

Wally Melnitchouk

List of Publications by Year in descending order

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154
papers

5,840
citations

66315

42
h-index

85498

71
g-index

157
all docs

157
docs citations

157
times ranked

3560
citing authors

#	ARTICLE	IF	CITATIONS
1	Two-Photon Exchange and Elastic Electron-Proton Scattering. Physical Review Letters, 2003, 91, 142304.	2.9	285
2	Global analysis of proton elastic form factor data with two-photon exchange corrections. Physical Review C, 2007, 76, .	1.1	231
3	Constraints on large- x parton distributions from new weak boson production and deep-inelastic scattering data. Physical Review D, 2016, 93, .	1.6	213
4	STUDIES OF NUCLEON RESONANCE STRUCTURE IN EXCLUSIVE MESON ELECTROPRODUCTION. International Journal of Modern Physics E, 2013, 22, 1330015.	0.4	193
5	Two-photon exchange in elastic electron-nucleon scattering. Physical Review C, 2005, 72, .	1.1	189
6	First Simultaneous Extraction of Spin-Dependent Parton Distributions and Fragmentation Functions from a Global QCD Analysis. Physical Review Letters, 2017, 119, 132001.	2.9	160
7	Quark-hadron duality in electron scattering. Physics Reports, 2005, 406, 127-301.	10.3	151
8	Review of two-photon exchange in electron scattering. Progress in Particle and Nuclear Physics, 2011, 66, 782-833.	5.6	143
9	Chiral Extrapolation of Lattice Moments of Proton Quark Distributions. Physical Review Letters, 2001, 87, 172001.	2.9	135
10	structure function ratio at large x . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 377, 11-17.	1.5	134
11	Global parton distributions with nuclear and finite- Q^2 corrections. Physical Review D, 2013, 87, .	1.6	131
12	$\hat{\Gamma}$ Resonance Contribution to Two-Photon Exchange in Electron-Proton Scattering. Physical Review Letters, 2005, 95, 172503.	2.9	114
13	First Monte-Carlo Global QCD Analysis of Pion Parton Distributions. Physical Review Letters, 2018, 121, 152001.	2.9	114
14	Iterative Monte-Carlo analysis of spin-dependent parton distributions. Physical Review D, 2016, 93, .	1.6	107
15	Deep-inelastic scattering from off-shell nucleons. Physical Review D, 1994, 49, 1183-1198.	1.6	103
16	Target mass corrections. Journal of Physics G: Nuclear and Particle Physics, 2008, 35, 053101.	1.4	94
17	Excited baryons in lattice QCD. Physical Review D, 2003, 67, .	1.6	85
18	Dynamical Symmetry Breaking in the Sea of the Nucleon. Physical Review Letters, 2000, 85, 2892-2894.	2.9	84

#	ARTICLE	IF	CITATIONS
19	Dynamics of light antiquarks in the proton. Physical Review D, 1998, 59, .	1.6	81
20	Parton momentum and helicity distributions in the nucleon. Journal of Physics G: Nuclear and Particle Physics, 2013, 40, 093102.	1.4	69
21	First Monte Carlo Global Analysis of Nucleon Transversity with Lattice QCD Constraints. Physical Review Letters, 2018, 120, 152502.	2.9	69
22	Uncertainties in determining parton distributions at large x . Physical Review D, 2011, 84, .	1.6	68
23	Relativistic deuteron structure function. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 335, 11-16.	1.5	66
24	New parton distributions from large x and low Q^2 data. Physical Review D, 2010, 81, .	1.6	64
25	Probing the origin of the EMC effect via tagged structure functions of the deuteron. Zeitschrift für Physik A, 1997, 359, 99-109.	0.9	61
26	$\hat{\Gamma}^3_Z$ corrections to forward-angle parity-violating $e p$ scattering. Physical Review D, 2010, 82, .	1.6	58
27	Strange quark suppression from a simultaneous Monte Carlo analysis of parton distributions and fragmentation functions. Physical Review D, 2020, 101, .	1.6	58
28	What can break the Wandzura-Wilczek relation?. Journal of High Energy Physics, 2009, 2009, 093-093.	1.6	57
29	Measurement of the structure function of the nearly free neutron using spectator tagging in inelastic H		

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37	First Monte Carlo analysis of fragmentation functions from single-inclusive $\frac{dN}{dx dy dz} = \sum_i e_i^2 \int_0^1 dx' dy' dz' \mathcal{D}_{h/q}(z) \mathcal{D}_{h/q}(z')$ Physical Review D, 2016, 94, .	1.6	50
38	Impact of hadronic and nuclear corrections on global analysis of spin-dependent parton distributions. Physical Review D, 2014, 89, .	1.6	48
39	Role of vector mesons in high-Q ² lepton-nucleon scattering. Physical Review D, 1993, 47, 3794-3803.	1.6	47
40	Gottfried sum rule and the shape of $F_2^p - F_2^n$. Zeitschrift für Physik A, 1991, 340, 85-92.	0.9	45
41	Strong QCD from Hadron Structure Experiments. International Journal of Modern Physics E, 2020, 29, 2030006.	0.4	45
42	Deep inelastic scattering from polarized deuterons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 346, 165-171.	1.5	42
43	Spin-dependent nuclear structure functions: General approach with application to the deuteron. Physical Review C, 1995, 52, 932-946.	1.1	42
44	Strangeness in the nucleon on the light cone. Physical Review C, 1997, 55, 431-440.	1.1	42
45	Measurement of the Neutron $F_2^{\nu N}$ Structure Function via Spectator Tagging with CLAS. Physical Review Letters, 2012, 108, 142001.	2.9	40
46	New Formulation of $\hat{\Gamma}^3$ Box Corrections to the Weak Charge of the Proton. Physical Review Letters, 2011, 107, 081801.	2.9	39
47	\hat{A}^{\sim} Asymmetry in the \hat{u} CKM matrix element. Physical Review D, 2021, 104, .	2.9	37
48	Electroweak axial structure functions and improved extraction of the \hat{u} CKM matrix element. Physical Review D, 2021, 104, .	1.6	37
49	Local Duality Predictions for $\hat{F}_1^{\nu N}$ Structure Functions. Physical Review Letters, 2001, 86, 35-38.	2.9	36
50	Pion momentum distributions in the nucleon in chiral effective theory. Physical Review D, 2013, 87, .	1.6	36
51	Constrained $\hat{\Gamma}^3$ interference corrections to parity-violating electron scattering. Physical Review D, 2013, 88, .	1.6	36
52	Dispersive approach to two-photon exchange in elastic electron-proton scattering. Physical Review C, 2017, 95, .	1.1	36
53	Confronting lattice parton distributions with global QCD analysis. Physical Review D, 2021, 103, .	1.6	35
54	Strange asymmetries in the nucleon sea. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 451, 224-232.	1.5	34

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55	Target mass corrections revisited. Physical Review C, 2006, 73, .	1.1	34
56	How Well Do We Know the Neutron Structure Function?. Physical Review Letters, 2012, 108, 252001.	2.9	34
57	Pion structure function from leading neutron electroproduction and SU(2) flavor asymmetry. Physical Review D, 2016, 93, .	1.6	34
58	New method for extracting neutron structure functions from nuclear data. Physical Review C, 2009, 79, .	1.1	33
59	Detailed analysis of two-boson exchange in parity-violating e - p scattering. Physical Review C, 2009, 79, .	1.1	33
60	Global QCD Analysis of Pion Parton Distributions with Threshold Resummation. Physical Review Letters, 2021, 127, 232001.	2.9	33
61	Constraints on spin-dependent parton distributions at large x from global QCD analysis. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 738, 263-267.	1.5	32
62	Next-to-leading order analysis of target mass corrections to structure functions and asymmetries. Physical Review D, 2011, 84, .	1.6	31
63	Finite-Q ² corrections to parity-violating DIS. Physical Review D, 2008, 77, .	1.6	30
64	Quark-hadron duality in electron-pion scattering. European Physical Journal A, 2003, 17, 223-234.	1.0	29
65	Publishers Note: Measurement of the Neutron Structure Function via Spectator Tagging with CLAS [Phys. Rev. Lett. 108 , 142001 (2012)]. Physical Review Letters, 2012, 108, .	2.9	29
66	\hat{I}^3 Box Corrections to Weak Charges of Heavy Nuclei in Atomic Parity Violation. Physical Review Letters, 2012, 109, 262301.	2.9	29
67	Measurement of the EMC effect in the deuteron. Physical Review C, 2015, 92, .	1.1	27
68	Parton distributions from lattice QCD. EPJ Direct, 2001, 3, 1-15.	0.1	25
69	Target mass corrections for spin-dependent structure functions in collinear factorization. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 670, 114-118.	1.5	25
70	Isvector EMC Effect from Global QCD Analysis with MARATHON Data. Physical Review Letters, 2021, 127, 242001.	2.9	25
71	Quark-hadron duality in neutrino scattering. Physical Review C, 2007, 75, .	1.1	24
72	Parton distributions in the presence of target mass corrections. Physical Review C, 2012, 86, .	1.1	24

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73	Strange-quark asymmetry in the proton in chiral effective theory. Physical Review D, 2016, 94, .	1.6	24
74	Comparative study of nuclear effects in polarized electron scattering from ^3He . Physical Review C, 2013, 88, .	1.1	22
75	Anatomy of relativistic pion loop corrections to the electromagnetic nucleon coupling. Physical Review D, 2013, 88, .	1.6	22
76	Bayesian Monte Carlo extraction of the sea asymmetry with SeaQuest and STAR data. Physical Review D, 2021, 104, .	1.6	21
77	Quark-hadron duality and truncated moments of nucleon structure functions. Physical Review C, 2008, 78, .	1.1	20
78	Constraints on the large- x / u ratio from electron-nucleus scattering at $x > 1$. Physical Review D, 2011, 84, .	1.6	20
79	Nucleon structure functions from relativistic constituent quarks. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 334, 275-280.	1.5	19
80	Spin structure functions of ^3He at finite Q^2 . Physical Review C, 2008, 78, .	1.1	19
81	Impact of PDF uncertainties at large x on heavy boson production. Journal of High Energy Physics, 2012, 2012, 1.	1.6	19
82	Constraints on the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll" \rangle \langle \text{mml:mi} \rangle \text{s} \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \hat{\Lambda}^2 \langle \text{mml:mo} \rangle \langle \text{mml:mover accent="true" \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{s} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mo stretchy="false" \rangle \hat{\Lambda}^2 \langle \text{mml:mo} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mover} \rangle \langle \text{mml:math} \rangle$ asymmetry of the proton in chiral effective theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 762, 52-56.	1.5	19
83	How well do we know the gluon polarization in the proton?. Physical Review D, 2022, 105, .	1.6	19
84	Nucleon structure functions at moderate Q^2 : Relativistic constituent quarks and spectator mass spectrum. Nuclear Physics A, 1996, 597, 515-542.	0.6	18
85	Large- x d/u ratio in W -boson production. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 400, 220-225.	1.5	18
86	Effect of Two-Boson Exchange on Parity-Violating $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle \text{mml:mi} \rangle \text{e} \langle \text{mml:mi} \rangle \langle \text{mml:mtext mathvariant="normal" \rangle \hat{\Lambda}^2 \langle \text{mml:mtext} \rangle \langle \text{mml:mi} \rangle \text{p} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ Scattering. Physical Review Letters, 2008, 100, 082003.	2.9	18
87	Parton distributions from nonlocal chiral $\text{SU}(3)$ effective theory: Splitting functions. Physical Review D, 2019, 99, .	1.6	18
88	First analysis of world polarized DIS data with small- $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle \text{mml:mi} \rangle \text{x} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ helicity evolution. Physical Review D, 2021, 104, .	1.6	18
89	Polarized deep-inelastic scattering from nuclei: A relativistic approach. Physical Review C, 1996, 54, 894-903.	1.1	17
90	Equivalence of pion loops in equal-time and light-front dynamics. Physical Review D, 2009, 80, .	1.6	17

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91	Two-photon exchange corrections to the pion form factor. <i>Physical Review C</i> , 2010, 81, .	1.1	17
92	Quark-hadron duality constraints on \hat{Z} box corrections to parity-violating elastic scattering. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2016, 753, 221-226.	1.5	17
93	Towards the three-dimensional parton structure of the pion: Integrating transverse momentum data into global QCD analysis. <i>Physical Review D</i> , 2021, 103, .	1.6	17
94	An experimental program with high duty-cycle polarized and unpolarized positron beams at Jefferson Lab. <i>European Physical Journal A</i> , 2021, 57, 1.	1.0	17
95	Deuteron spin structure functions in the resonance and deep inelastic scattering regions. <i>Physical Review C</i> , 2008, 77, .	1.1	16
96	Confirmation of Quark-Hadron Duality in the Neutron F_2 Structure Function. <i>Physical Review Letters</i> , 2010, 104, 102001.	2.9	16
97	Meson cloud of the nucleon in polarized semi-inclusive deep-inelastic scattering. <i>Zeitschrift für Physik A</i> , 1995, 353, 311-319.	0.9	15
98	Leading twist moments of the neutron structure function. <i>Nuclear Physics A</i> , 2006, 766, 142-171.	0.6	14
99	Weak deeply virtual Compton scattering. <i>Physical Review D</i> , 2007, 75, .	1.6	14
100	Parton distributions from nonlocal chiral SU(3) effective theory: Flavor asymmetries. <i>Physical Review D</i> , 2019, 100, .	1.6	14
101	Two-photon exchange from intermediate state resonances in elastic electron-proton scattering. <i>Physical Review C</i> , 2020, 102, .	1.1	14
102	Hadron mass corrections in semi-inclusive deep inelastic scattering. <i>Journal of High Energy Physics</i> , 2009, 2009, 084-084.	1.6	13
103	Comment on "Taming the Pion Cloud of the Nucleon". <i>Physical Review Letters</i> , 2013, 110, 179101.	2.9	13
104	Nuclear effects in the proton-deuteron Drell-Yan process. <i>Physical Review D</i> , 2014, 90, .	1.6	13
105	Resonant contributions to inclusive nucleon structure functions from exclusive meson electroproduction data. <i>Physical Review C</i> , 2021, 104, .	1.1	12
106	FLIC fermions and hadron phenomenology. <i>European Physical Journal A</i> , 2003, 18, 247-252.	1.0	11
107	Unpolarized Structure Functions. <i>Journal of Physics: Conference Series</i> , 2011, 299, 012004.	0.3	11
108	Hadron mass corrections in semi-inclusive deep-inelastic scattering. <i>Journal of High Energy Physics</i> , 2015, 2015, 1.	1.6	11

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109	Deep-inelastic and quasielastic electron scattering from A nuclei. Physical Review C, 2019, 99, .		
110	What does kinematical target mass sensitivity in DIS reveal about hadron structure?. Physical Review D, 2019, 99, .	1.6	11
111	A new approach to semi-inclusive deep-inelastic scattering with QED and QCD factorization. Journal of High Energy Physics, 2021, 2021, 1.	1.6	11
112	Complementarity of experimental and lattice QCD data on pion parton distributions. Physical Review D, 2022, 105, .	1.6	11
113	Direct observation of quark-hadron duality in the free neutron structure function. Physical Review C, 2015, 91, .		
114	Semi-inclusive pion production and the d/u ratio. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 435, 420-426.	1.5	9
115	Revisiting quark and gluon polarization in the proton at the EIC. Physical Review D, 2021, 104, .	1.6	9
116	Do Short-Range Correlations Cause the Nuclear EMC Effect in the Deuteron?. Physical Review Letters, 2020, 125, 262002.	2.9	9
117	Proton production bias in neutrino-hydrogen interactions. Zeitschrift für Physik A, 1992, 342, 215-221.	0.9	8
118	The OLYMPUS Experiment at DESY. , 2009, , .		8
119	Higher twists in the pion structure function. Physical Review D, 2003, 67, .	1.6	7
120	Duality in semi-inclusive pion electroproduction. Physical Review C, 2009, 79, .	1.1	7
121	A Polarized Positron Source for CEBAF. , 2009, , .		7
122	What are the low- Q^2 and large- x boundaries of collinear QCD factorization theorems?. Physical Review D, 2017, 95, .	1.6	7
123	Two-photon exchange measurements with positrons and electrons. , 2009, , .		6
124	Evidence for quark-hadron duality in \hat{p} helicity cross sections. Physical Review C, 2011, 83, .	1.1	6
125	Quasielastic electron-deuteron scattering in the weak-binding approximation. Physical Review C, 2014, 89, .	1.1	6
126	Hadronic \hat{Z} box corrections in Møller scattering. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 731, 287-292.	1.5	6

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127	A meson exchange model for the YN interaction. AIP Conference Proceedings, 2001, , .	0.3	5
128	Baryon resonances from a novel fat-link fermion action. Nuclear Physics, Section B, Proceedings Supplements, 2002, 109, 96-100.	0.5	5
129	http://www.w3.org/1998/Math/MathML altimg= "sr1.svg" ><mml:mover accent="true"><mml:mrow><mml:mi>d</mml:mi></mml:mrow><mml:mrow><mml:mo stretchy="false">^</mml:mo></mml:mrow></mml:mover><mml:mo linebreak="goodbreak" linebreakstyle="after">^</mml:mo><mml:mover accent="true"><mml:mrow><mml:mi>u</mml:mi></mml:mrow><mml:mrow><mml:mo stretchy="false"> 130 Strange quark helicity in the proton from chiral effective theory. Physical Review D, 2020, 102, .	1.5	5
130	Strange quark helicity in the proton from chiral effective theory. Physical Review D, 2020, 102, .	1.6	5
131	New tool for kinematic regime estimation in semi-inclusive deep-inelastic scattering. Journal of High Energy Physics, 2022, 2022, 1.	1.6	5
132	Nucleon strange magnetic moment and relativistic covariance. Physical Review C, 1997, 56, R2373-R2377.	1.1	4
133	Quark-hadron duality and the nuclear EMC effect. European Physical Journal A, 2002, 14, 105-112.	1.0	4
134	Factorized approach to radiative corrections for inelastic lepton-hadron collisions. Physical Review D, 2021, 104, .	1.6	4
135	$\int_0^1 dx [d(x) - u(x)]$ Flavor Asymmetry in the Proton in Chiral Effective Field Theory. Few-Body Systems, 2015, 56, 355-362.	0.7	3
136	Flavor symmetry breaking in the \bar{s} sea. Physical Review D, 2019, 100, .	1.6	3
137	Helicity-dependent distribution of strange quarks in the proton from nonlocal chiral effective theory. Physical Review D, 2022, 105, .	1.6	3
138	Quark-hadron duality in structure functions. Journal of Physics: Conference Series, 2005, 9, 260-263.	0.3	2
139	Two-photon exchange in elastic electron-proton scattering. European Physical Journal A, 2005, 24, 59-63.	1.0	2
140	Experimental moments of the nucleon structure function F2. Nuclear Physics, Section B, Proceedings Supplements, 2007, 174, 23-26.	0.5	2
141	Jefferson Lab phenomenology: an overview. Nuclear Physics, Section B, Proceedings Supplements, 2005, 141, 151-158.	0.5	1
142	Structure functions at low Q^2 : higher twists and target mass effects. Nuclear Physics A, 2007, 782, 126-133.	0.6	1
143	Octet and decuplet baryon self-energies in relativistic SU(3) chiral effective theory. Physical Review D, 2021, 103, .	1.6	1
144	Deep-inelastic scattering with positron beams. European Physical Journal A, 2021, 57, 1.	1.0	1

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145	Deep inelastic scattering from polarized deuterons. AIP Conference Proceedings, 1995, , .	0.3	0
146	Asymmetric quarks in the proton. AIP Conference Proceedings, 2000, , .	0.3	0
147	Nucleon Resonances from FLIC Fermions. Progress of Theoretical Physics Supplement, 2003, 151, 138-142.	0.2	0
148	Jefferson Lab phenomenology: selected highlights. Nuclear Physics, Section B, Proceedings Supplements, 2006, 161, 176-184.	0.5	0
149	Resonance-DIS transition and low Q ² phenomena. Nuclear Physics, Section B, Proceedings Supplements, 2006, 159, 147-151.	0.5	0
150	Pion cloud and the sea of the nucleon. Indian Journal of Physics, 2009, 83, 617-628.	0.9	0
151	SU(2) Flavor Asymmetry of the Proton Sea in Chiral Effective Theory. Few-Body Systems, 2016, 57, 593-599.	0.7	0
152	HADRON MASSES FROM A NOVEL FAT-LINK FERMION ACTION. , 2002, , .		0
153	Future Fixed Target Facilities. , 2008, , .		0
154	Title is missing!. , 2017, , .		0