

Quentin Python

List of Publications by Year in descending order

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Version: 2024-02-01

99
papers

5,888
citations

87888

38
h-index

74163

75
g-index

104
all docs

104
docs citations

104
times ranked

6982
citing authors

#	ARTICLE	IF	CITATIONS
1	Event generator tunes obtained from underlying event and multiparton scattering measurements. European Physical Journal C, 2016, 76, 155.	3.9	499
2	Particle-flow reconstruction and global event description with the CMS detector. Journal of Instrumentation, 2017, 12, P10003-P10003.	1.2	348
3	Observation of the diphoton decay of the Higgs boson and measurement of its properties. European Physical Journal C, 2014, 74, 3076.	3.9	342
4	The CMS trigger system. Journal of Instrumentation, 2017, 12, P01020-P01020.	1.2	307
5	Identification of heavy-flavour jets with the CMS detector in pp collisions at 13 TeV. Journal of Instrumentation, 2018, 13, P05011-P05011.	1.2	241
6	Observation of Higgs Boson Decay to Bottom Quarks. Physical Review Letters, 2018, 121, 121801.	7.8	219
7	Jet energy scale and resolution in the CMS experiment in pp collisions at 8 TeV. Journal of Instrumentation, 2017, 12, P02014-P02014.	1.2	216
8	Observation of $t\bar{t}$ production in association with a Higgs boson in the decay channel $H \rightarrow b\bar{b}$. Physical Review Letters, 2018, 120, 231801.	7.8	209
9	Extraction and validation of a new set of CMS pythia8 tunes from underlying-event measurements. European Physical Journal C, 2020, 80, 4.	3.9	198
10	Performance of the CMS muon detector and muon reconstruction with proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2018, 13, P06015-P06015.	1.2	180
11	Search for invisible decays of a Higgs boson produced through vector boson fusion in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 793, 520-551.	1.2	176
12	Evidence for transverse-momentum- and pseudorapidity-dependent event-plane fluctuations in PbPb and $p\bar{p}$ collisions. Physical Review C, 2015, 92, .	2.9	140
13	Observation of the Higgs boson decay to a pair of τ , leptons with the CMS detector. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 779, 283-316.	4.1	125
14	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.	4.7	103
15	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.	4.7	101
16	Search for high-mass resonances in dilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	86
17	Performance of the CMS Level-1 trigger in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2020, 15, P10017-P10017.	1.2	84
18	Performance of missing transverse momentum reconstruction in proton-proton collisions at $\sqrt{s} = 13$ TeV using the CMS detector. Journal of Instrumentation, 2019, 14, P07004-P07004.	1.2	83

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19	Search for new physics in final states with an energetic jet or a hadronically decaying W boson and transverse momentum imbalance in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2018, 13, P10005-P10005.	4.7	78
20	Performance of reconstruction and identification of \tilde{l} , leptons decaying to hadrons and ν in pp collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2018, 13, P10005-P10005.	1.2	69
21	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.	3.9	64
22	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.	4.7	63
23	A measurement of the Higgs boson mass in the diphoton decay channel. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 805, 135425.	4.1	63
24	Measurement of the inelastic proton-proton cross section at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	62
25	Electron and photon reconstruction and identification with the CMS experiment at the CERN LHC. Journal of Instrumentation, 2021, 16, P05014.	1.2	62
26	Search for a Narrow Resonance Lighter than 200 GeV Decaying to a Pair of Muons in Proton-Proton Collisions at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2020, 124, 131802.	7.8	61
27	Measurements of Higgs boson properties in the diphoton decay channel in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	57
28	Measurement of the double-differential inclusive jet cross section in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2016, 76, 451.	3.9	55
29	Measurement and QCD analysis of double-differential inclusive jet cross sections in pp collisions at $\sqrt{s} = 8$ TeV and cross section ratios to 2.76 and 7 TeV. Journal of High Energy Physics, 2017, 2017, 1.	4.7	54
30	Measurements of the $pp \rightarrow ZZ$ production cross section and the $Z \rightarrow 4\ell$ branching fraction, and constraints on anomalous triple gauge couplings at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2018, 78, 165.	3.9	52
31	Search for the associated production of the Higgs boson with a top-quark pair. Journal of High Energy Physics, 2014, 2014, 1.	4.7	51
32	Pileup mitigation at CMS in 13 TeV data. Journal of Instrumentation, 2020, 15, P09018-P09018.	1.2	47
33	Measurement of diffractive dissociation cross sections in pp collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2018, 78, 165.	4.7	46
34	Pseudorapidity distribution of charged hadrons in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 751, 143-163.	4.1	45
35	Identification techniques for highly boosted W bosons that decay into hadrons. Journal of High Energy Physics, 2014, 2014, 1.	4.7	43
36	Search for the standard model Higgs boson produced through vector boson fusion and decaying to $b\bar{b}$. Physical Review D, 2015, 92, .	4.7	43

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37	Measurement of the Higgs boson production rate in association with top quarks in final states with electrons, muons, and hadronically decaying tau leptons at $\sqrt{s} = 13, \text{ext}\{Te\}\text{ext}\{V\}$ TeV. European Physical Journal C, 2021, 81, 378.	3.9	40
38	Observation of Correlated Azimuthal Anisotropy Fourier Harmonics in $p\bar{p}$ and $p\bar{p} + Pb$ collisions at the LHC. Physical Review Letters, 2018, 120, 092301.	7.8	39
39	Measurement of differential cross sections for Z boson production in association with jets in proton-proton collisions at $\sqrt{s} = 13, \text{ext}\{Te\}$ TeV. European Physical Journal C, 2018, 78, 965.	3.9	39
40	Search for heavy resonances that decay into a vector boson and a Higgs boson in hadronic final states at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2017, 77, 636.	3.9	38
41	Evidence for associated production of a Higgs boson with a top quark pair in final states with electrons, muons, and hadronically decaying l , leptons at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	38
42	Search for top squarks and dark matter particles in opposite-charge dilepton final states at $\sqrt{s} = 13$ TeV. Physical Review D, 2018, 97, .	4.7	36
43	Search for dark matter produced in association with a leptonically decaying Z boson in proton-proton collisions at $\sqrt{s} = 13, \text{ext}\{Te\}$ TeV. European Physical Journal C, 2021, 81, 13.	3.9	33
44	Search for top squark pair production using dilepton final states in pp collision data collected at $\sqrt{s} = 13, \text{ext}\{TeV\}$ TeV. European Physical Journal C, 2021, 81, 3.	3.9	33
45	Search for singly and pair produced top quarks coupling to third-generation fermions in proton-proton collisions at $\sqrt{s} = 13$ TeV. High Energy Physics, 2021, 81, 136446.	4.1	33
46	Measurements of the Z production cross sections in the $2l2\bar{1}/2$ channel in proton-proton collisions at $\sqrt{s} = 7$ and 8 TeV. European Physical Journal C, 2015, 75, 511.	3.9	32
47	Searches for pair production of third-generation squarks in pp collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2017, 77, 327.	3.9	32
48	Search for top squark pair production in pp collisions at $\sqrt{s} = 13$ TeV using single lepton events. Journal of High Energy Physics, 2017, 2017, 1.	4.7	31
49	Measurement of differential cross sections for the production of top quark pairs and of additional jets in pp collisions at $\sqrt{s} = 13$ TeV. Physical Review D, 2018, 98, 114011.	4.7	30
50	Search for light bosons in decays of the 125 GeV Higgs boson in proton-proton collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	4.7	29
51	Search for dark matter produced in association with a Higgs boson decaying to a pair of bottom quarks in proton-proton collisions at $\sqrt{s} = 13, \text{ext}\{Te\}$ TeV. European Physical Journal C, 2019, 79, 280.	3.9	29
52	Search for $t\bar{t}H$ production in the $t\bar{t}b\bar{b}$ decay channel with leptonic $t\bar{t}$ decays in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	28
53	Measurements of differential Z boson production cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	28
54	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.	3.9	27

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55	Performance of the reconstruction and identification of high-momentum muons in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2020, 15, P02027-P02027.	1.2	27
56	Search for high-mass resonances in final states with a lepton and missing transverse momentum at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	25
57	Measurement of jet substructure observables in $pp \rightarrow t\bar{t}$ events from proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	24
58	Measurements of $\sigma(\text{pp} \rightarrow \text{Z}\gamma\text{Z})$ production cross sections and constraints on anomalous triple gauge couplings at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 200.	3.9	24
59	Measurement of the ZZ production cross section and Z $\rightarrow \text{e}^+\text{e}^-$ branching fraction in pp collisions at $\sqrt{s} = 13$ TeV. Physics Letters. Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 763, 280-303.	4.1	22
60	Search for direct production of supersymmetric partners of the top quark in the all-jets final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	4.7	22
61	A Deep Neural Network for Simultaneous Estimation of b Jet Energy and Resolution. Computing and Software for Big Science, 2020, 4, 10.	2.9	21
62	Search for direct top squark pair production in events with one lepton, jets, and missing transverse momentum at 13 TeV with the CMS experiment. Journal of High Energy Physics, 2020, 2020, 1.	4.7	21
63	Search for $\text{pp} \rightarrow \text{t}\bar{\text{t}}\text{H}$ production in the all-jet final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	20
64	Search for dark matter in events with energetic, hadronically decaying top quarks and missing transverse momentum at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	20
65	Search for associated production of a Higgs boson and a single top quark in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physical Review D, 2019, 99, .	4.7	20
66	Measurement of top quark pair production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	20
67	Measurements of production cross sections of polarized same-sign W boson pairs in association with two jets in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.1	20
68	Search for a very light NMSSM Higgs boson produced in decays of the 125 GeV scalar boson and decaying into $\tilde{l}, \tilde{\nu}_\tau$ leptons in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	19
69	Measurement of the differential cross sections for the associated production of a W boson and jets in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physical Review D, 2017, 96, .	4.7	19
70	MUSIC: a model-unspecific search for new physics in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 629.	3.9	18
71	Search for low-mass dilepton resonances in Higgs boson decays to four-lepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2022, 82, 290.	3.9	18
72	Search for $Z\tilde{l}^3$ resonances using leptonic and hadronic final states in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	17

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73	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.	3.9	17
74	Combination of CMS searches for heavy resonances decaying to pairs of bosons or leptons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 798, 134952.	4.1	17
75	Search for black holes and sphalerons in high-multiplicity final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	14
76	Measurements of the pp \rightarrow WZ inclusive and differential production cross sections and constraints on charged anomalous triple gauge couplings at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	14
77	Mixed higher-order anisotropic flow and nonlinear response coefficients of charged particles in $\sqrt{s_{NN}}=2.76$ and 5.02 TeV collisions at $\sqrt{s_{NN}}=2.76$ and 5.02 TeV. European Physical Journal C, 2020, 80, 534.	3.9	14
78	Search for dark matter particles produced in association with a Higgs boson in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	14
79	Search for the associated production of a Higgs boson with a single top quark in proton-proton collisions at $\sqrt{s}=8$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	13
80	Measurement of the underlying event activity in inclusive Z boson production in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	13
81	Measurements of differential cross sections of top quark pair production as a function of kinematic event variables in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	13
82	Studies of charm and beauty hadron long-range correlations in pp and pPb collisions at LHC energies. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 813, 136036.	4.1	13
83	Measurement of the azimuthal anisotropy of final mesons in Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ and 5.02 TeV. European Physical Journal C, 2018, 78, 697.	4.1	13
84	Search for dark matter produced in association with a Higgs boson decaying to $\tilde{\chi}_1^0$ or $\tilde{\chi}_1^\pm$, \tilde{g} at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	12
85	Search for heavy resonances decaying into two Higgs bosons or into a Higgs boson and a W or Z boson in proton-proton collisions at 13 TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	12
86	Development and validation of HERWIG7 tunes from CMS underlying-event measurements. European Physical Journal C, 2021, 81, 312.	3.9	12
87	Search for heavy resonances decaying into a vector boson and a Higgs boson in final states with charged leptons, neutrinos and b quarks at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	11
88	Search for a heavy resonance decaying into a Z boson and a vector boson in the $u\bar{u}$ final state. Journal of High Energy Physics, 2018, 2018, 1.	4.7	10
89	Search for a heavy vector resonance decaying to a $Z\gamma$ boson and a Higgs boson in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 688.	3.9	9
90	Search for a heavy resonance decaying into a Z boson and a Z or W boson in $2q$ final states at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	8

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91	Search for direct pair production of scalar top quarks in the single- and dilepton channels in proton-proton collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	7
92	Search for the associated production of the Higgs boson with a top-quark pair. , 2014, 2014, 1.		6
93	Search for the pair production of light top squarks in the e^+e^- final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	5
94	Measurement of single-diffractive dijet production in proton-proton collisions at $\sqrt{s} = 8, \sqrt{s} = 13$ TeV with the CMS and TOTEM experiments. European Physical Journal C, 2020, 80, 1164.	3.9	5
95	Search for the rare decay of the W boson into a pion and a photon in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physics Letters. Section B: Nuclear, Particle and High Energy Physics, 2021, 847, 137817.	4.1	3
96	Hard color-singlet exchange in dijet events in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physical Review D, 2021, 104, 034011.	4.7	3
97	Measurements of the $(pp \rightarrow ZZ)$ production cross section and the $(Z \rightarrow 4\ell)$ branching fraction, and constraints on anomalous triple gauge couplings at $\sqrt{s} = 13$ TeV. , 2018, 78, 1.		3
98	Search for strongly interacting massive particles generating trackless jets in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2022, 82, 213.	3.9	3
99	Measurements of angular distance and momentum ratio distributions in three-jet and Z + two-jet final states in pp collisions. European Physical Journal C, 2021, 81, 852.	3.9	2