William Detmold

List of Publications by Year
in descending order

77 papers	2,981 citations	126907 33 h-index	168389 53 g-index
79 all docs	79 docs citations	79 times ranked	1666 citing authors

#	Article	IF	Citations
1	Parton physics from a heavy-quark operator product expansion: Lattice QCD calculation of the second moment of the pion distribution amplitude. Physical Review D, 2022, 105, .	4.7	11
2	Nuclear matrix elements from lattice QCD for electroweak and beyond-Standard-Model processes. Physics Reports, 2021, 900, 1-74.	25.6	39
3	Low-energy scattering and effective interactions of two baryons at <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>m</mml:mi></mml:mrow><mml:mrow><mml:mi>Ï€</mml:mi></m from lattice quantum chromodynamics. Physical Review D, 2021, 103, .	4.7	20
4	Axial charge of the triton from lattice QCD. Physical Review D, 2021, 103, .	4.7	11
5	Path integral contour deformations for observables in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>S</mml:mi><mml:mi>U</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>N</mml:mi><mml:mo stretchy="false">)</mml:mo></mml:math> gauge theory. Physical Review D, 2021, 103, .	4.7	18
6	Lattice QCD Constraints on the Parton Distribution Functions of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>He</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math>. Physical Review Letters, 2021, 126, 202001.	7.8	11
7	Parton physics from a heavy-quark operator product expansion: Formalism and Wilson coefficients. Physical Review D, 2021, 104, .	4.7	18
8	Path integral contour deformations for noisy observables. Physical Review D, 2020, 102, .	4.7	15
9	Lattice QCD Inputs for nuclear double beta decay. Progress in Particle and Nuclear Physics, 2020, 112, 103771.	14.4	16
10	Status and future perspectives for lattice gauge theory calculations to the exascale and beyond. European Physical Journal A, 2019, 55, 1.	2.5	37
11	Hadrons and nuclei. European Physical Journal A, 2019, 55, 1.	2.5	58
12	Lattice QCD and neutrino-nucleus scattering. European Physical Journal A, 2019, 55, 1.	2.5	41
13	Topical Issue on Opportunities for Lattice Gauge Theory in the Era of Exascale Computing. European Physical Journal A, 2019, 55, 1.	2.5	13
14	Scalar, Axial, and Tensor Interactions of Light Nuclei from Lattice QCD. Physical Review Letters, 2018, 120, 152002.	7.8	41
15	Baryon magnetic moments: Symmetries and relations. EPJ Web of Conferences, 2018, 175, 06001.	0.3	1
16	Phase unwrapping and one-dimensional sign problems. Physical Review D, 2018, 98, .	4.7	9
17	Machine learning action parameters in lattice quantum chromodynamics. Physical Review D, 2018, 97, .	4.7	50
18	Isotensor Axial Polarizability and Lattice QCD Input for Nuclear Double- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math> Decay Phenomenology. Physical Review Letters, 2017, 119, 062003.	7.8	49

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19	Proton-Proton Fusion and Tritium <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math> Decay from Lattice Quantum Chromodynamics. Physical Review Letters, 2017, 119, 062002.	7.8	71
20	First lattice QCD study of the gluonic structure of light nuclei. Physical Review D, 2017, 96, .	4.7	31
21	Baryon-baryon interactions and spin-flavor symmetry from lattice quantum chromodynamics. Physical Review D, 2017, 96, .	4.7	48
22	Octet baryon magnetic moments from lattice QCD: Approaching experiment from a three-flavor symmetric point. Physical Review D, 2017, 95, .	4.7	22
23	Short-Range Correlations and the EMC Effect in Effective Field Theory. Physical Review Letters, 2017, 119, 262502.	7.8	30
24	Double- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math> decay matrix elements from lattice quantum chromodynamics. Physical Review D, 2017, 96, .	4.7	47
25	Multiscale MonteÂCarlo equilibration: Two-color QCD with two fermion flavors. Physical Review D, 2016, 94, .	4.7	5
26	Composite vector particles in external electromagnetic fields. Physical Review D, 2016, 93, .	4.7	3
27	Low energy scattering phase shifts for meson-baryon systems. Physical Review D, 2016, 93, .	4.7	22
28	Unitary Limit of Two-Nucleon Interactions in Strong Magnetic Fields. Physical Review Letters, 2016, 116, 112301.	7.8	20
29	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">Î›</mml:mi></mml:mrow><mml:mrow><mml:mi>b</mml:mi></mml:mrow></mml:msub><mml:mo stretchy="false">â†'</mml:mo><mml:mi mathvariant="normal">Î›</mml:mi><mml:msup><mml:mrow><mml:mo>â„"</mml:mo></mml:mrow><mml:mrow><mml:mo>+</mml:m factors,. Physical Review D, 2016, 93, .	4.7	87
30	Finite-volume matrix elements in multiboson states. Physical Review D, 2015, 91, .	4.7	11
31	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">Î›</mml:mi></mml:mrow><mml:mrow><mml:mi>b</mml:mi></mml:mrow></mml:msub><mml:mo stretchy="false">â†'</mml:mo><mml:mi>p</mml:mi><mml:msup><mml:mrow><mml:mo>â„"</mml:mo></mml:mrow><mml:mrow> accent="true"><mml:mrow><mml:mi>Î½</mml:mi></mml:mrow><mml:mrow><mml:mo stretchy="false">Â¯</mml:mo></mml:mrow></mml:mover></mm. Physical Review D, 2015, 92, .	4.7	144
32	Magnetic structure of light nuclei from lattice QCD. Physical Review D, 2015, 92, .	4.7	62
33	Two nucleon systems at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>m</mml:mi></mml:mrow><mml:mrow><mml:mi>Ï€</mml:mi></m lattice QCD. Physical Review D, 2015, 92, .	4.7	92
34	QCD inequalities for hadron interactions. Physical Review Letters, 2015, 114, 222001.	7.8	5
35	<i>AbÂinitio</i>Calculation of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>n</mml:mi><mml:mi>p</mml:mi><mml:mo stretchy="false">â†'</mml:mo><mml:mi>d</mml:mi><mml:mi>Î³</mml:mi></mml:mrow></mml:math>Radiative Capture Process. Physical Review Letters, 2015, 115, 132001.	7.8	68
36	Implementation of general background electromagnetic fields on a periodic hypercubic lattice. Physical Review D, 2015, 92, .	4.7	15

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37	Multiscale MonteÂCarlo equilibration: Pure Yang-Mills theory. Physical Review D, 2015, 92, .	4.7	26
38	Uncertainty quantification in lattice QCD calculations for nuclear physics. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 034022.	3.6	19
39	Nuclear Physics from Lattice QCD. Lecture Notes in Physics, 2015, , 153-194.	0.7	11
40	Dark nuclei. II. Nuclear spectroscopy in two-color QCD. Physical Review D, 2014, 90, .	4.7	58
41	Signal/noise enhancement strategies for stochastically estimated correlation functions. Physical Review D, 2014, 90, .	4.7	16
42	Dark nuclei. I. Cosmology and indirect detection. Physical Review D, 2014, 90, .	4.7	97
43	Charmed bottom baryon spectroscopy from lattice QCD. Physical Review D, 2014, 90, .	4.7	198
44	Quarkonium at nonzero isospin density. Physical Review D, 2013, 87, .	4.7	13
45	Multi-hadron systems in lattice QCD. European Physical Journal A, 2013, 49, 1.	2.5	2
46	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Î›</mml:mi><mml:mi>b</mml:mi></mml:msub><mml:mo>â†’</mml:mo><mml:mi>Î›</mml:mi>< mathvariant="bold">+</mml:mo></mml:msup><mml:msup><mml:mi>â„“</mml:mi><mml:mo mathvariant="bold">âˆ’</mml:mo></mml:msup></mml:math>form factors and differential branching fraction from lattice QCD. Physical Review D, 2013, 87, .	4.7	33
47	Baryon masses at nonzero isospin/kaon density. Physical Review D, 2013, 88, .	4.7	6
48	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Î›</mml:mi><mml:mi>b</mml:mi></mml:msub><mml:mo>â†’</mml:mo><mml:mi>p</mml:mi>< mathvariant="bold">âˆ’</mml:mo></mml:msup><mml:msub><mml:mover accent="true"><mml:mi>Î½</mml:mi><mml:mo>Â¯</mml:mo></mml:mover><mml:mi>â„“</mml:mi></mml:msub></mml:math>form factors from lattice QCD with static<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>b</mml:mi></mml:math>qu. Physical Review D, 2013, 88, .	4.7	12
49	Nuclear correlation functions in lattice QCD. Physical Review D, 2013, 87, .	4.7	49
50	Lattice QCD for nuclear physics. , 2013, , .		0
51	Evidence for a bound H-dibaryon using lattice QCD. , 2012, , .		0
52	Axial Couplings and Strong Decay Widths of Heavy Hadrons. Physical Review Letters, 2012, 108, 172003.	7.8	27
53	Lattice QCD at nonzero isospin chemical potential. Physical Review D, 2012, 86, .	4.7	67
54	Calculation of the heavy-hadron axial couplings<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>g</mml:mi><mml:mn>1</mml:mn></mml:msub></mml:math>,<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>g</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>, and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:	4.7	65

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55	Lattice QCD study of mixed systems of pions and kaons. Physical Review D, 2011, 84, .	4.7	28
56	Axial couplings in heavy-hadron chiral perturbation theory at the next-to-leading order. Physical Review D, 2011, 84, .	4.7	16
57	Method to study complex systems of mesons in lattice QCD. Physical Review D, 2010, 82, .	4.7	29
58	High statistics analysis using anisotropic clover lattices: III. Baryon-baryon interactions. Physical Review D, 2010, 81, .	4.7	57
59	Color Screening by Pions. Physical Review Letters, 2009, 102, 032004.	7.8	16
60	High statistics analysis using anisotropic clover lattices. II. Three-baryon systems. Physical Review D, 2009, 80, .	4.7	69
61	Bottom hadron mass splittings in the static limit from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mn>2</mml:mn><mml:mo>+</mml:mo><mml:mn>1</mml:mn></mml:math> flavour lattice QCD. Nuclear Physics B, 2009, 818, 17-27.	2.5	7
62	High statistics analysis using anisotropic clover lattices: Single hadron correlation functions. Physical Review D, 2009, 79, .	4.7	58
63	Kaon condensation with lattice QCD. Physical Review D, 2008, 78, .	4.7	70
64	Energy of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>n</mml:mi></mml:math>identical bosons in a finite volume at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="script">O</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:msup><mml:mi>L</mml:mi><mml:mrow><mml:mo>âˆ'</mml:mo><mml:mn>7</mml:mn></mml:mr	4.7	46
65	Multipion states in lattice QCD and the charged-pion condensate. Physical Review D, 2008, 78, .	4.7	82
66	Multipion Systems in Lattice QCD and the Three-Pion Interaction. Physical Review Letters, 2008, 100, 082004.	7.8	98
67	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>B</mml:mi><mml:mi>B</mml:mi></mml:math>potentials in quenched lattice QCD. Physical Review D, 2007, 76, .	4.7	48
68	Matrix elements of the complete set ofÎ"B=2andÎ"C=2operators in heavy meson chiral perturbation theory. Physical Review D, 2007, 76, .	4.7	14
69	n-boson energies at finite volume and three-boson interactions. Physical Review D, 2007, 76, .	4.7	88
70	Generalized parton distributions of the pion in partially-quenched chiral perturbation theory. Physical Review D, 2007, 75, .	4.7	13
71	Deep-inelastic scattering and the operator product expansion in lattice QCD. Physical Review D, 2006, 73, .	4.7	101
72	Target mass effects in deep-inelastic scattering on the deuteron. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2006, 632, 261-269.	4.1	16

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73	Universality of the EMC effect. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 625, 165-170.	4.1	22
74	The EMC effect in effective field theory. AIP Conference Proceedings, 2005, , .	0.4	0
75	Twist-two matrix elements at finite and infinite volume. Physical Review D, 2005, 71, .	4.7	53
76	Electroweak matrix elements in the two-nucleon sector from lattice QCD. Nuclear Physics A, 2004, 743, 170-193.	1.5	72
77	Nucleon properties at finite volume: the <mml:math altimg="si1.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.else. Physics Le	4.1	29