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	Charmed bottom baryon spectroscopy from lattice QCD. Physical Review D, 2014, 90, .	4.7	198
2	<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><m 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
3	Deep-inelastic scattering and the operator product expansion in lattice QCD. Physical Review D, 2006, 73, .	4.7	101
4	Multipion Systems in Lattice QCD and the Three-Pion Interaction. Physical Review Letters, 2008, 100, 082004.	7.8	98
5	Dark nuclei. I. Cosmology and indirect detection. Physical Review D, 2014, 90, .	4.7	97
6	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></mml:mrow></mml:msub></mml:mrow></mml:math> lattice QCD. Physical Review D, 2015, 92, .	4.7	92
7	n-boson energies at finite volume and three-boson interactions. Physical Review D, 2007, 76, .	4.7	88
8	<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:mo></mml:m factors,. Physical Review D, 2016, 93, .	4.7	87
9	Multipion states in lattice QCD and the charged-pion condensate. Physical Review D, 2008, 78, .	4.7	82
10	Electroweak matrix elements in the two-nucleon sector from lattice QCD. Nuclear Physics A, 2004, 743, 170-193.	1.5	72
11	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
12	Kaon condensation with lattice QCD. Physical Review D, 2008, 78, .	4.7	70
13	High statistics analysis using anisotropic clover lattices. II. Three-baryon systems. Physical Review D, 2009, 80, .	4.7	69
14	AbÂinitioCalculation 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
15	Lattice QCD at nonzero isospin chemical potential. Physical Review D, 2012, 86, .	4.7	67
16	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
17	Magnetic structure of light nuclei from lattice QCD. Physical Review D, 2015, 92, .	4.7	62
18	High statistics analysis using anisotropic clover lattices: Single hadron correlation functions. Physical Review D, 2009, 79, .	4.7	58

#	Article	IF	Citations
19	Dark nuclei. II. Nuclear spectroscopy in two-color QCD. Physical Review D, 2014, 90, .	4.7	58
20	Hadrons and nuclei. European Physical Journal A, 2019, 55, 1.	2.5	58
21	High statistics analysis using anisotropic clover lattices: III. Baryon-baryon interactions. Physical Review D, 2010, 81, .	4.7	57
22	Twist-two matrix elements at finite and infinite volume. Physical Review D, 2005, 71, .	4.7	53
23	Machine learning action parameters in lattice quantum chromodynamics. Physical Review D, 2018, 97, .	4.7	50
24	Nuclear correlation functions in lattice QCD. Physical Review D, 2013, 87, .	4.7	49
25	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
26	<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
27	Baryon-baryon interactions and spin-flavor symmetry from lattice quantum chromodynamics. Physical Review D, 2017, 96, .	4.7	48
28	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
29	<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>â^'</mml:mo><mml:mn>7</mml:mn></mml:mrow></mml:msup><mml:mo stretchy="false">)	4.7	46
30	Scalar, Axial, and Tensor Interactions of Light Nuclei from Lattice QCD. Physical Review Letters, 2018, 120, 152002.	7.8	41
31	Lattice QCD and neutrino-nucleus scattering. European Physical Journal A, 2019, 55, 1.	2.5	41
32	Nuclear matrix elements from lattice QCD for electroweak and beyond-Standard-Model processes. Physics Reports, 2021, 900, 1-74.	25.6	39
33	Status and future perspectives for lattice gauge theory calculations to the exascale and beyond. European Physical Journal A, 2019, 55, 1.	2.5	37
34	<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><mml:mi mathvariant="bold">+</mml:mi></mml:msup><mml:msup><mml:mi>â„“</mml:mi><mml:mo mathvariant="bold">â^'</mml:mo></mml:msup></mml:math>form factors and differential branching fraction from lattice QCD. Physical Review D, 2013, 87, .	4.7	33
35	First lattice QCD study of the gluonic structure of light nuclei. Physical Review D, 2017, 96, .	4.7	31
36	Short-Range Correlations and the EMC Effect in Effective Field Theory. Physical Review Letters, 2017, 119, 262502.	7.8	30

#	ARTICLE	IF	CITATIONS
37	[illegible] 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
38	Method to study complex systems of mesons in lattice QCD. Physical Review D, 2010, 82, .	4.7	29
39	Lattice QCD study of mixed systems of pions and kaons. Physical Review D, 2011, 84, .	4.7	28
40	Axial Couplings and Strong Decay Widths of Heavy Hadrons. Physical Review Letters, 2012, 108, 172003.	7.8	27
41	Multiscale MonteÂCarlo equilibration: Pure Yang-Mills theory. Physical Review D, 2015, 92, .	4.7	26
42	Universality of the EMC effect. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 625, 165-170.	4.1	22
43	Low energy scattering phase shifts for meson-baryon systems. Physical Review D, 2016, 93, .	4.7	22
44	Octet baryon magnetic moments from lattice QCD: Approaching experiment from a three-flavor symmetric point. Physical Review D, 2017, 95, .	4.7	22
45	Unitary Limit of Two-Nucleon Interactions in Strong Magnetic Fields. Physical Review Letters, 2016, 116, 112301.	7.8	20
46	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></mml from lattice quantum chromodynamics. Physical Review D, 2021, 103, .	4.7	20
47	Uncertainty quantification in lattice QCD calculations for nuclear physics. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 034022.	3.6	19
48	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
49	Parton physics from a heavy-quark operator product expansion: Formalism and Wilson coefficients. Physical Review D, 2021, 104, .	4.7	18
50	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
51	Color Screening by Pions. Physical Review Letters, 2009, 102, 032004.	7.8	16
52	Axial couplings in heavy-hadron chiral perturbation theory at the next-to-leading order. Physical Review D, 2011, 84, .	4.7	16
53	Signal/noise enhancement strategies for stochastically estimated correlation functions. Physical Review D, 2014, 90, .	4.7	16
54	Lattice QCD Inputs for nuclear double beta decay. Progress in Particle and Nuclear Physics, 2020, 112, 103771.	14.4	16

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55	Implementation of general background electromagnetic fields on a periodic hypercubic lattice. Physical Review D, 2015, 92, .	4.7	15
56	Path integral contour deformations for noisy observables. Physical Review D, 2020, 102, .	4.7	15
57	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
58	Generalized parton distributions of the pion in partially-quenched chiral perturbation theory. Physical Review D, 2007, 75, .	4.7	13
59	Quarkonium at nonzero isospin density. Physical Review D, 2013, 87, .	4.7	13
60	Topical Issue on Opportunities for Lattice Gauge Theory in the Era of Exascale Computing. European Physical Journal A, 2019, 55, 1.	2.5	13
61	<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><mml:mi mathvariant="bold">â„“</mml:mi></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
62	Finite-volume matrix elements in multiboson states. Physical Review D, 2015, 91, .	4.7	11
63	Axial charge of the triton from lattice QCD. Physical Review D, 2021, 103, .	4.7	11
64	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
65	Nuclear Physics from Lattice QCD. Lecture Notes in Physics, 2015, , 153-194.	0.7	11
66	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
67	Phase unwrapping and one-dimensional sign problems. Physical Review D, 2018, 98, .	4.7	9
68	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
69	Baryon masses at nonzero isospin/kaon density. Physical Review D, 2013, 88, .	4.7	6
70	QCD inequalities for hadron interactions. Physical Review Letters, 2015, 114, 222001.	7.8	5
71	Multiscale MonteÂCarlo equilibration: Two-color QCD with two fermion flavors. Physical Review D, 2016, 94, .	4.7	5
72	Composite vector particles in external electromagnetic fields. Physical Review D, 2016, 93, .	4.7	3

#	Article	IF	Citations
73	Multi-hadron systems in lattice QCD. European Physical Journal A, 2013, 49, 1.	2.5	2
74	Baryon magnetic moments: Symmetries and relations. EPJ Web of Conferences, 2018, 175, 06001.	0.3	1
75	The EMC effect in effective field theory. AIP Conference Proceedings, 2005, , .	0.4	0
76	Evidence for a bound H-dibaryon using lattice QCD. , 2012, , .		0
77	Lattice QCD for nuclear physics. , 2013, , .		0