

# Hucheng Chen

## List of Publications by Year in descending order

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75  
papers

6,140  
citations

117625

34  
h-index

79698

73  
g-index

78  
all docs

78  
docs citations

78  
times ranked

6228  
citing authors

#	ARTICLE	IF	CITATIONS
1	The ATLAS Simulation Infrastructure. European Physical Journal C, 2010, 70, 823-874.	3.9	1,187
2	Performance of the ATLAS trigger system in 2015. European Physical Journal C, 2017, 77, 317.	3.9	489
3	Muon reconstruction performance of the ATLAS detector in proton-proton collision data at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2016, 76, 292.	3.9	453
4	Topological cell clustering in the ATLAS calorimeters and its performance in LHC Run 1. European Physical Journal C, 2017, 77, 490.	3.9	325
5	Performance of pile-up mitigation techniques for jets in $pp$ collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2016, 76, 581.	3.9	298
6	Luminosity determination in $pp$ collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector at the LHC. European Physical Journal C, 2016, 76, 653.	3.9	279
7	Measurements of the Higgs boson production and decay rates and coupling strengths using $pp$ collision data at $\sqrt{s} = 7$ and 8 TeV in the ATLAS experiment. European Physical Journal C, 2016, 76, 6.	3.9	274
8	Jet energy resolution in proton-proton collisions at $\sqrt{s} = 7$ TeV recorded in 2010 with the ATLAS detector. European Physical Journal C, 2013, 73, 2306.	3.9	209
9	Performance of missing transverse momentum reconstruction with the ATLAS detector using proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2018, 78, 903.	3.9	181
10	Study of the spin and parity of the Higgs boson in diboson decays with the ATLAS detector. European Physical Journal C, 2015, 75, 476.	3.9	174
11	Volume I. Introduction to DUNE. Journal of Instrumentation, 2020, 15, T08008-T08008.	1.2	168
12	Measurement of the top quark-pair production cross section with ATLAS in $pp$ collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2011, 71, 1.	3.9	146
13	Jet reconstruction and performance using particle flow with the ATLAS Detector. European Physical Journal C, 2017, 77, 466.	3.9	145
14	Measurement of the $Z/\gamma^*$ boson transverse momentum distribution in $pp$ collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector. Journal of High Energy Physics, 2014, 2014, 1.	4.7	131
15	ATLAS b-jet identification performance and efficiency measurement with $t\bar{t}$ events in $pp$ collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2019, 79, 1.	3.9	130
16	Search for the $b\bar{b}\gamma$ decay of the Standard Model Higgs boson in associated (W/Z)H production with the ATLAS detector. Journal of High Energy Physics, 2015, 2015, 1.	4.7	89
17	Volume IV. The DUNE far detector single-phase technology. Journal of Instrumentation, 2020, 15, T08010-T08010.	1.2	86
18	Electron reconstruction and identification in the ATLAS experiment using the 2015 and 2016 LHC proton-proton collision data at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2019, 79, 1.	3.9	77

#	ARTICLE	IF	CITATIONS
19	Reconstruction of primary vertices at the ATLAS experiment in Run 1 proton-proton collisions at the LHC. European Physical Journal C, 2017, 77, 332.	3.9	71
20	Evidence for the $H \rightarrow b\bar{b}$ decay with the ATLAS detector. Journal of High Energy Physics, 2017, 2017, 1.	4.7	64
21	Jet energy scale and resolution measured in proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	64
22	Search for direct top squark pair production in events with a $Z$ boson, $b$ -jets and missing transverse momentum in $\sqrt{s}=8$ TeV $pp$ collisions with the ATLAS detector. European Physical Journal C, 2014, 74, 2883.	3.9	55
23	Reconstruction of hadronic decay products of tau leptons with the ATLAS experiment. European Physical Journal C, 2016, 76, 295.	3.9	50
24	Search for direct top squark pair production in final states with two leptons in $\sqrt{s}=13$ TeV $pp$ collisions with the ATLAS detector. European Physical Journal C, 2017, 77, 898.	3.9	50
25	Test of CP invariance in vector-boson fusion production of the Higgs boson using the Optimal Observable method in the ditau decay channel with the ATLAS detector. European Physical Journal C, 2016, 76, 658.	3.9	48
26	Measurement of the Higgs boson coupling properties in the $H \rightarrow Z\bar{Z}^* \rightarrow 4\mu$ decay channel at $\sqrt{s}=13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2018, 2018, 1.	4.7	46
27	Testbeam results of irradiated ams H18 HV-CMOS pixel sensor prototypes. Journal of Instrumentation, 2018, 13, P02011-P02011.	1.2	46
28	Measurement of the photon identification efficiencies with the ATLAS detector using LHC Run 2 data collected in 2015 and 2016. European Physical Journal C, 2019, 79, 1.	3.9	46
29	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. European Physical Journal C, 2020, 80, 1.	3.9	41
30	Measurements of b-jet tagging efficiency with the ATLAS detector using $t\bar{t}$ events at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	40
31	Measurements of WH and ZH production in the $H \rightarrow \bar{b}b$ decay channel in $pp$ collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	38
32	Electron and photon energy calibration with the ATLAS detector using 2015-2016 LHC proton-proton collision data. Journal of Instrumentation, 2019, 14, P03017-P03017.	1.2	37
33	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. European Physical Journal C, 2020, 80, 1.	3.9	36
34	Performance of the electronic readout of the ATLAS liquid argon calorimeters. Journal of Instrumentation, 2010, 5, P09003-P09003.	1.2	35
35	FELIX: a PCIe based high-throughput approach for interfacing front-end and trigger electronics in the ATLAS Upgrade framework. Journal of Instrumentation, 2016, 11, C12023-C12023.	1.2	35
36	FELIX: a High-Throughput Network Approach for Interfacing to Front End Electronics for ATLAS Upgrades. Journal of Physics: Conference Series, 2015, 664, 082050.	0.4	34

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37	Search for direct production of electroweakinos in final states with one lepton, missing transverse momentum and a Higgs boson decaying into two b-jets in $pp$ collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	34
38	Measurements of the Higgs boson inclusive and differential fiducial cross sections in the $H \rightarrow b\bar{b}$ decay channel at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2020, 80, 1.	3.9	32
39	Measurement of inclusive and differential cross sections in the $H \rightarrow ZZ^* \rightarrow 4\ell$ decay channel in $pp$ collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2017, 2017, 1.	4.7	31
40	Search for heavy diboson resonances in semileptonic final states in $pp$ collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	29
41	Measurements of electroweak $Wjj$ production and constraints on anomalous gauge couplings with the ATLAS detector. European Physical Journal C, 2017, 77, 474.	3.9	26
42	Measurement of fiducial and differential $W^+W^-$ production cross-sections at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2019, 79, 1.	3.9	24
43	Search for new non-resonant phenomena in high-mass dilepton final states with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	4.7	24
44	AtIFast3: The Next Generation of Fast Simulation in ATLAS. Computing and Software for Big Science, 2022, 6, 1.	2.9	23
45	Measurement of the electroweak production of dijets in association with a Z-boson and distributions sensitive to vector boson fusion in proton-proton collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector. Journal of High Energy Physics, 2014, 2014, 1.	4.7	22
46	Measurements of top-quark pair spin correlations in the $e\mu$ channel at $\sqrt{s} = 13$ TeV using $pp$ collisions in the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	22
47	A Generic High Bandwidth Data Acquisition Card for Physics Experiments. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 4569-4577.	4.7	16
48	Measurement of $VH$ , $\mathcal{H} \rightarrow \mathcal{B} \overline{\mathcal{B}}$ production as a function of the vector-boson transverse momentum in 13 TeV $pp$ collisions with the ATLAS detector. Journal of High Energy Physics, 2019, 2019, 1.	4.7	14
49	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. Journal of High Energy Physics, 2021, 2021, 1.	4.7	14
50	Search for $\overline{t}t$ resonances in fully hadronic final states in $pp$ collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, 1.	4.7	14
51	Differential cross-section measurements for the electroweak production of dijets in association with a Z boson in proton-proton collisions at ATLAS. European Physical Journal C, 2021, 81, 1.	3.9	12
52	Evaluation of commercial ADC radiation tolerance for accelerator experiments. Journal of Instrumentation, 2015, 10, P08009-P08009.	1.2	11
53	Optimization on fixed low latency implementation of the GBT core in FPGA. Journal of Instrumentation, 2017, 12, P07011-P07011.	1.2	10
54	Development of a modular test system for the silicon sensor R&D of the ATLAS Upgrade. Journal of Instrumentation, 2017, 12, P01008-P01008.	1.2	10

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55	Front-end ASIC for a liquid argon TPC. , 2010, , .		9
56	Search for direct top squark pair production in events with a Higgs or Z boson, and missing transverse momentum in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2017, 2017, 1.	4.7	8
57	Reconstruction and identification of boosted di- $\tau$ , systems in a search for Higgs boson pairs using 13 TeV proton-proton collision data in ATLAS. Journal of High Energy Physics, 2020, 2020, 1.	4.7	8
58	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. European Physical Journal C, 2022, 82, 1.	3.9	8
59	The Phase-I trigger readout electronics upgrade of the ATLAS Liquid Argon calorimeters. Journal of Instrumentation, 2022, 17, P05024.	1.2	6
60	Design and Evaluation of the LAr Trigger Digitizer Board in the ATLAS Phase-I Upgrade. IEEE Transactions on Nuclear Science, 2019, 66, 2011-2016.	2.0	5
61	Measurement of hadronic event shapes in high- $p_T$ multijet final states at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	4
62	Search for top squarks in events with a Higgs or Z boson using 139 $\text{fb}^{-1}$ of pp collision data at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, 1.	3.9	4
63	Measurement of the energy response of the ATLAS calorimeter to charged pions from $W \rightarrow \mu \nu$ events in Run-2 data. European Physical Journal C, 2022, 82, 1.	3.9	4
64	Front-end readout electronics system of ProtoDUNE-SP LAr TPC. Radiation Detection Technology and Methods, 2019, 3, 1.	0.8	3
65	Characterization and QC practice of 16-channel ADC ASIC at cryogenic temperature for Liquid Argon TPC front-end readout electronics system in DUNE experiment. Journal of Instrumentation, 2021, 16, T06005.	1.2	3
66	Measurement of single top-quark production in association with a W boson in the single-lepton channel at $\sqrt{s} = 8$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	3
67	ColdADC_P2: A 16-Channel Cryogenic ADC ASIC for the Deep Underground Neutrino Experiment. IEEE Transactions on Nuclear Science, 2022, 69, 105-112.	2.0	3
68	Design and Testing of the Address in Real-Time Data Driver Card for the Micromegas Detector of the ATLAS New Small Wheel Upgrade. IEEE Transactions on Nuclear Science, 2020, 67, 2155-2160.	2.0	2
69	ColdADC: A 16-Channel Digitizer ASIC with 186 $\mu\text{V}$ -rms noise and 10.5-bit ENOB at 77 K for the Deep Underground Neutrino Experiment. , 2020, , .		2
70	Measurement of the energy asymmetry in $t\bar{t}$ production at $\sqrt{s} = 13$ TeV with the ATLAS experiment and interpretation in the SMEFT framework. European Physical Journal C, 2022, 82, .	3.9	2
71	Power distribution in Harsh environment: Measurement on commercial power brick. , 2017, , .		1
72	A data acquisition system for HV-CMOS sensor research and development in the upgrade of ATLAS experiment. Review of Scientific Instruments, 2019, 90, 064701.	1.3	1

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73	Multiplexing Firmware Prototypes for the Global Trigger Subsystem of ATLAS Phase-II Upgrade. IEEE Transactions on Nuclear Science, 2021, 68, 2421-2428.	2.0	1
74	Development of a High Throughput PCIe Card for DAQ System in the ATLAS and DUNE Experiments. Journal of Instrumentation, 2021, 16, P11004.	1.2	1
75	Development of a FELIX based readout system for ITk strip hybrid module demonstrator for ATLAS Phase-II Upgrade. Journal of Instrumentation, 2020, 15, P03013-P03013.	1.2	0