, 421.	1.4	355
4	Observation of a new boson with mass near 125 GeV in pp collisions at $\sqrt{s}=7$ and 8 TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	320
5	Search for dark matter, extra dimensions, and unparticles in monojet events in proton-proton collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2015, 75, 235.	1.4	320
6	Searches for electroweak production of charginos, neutralinos, and sleptons decaying to leptons and W, Z, and Higgs bosons in pp collisions at 8 TeV. European Physical Journal C, 2014, 74, 3036.	1.4	241
7	Transverse-momentum and pseudorapidity distributions of charged hadrons in pp collisions at $\sqrt{s} = 0.9$ and 2.36 TeV. Journal of High Energy Physics, 2010, 2010, 1.	1.6	230
8	Extraction and validation of a new set of CMS pythia8 tunes from underlying-event measurements. European Physical Journal C, 2020, 80, 4.	1.4	198
9	Measurement of the inclusive W and Z production cross sections in pp collisions at $\sqrt{s} = 7$ TeV with the CMS experiment. Journal of High Energy Physics, 2011, 2011, 1.	1.6	158
10	Charged-particle nuclear modification factors in PbPb and pPb collisions at $\sqrt{s_{NN}}=5.02$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	103
11	Measurements of properties of the Higgs boson decaying into the four-lepton final state in pp collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	101
12	Searches for invisible decays of the Higgs boson in pp collisions at $\sqrt{s} = 7, 8,$ and 13 TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	95
13	Measurement of the $t\bar{t}$ production cross section, the top quark mass, and the strong coupling constant using dilepton events in pp collisions at. European Physical Journal C, 2019, 79, 368.	1.4	68
14	Search for new physics in same-sign dilepton events in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2016, 76, 439.	1.4	64
15	Search for electroweak production of charginos and neutralinos in multilepton final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	63
16	Search for dark matter produced with an energetic jet or a hadronically decaying W or Z boson at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	62
17	Search for physics beyond the standard model in events with two leptons of same sign, missing transverse momentum, and jets in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2017, 77, 578.	1.4	57
18	Combined search for electroweak production of charginos and neutralinos in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	57

#	ARTICLE	IF	CITATIONS
19	Measurements of the $\sigma(\text{pp} \rightarrow \text{ZZ})$ production cross section and the $\text{BR}(\text{Z} \rightarrow 4\ell)$ branching fraction, and constraints on anomalous triple gauge couplings at $\sqrt{s}=0.9, 2.76, 7, 13$ TeV. European Physical Journal C, 2018, 78, 165.	1.4	52
20	Study of the underlying event at forward rapidity in pp collisions at $\sqrt{s}=0.9, 2.76, 7, 13$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	50
21	Search for a heavy pseudoscalar boson decaying to a Z and a Higgs boson at $\sqrt{s}=13$ TeV. European Physical Journal C, 2019, 79, 564.	1.4	50
22	Measurement of pseudorapidity distributions of charged particles in proton-proton collisions at $\sqrt{s}=8$ TeV by the CMS and TOTEM experiments. European Physical Journal C, 2014, 74, 1.	1.4	49
23	Search for vector-like quarks in events with two oppositely charged leptons and jets in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2019, 79, 364.	1.4	48
24	Measurement of the cross section and angular correlations for associated production of a Z boson with b hadrons in pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	47
25	Search for standard model production of four top quarks with same-sign and multilepton final states in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2018, 78, 140.	1.4	44
26	Search for natural and split supersymmetry in proton-proton collisions at $\sqrt{s}=13$ TeV in final states with jets and missing transverse momentum. Journal of High Energy Physics, 2018, 2018, 1.	1.6	43
27	Search for low mass vector resonances decaying into quark-antiquark pairs in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	42
28	Measurement of the top quark mass in the all-jets final state at $\sqrt{s}=13$ TeV and combination with the lepton+jets channel. European Physical Journal C, 2019, 79, 313.	1.4	40
29	Measurement of the $Z \rightarrow b\bar{b}$ cross section in pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	39
30	Measurement of the ZZ production cross section and search for anomalous couplings in $2\ell, 2\ell\gamma, \ell\ell\gamma^2$ final states in pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	39
31	Searches for third-generation squark production in fully hadronic final states in proton-proton collisions at $\sqrt{s}=8$ TeV. Journal of High Energy Physics, 2015, 2015, 1.	1.6	37
32	Search for resonant and nonresonant Higgs boson pair production in the $b\bar{b}\gamma\gamma$ final state in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	36
33	Observation of Z decays to four leptons with the CMS detector at the LHC. Journal of High Energy Physics, 2012, 2012, 1.	1.6	34
34	Measurement of the top quark mass with lepton+jets final states using $\text{pp} \rightarrow \text{t}\bar{\text{t}} + \text{lepton} + \text{jets}$ collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2018, 78, 891.	1.4	34
35	Measurement of normalised multi-differential cross sections in $\text{pp} \rightarrow \text{pp}$ collisions at $\sqrt{s}=13$ TeV, and simultaneous determination of the strong coupling strength, top quark pole mass, and parton distribution functions. European Physical Journal C, 2020, 80, 1.	1.4	33
36	Measurement of $\langle \cos\theta_{\text{B}} \rangle$ angular correlations based on secondary vertex reconstruction at $\sqrt{s}=7, 13$ TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	32

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37	Measurements of the $Z Z$ production cross sections in the $2u$ channel in proton-proton collisions at $\sqrt{s} = 7$ and 8 TeV. European Physical Journal C, 2015, 75, 511.	1.4	32
38	A multi-dimensional search for new heavy resonances decaying to boosted W boson pairs in the dijet final state at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2020, 80, 237.	1.4	31
39	Measurements of the associated production of a Z boson and b jets in pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2017, 77, 751.	1.4	30
40	Search for new physics in events with a leptonically decaying Z boson and a large transverse momentum imbalance in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2018, 78, 291.	1.4	27
41	Ratios of dijet production cross sections as a function of the absolute difference in rapidity between jets in proton-proton collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2012, 72, 1.	1.4	26
42	Measurement of energy flow at large pseudorapidities in pp collisions at $\sqrt{s} = 0.9$ and 7 TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	25
43	Measurement of the triple-differential dijet cross section in proton-proton collisions at $\sqrt{s} = 8$ TeV and constraints on parton distribution functions. European Physical Journal C, 2017, 77, 746.	1.4	23
44	Search for dark matter and unparticles in events with a Z boson and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	23
45	Search for direct pair production of supersymmetric partners to the τ lepton in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2020, 80, 189.	1.4	22
46	Measurement of normalized differential $\overline{\sigma}(\tau)$ cross sections in the dilepton channel from pp collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	18
47	Search for standard model production of four top quarks in the lepton + jets channel in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	17
48	Constraints on the double-parton scattering cross section from same-sign W boson pair production in proton-proton collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	17
49	Measurement of charged particle spectra in minimum-bias events from proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2018, 78, 697.	1.4	17
50	Measurement of the inclusive production cross sections for forward jets and for dijet events with one forward and one central jet in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	16
51	Measurement of dijet azimuthal decorrelation in pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2016, 76, 536.	1.4	16
52	Measurement of associated Z + charm production in proton-proton collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2018, 78, 287.	1.4	16
53	Measurements of differential production cross sections for a Z boson in association with jets in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	14
54	Mixed higher-order anisotropic flow and nonlinear response coefficients of charged particles in $PbPb$ collisions at $\sqrt{s_{NN}} = 2.76$ and 5.02 TeV. European Physical Journal C, 2020, 80, 534.	1.4	14

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55	Jet properties in PbPb and pp collisions at $\sqrt{s_{\mathrm{NN}}}=5.02$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	13
56	Comparing transverse momentum balance of b jet pairs in pp and PbPb collisions at $\sqrt{s_{\mathrm{NN}}}=5.02$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	12
57	Search for a heavy resonance decaying to a pair of vector bosons in the lepton plus merged jet final state at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	11
58	Study of the underlying event in top quark pair production in $\mathrm{p}\mathrm{p}$ collisions at $13\sqrt{s}=13$ Te. European Physical Journal C, 2019, 79, 123.	1.4	11
59	Search for a light pseudoscalar Higgs boson produced in association with bottom quarks in pp collisions at $\sqrt{s}=8$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	10
60	Study of dijet events with a large rapidity gap between the two leading jets in pp collisions at $\sqrt{s}=7\sqrt{s}$, ext {TeV}. European Physical Journal C, 2018, 78, 242.	1.4	10
61	Evidence for $\mathrm{W}\mathrm{W}$ production from double-parton interactions in proton-proton collisions at $\sqrt{s}=13$, ext {TeV}. European Physical Journal C, 2020, 80, 1.	1.4	10
62	Search for lepton-flavor violating decays of heavy resonances and quantum black holes to $e\gamma$ final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	9
63	Search for a heavy resonance decaying to a top quark and a vector-like top quark in the lepton + jets final state in pp collisions at $\sqrt{s}=13$, ext {TeV} $s=13$ TeV. European Physical Journal C, 2019, 79, 1.	1.4	9
64	Pseudorapidity distributions of charged hadrons in proton-lead collisions at $s_{\mathrm{NN}}=5.02$ TeV and 8.16 TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	8
65	Azimuthal separation in nearly back-to-back jet topologies in inclusive 2- and 3-jet events in $\mathrm{p}\mathrm{p}$ collisions at $\sqrt{s}=13$, ext {TeV}. European Physical Journal C, 2019, 79, 773.	1.4	8
66	Search for supersymmetry in events with at least three electrons or muons, jets, and missing transverse momentum in proton-proton collisions at $s=13\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	6
67	Measurement of the inclusive $\overline{\mathrm{t}}\mathrm{t}$ cross section in pp collisions at $\sqrt{s}=5.02$ TeV using final states with at least one charged lepton. Journal of High Energy Physics, 2018, 2018, 1.	1.6	5
68	Search for new phenomena in final states with two opposite-charge, same-flavor leptons, jets, and missing transverse momentum in pp collisions at $s=13\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	5
69	Measurement of energy flow at large pseudorapidities in pp collisions at ($\sqrt{s}=0.9$) and 7 TeV. , 2011, 2011, 1.		5
70	Measurement of single-diffractive dijet production in proton-proton collisions at $\sqrt{s}=8$, ext {TeV} with the CMS and TOTEM experiments. European Physical Journal C, 2020, 80, 1164.	1.4	5
71	Characterisation of irradiated thin silicon sensors for the CMS phase II pixel upgrade. European Physical Journal C, 2017, 77, 1.	1.4	4
72	Measurement of differential cross sections in the kinematic angular variable $\tilde{\chi}^*$ for inclusive Z boson production in pp collisions at $\sqrt{s}=8$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	4

#	ARTICLE	IF	CITATIONS
73	Search for ZZ resonances in the $2\hat{\alpha}, "2\hat{1}\frac{1}{2}$ final state in proton-proton collisions at 13 TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	4