Carsten Urbach

List of Publications by Year
in descending order

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93	2,730	147801	189892
papers	citations	31 h-index	50 g-index

94	94	94	1028
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Light hadrons from lattice QCD with light (u, d), strange and charm dynamical quarks. Journal of High Energy Physics, 2010, 2010, 1.	4.7	162
2	HMC algorithm with multiple time scale integration and mass preconditioning. Computer Physics Communications, 2006, 174, 87-98.	7.5	135
3	Dynamical twisted mass fermions with light quarks: simulation and analysis details. Computer Physics Communications, 2008, 179, 695-715.	7.5	135
4	Up, down, strange and charm quark masses with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:msub><mml:mrow><mml:mi>N</mml:mi></mml:mrow><mml:mrow><mml:mi>f</mml:mi></mml:mrow></mml:msub></mml:math>=2+1+1 twisted mass lattice QCD. Nuclear Physics B, 2014, 887, 19-68.	2.5	133
5	Dynamical twisted mass fermions with light quarks. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2007, 650, 304-311.	4.1	121
6	Nucleon and pion structure with lattice QCD simulations at physical value of the pion mass. Physical Review D, 2015, 92, .	4.7	115
7	Light meson physics from maximally twisted mass lattice QCD. Journal of High Energy Physics, 2010, 2010, 1.	4.7	103
8	Twisted mass quarks and the phase structure of lattice QCD. European Physical Journal C, 2005, 39, 421.	3.9	64
9	Scaling test for Wilson twisted mass QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 586, 432-438.	4.1	63
10	Light baryon masses with dynamical twisted mass fermions. Physical Review D, 2008, 78, .	4.7	62
11	tmLQCD: A program suite to simulate Wilson twisted mass lattice QCD. Computer Physics Communications, 2009, 180, 2717-2738.	7.5	59
12	Simulating twisted mass fermions at physical light, strange, and charm quark masses. Physical Review D, 2018, 98, .	4.7	58
13	Computing K and D meson masses with twisted mass lattice QCD. Computer Physics Communications, 2011, 182, 299-316.	7.5	56
14	The phase structure of lattice QCD with two flavors of Wilson quarks and renormalization group improved gluons. European Physical Journal C, 2005, 42, 73-87.	3.9	53
15	Two- and three-body interactions in $$varphi ^4$$ Ïţ 4 theory from lattice simulations. European Physical Journal C, 2018, 78, 1.	3.9	48
16	Numerical simulation of QCD with u, d, s and c quarks in the twisted-mass Wilson formulation. European Physical Journal C, 2007, 50, 373-383.	3.9	45
17	First physics results at the physical pion mass from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>N</mml:mi><mml:mi>f</mml:mi></mml:msub><mml:mo>=</mml:mo><mml:mn>2</mml:mn> Wilson twisted mass fermions at maximal twist. Physical Review D, 2017, 95, .	4.7	44
18	Meson masses and decay constants from unquenched lattice QCD. Physical Review D, 2009, 80, .	4.7	43

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19	A proposal for B-physics on current lattices. Journal of High Energy Physics, 2010, 2010, 1.	4.7	43
20	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î·</mml:mi></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Î·</mml:mi><mml:mo>â€²</mml:mo></mml:msup></mml:math>Mixing from Lattice QCD. Physical Review Letters, 2013, 111, 181602.	7.8	42
21	Pseudoscalar decay constants of kaon andD-mesons fromN_f= 2 twisted mass Lattice QCD. Journal of High Energy Physics, 2009, 2009, 043-043.	4.7	40
22	The Î·â€² meson from lattice QCD. European Physical Journal C, 2008, 58, 261-269.	3.9	38
23	Hadron-hadron interactions from N f = 2 + 1 + 1 lattice QCD: isospin-2 Ï€Ï€ scattering length. Journal of High Energy Physics, 2015, 2015, 1.	4.7	37
24	Exploring the phase structure of lattice QCD with twisted mass quarks. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 240-245.	0.4	36
25	Isospin-0 <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo>Ï€</mml:mo><mml:mo>Ï€</mml:mo></mml:mrow></mml:math> s-wave scattering length from twisted mass lattice QCD. Physical Review D, 2017, 96, .	4.7	35
26	Nucleon axial and pseudoscalar form factors from lattice QCD at the physical point. Physical Review D, 2021, 103, .	4.7	35
27	Lattice investigation of the scalar mesons a 0(980) and Îº using four-quark operators. Journal of High Energy Physics, 2013, 2013, 1.	4.7	34
28	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mo stretchy="false">âŸ¨</mml:mo><mml:mi>x</mml:mi><mml:mo stretchy="false">âŸ©</mml:mo></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mo stretchy="false">âŸ¨</mml:mo><mml:msup><mml:mi>x</mml:mi><mml:mn>2</mml:mn></mml:msup><mml:mo stretchy="false">âŸ©</mml:mo></mml:math> of the pion PDF from lattice QCD with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:. Physical Review D, 2019, 99,	4.7	34
29	Moments of nucleon generalized parton distributions from lattice QCD simulations at physical pion mass. Physical Review D, 2020, 101, .	4.7	32
30	Scattering of two and three physical pions at maximal isospin from lattice QCD. European Physical Journal C, 2021, 81, 1.	3.9	32
31	Thermal QCD transition with two flavors of twisted mass fermions. Physical Review D, 2013, 87, .	4.7	31
32	Light quarks with twisted mass fermions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 619, 184-191.	4.1	30
33	Dealing with virtual aggregation â€“ a new index for analysing heterogeneous point patterns. Ecography, 2008, 31, 545-555.	4.5	30
34	Flavor-singlet meson decay constants from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>N</mml:mi></mml:mrow><mml:mrow><mml:mi>f</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math> twisted mass lattice QCD. Physical Review D, 2018, 97, .	4.7	30
35	Lattice spacing dependence of the first order phase transition for dynamical twisted mass fermions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 624, 324-333.	4.1	29
36	Hadronâ€“Hadron interactions from $$N_mathrm{{f}}=2+1+1$$ lattice QCD: the $$ho ,$$-resonance. European Physical Journal A, 2020, 56, 1.	2.5	29

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37	PhenoFlex - an integrated model to predict spring phenology in temperate fruit trees. Agricultural and Forest Meteorology, 2021, 307, 108491.	4.8	28
38	Flavour breaking effects of Wilson twisted mass fermions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 624, 334-341.	4.1	25
39	Relativistic N-particle energy shift in finite volume. Journal of High Energy Physics, 2021, 2021, 1.	4.7	24
40	Lemon: An MPI parallel I/O library for data encapsulation using LIME. Computer Physics Communications, 2012, 183, 1321-1335.	7.5	23
41	Numerical simulations with two flavours of twisted-mass Wilson quarks and DBW2 gauge action. European Physical Journal C, 2006, 47, 453-472.	3.9	22
42	O(<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML") Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 Td (display="inline"><m cutoff effects in lattice Wilson fermion simulations. Physical Review D, 2010, 81, .	4.7	22
43	Î· and Î·â€² mesons from N f â€‰=â€‰2â€‰+â€‰1â€‰+â€‰1 twisted mass lattice QCD. Journal of High Energy Physics, 2012, 20	4.7	22
44	Going chiral: overlap versus twisted mass fermions. Journal of High Energy Physics, 2004, 2004, 044-044.	4.7	20
45	Semimetalâ€“Mott insulator quantum phase transition of the Hubbard model on the honeycomb lattice. Physical Review B, 2020, 102, .	3.2	20
46	Light quark masses and pseudoscalar decay constants fromNf= 2 lattice QCD with twisted mass fermions. Journal of High Energy Physics, 2008, 2008, 020-020.	4.7	19
47	Quark masses using twisted-mass fermion gauge ensembles. Physical Review D, 2021, 104, .	4.7	19
48	Non-perturbative test of the Witten-Veneziano formula from lattice QCD. Journal of High Energy Physics, 2015, 2015, 1.	4.7	18
49	Pion vector form factor from lattice QCD at the physical point. Physical Review D, 2018, 97, .	4.7	18
50	Quenched scaling of Wilson twisted mass fermions. Journal of High Energy Physics, 2005, 2005, 071-071.	4.7	17
51	Determination of low-energy constants of Wilson chiral perturbation theory. Journal of High Energy Physics, 2013, 2013, 1.	4.7	17
52	The Ï•resonance from Nâ€¯=â€¯2 lattice QCD including the physical pion mass. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 819, 136449.	4.1	16
53	Parton distribution functions with twisted mass fermions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2006, 639, 520-526.	4.1	15
54	Quark mass and chiral condensate from the Wilson twisted mass lattice quark propagator. Physical Review D, 2013, 87, .	4.7	15

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55	Hadron-Hadron Interactions from Nf=2+1+1 lattice QCD: Isospin-1 KK scattering length. Physical Review D, 2017, 96, .	4.7	15
56	Hadron-Hadron interactions from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>N</mml:mi></mml:mrow><mml:mrow><mml:mi>f</mml:mi></mml:n lattice QCD: <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>I</mml:mi><mml:mo>=</mml:mo><mml:mn>3</mml:mn><mml:mo stretchy="false">... Physical Review D, 2018, 98, .	4.7	13
57	Topological susceptibility and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Î·</mml:mi><mml:mo>â€²</mml:mo></mml:msup></mml:math> meson mass from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>N</mml:mi><mml:mi>f</mml:mi></mml:msub><mml:mo>=</mml:mo><mml:mn>2</mml:mn lattice QCD at the physical point. Physical Review D, 2019, 99, .	4.7	13
58	Digitising SU(2) gauge fields and the freezing transition. European Physical Journal C, 2022, 82, 1.	3.9	13
59	Scalar Mesons and Tetraquarks from Twisted Mass Lattice QCD. Acta Physica Polonica B, Proceedings Supplement, 2013, 6, 847.	0.1	12
60	Ratio of kaon and pion leptonic decay constants with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>N</mml:mi><mml:mi>f</mml:mi></mml:msub><mml:mo>=</mml:mo><mml:mn>2</mml:mn>< Wilson-clover twisted-mass fermions. Physical Review D, 2021, 104, .	4.7	12
61	The <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mi>Ï‰</mml:mi><mml:mtext>â€"</mml:mtext><mml:mi>Ï•</mml:mi></mml:math> meson mass splitting and mixing from lattice QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 674, 286-290.	4.1	11
62	Monte Carlo simulations of the randomly forced Burgers equation. Europhysics Letters, 2008, 84, 40002.	2.0	10
63	Comparing topological charge definitions using topology fixing actions. European Physical Journal A, 2010, 43, 303-311.	2.5	10
64	On the generalised eigenvalue method and its relation to Prony and generalised pencil of function methods. European Physical Journal A, 2020, 56, 1.	2.5	10
65	A lattice QCD calculation of the transverse decay constant of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:msub><mml:mi>b</mml:mi><mml:mn>1</mml:mn></mml:msub><mml:mo stretchy="false">(</mml:mo><mml:mn>1235</mml:mn><mml:mo) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 332 Td (stretchy="fal Particle and High-Energy Physics, 2010, 690, 491-494.	4.1	9
66	Exploratory investigation of nucleon-nucleon interactions using Euclidean Monte Carlo simulations. European Physical Journal A, 2012, 48, 1.	2.5	9
67	Investigation of light and heavy tetraquark candidates using lattice QCD. Journal of Physics: Conference Series, 2014, 503, 012031.	0.4	9
68	A mixed action analysis of Î· and <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.elsevier.com. N	2.5	9
69	Accelerating Hybrid Monte Carlo simulations of the Hubbard model on the hexagonal lattice. Computer Physics Communications, 2019, 236, 15-25.	7.5	9
70	Ruling Out the Massless Up-Quark Solution to the Strong <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>C</mml:mi><mml:mi>P</mml:mi></mml:math> Problem by Computing the Topological Mass Contribution with Lattice QCD. Physical Review Letters, 2020, 125, 232001.	7.8	9
71	Antiferromagnetic character of the quantum phase transition in the Hubbard model on the honeycomb lattice. Physical Review B, 2021, 104, .	3.2	9
72	Recent development in the tmLQCD software suite. , 2014, , .		8

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73	Simulating both parity sectors of the Hubbard model with tensor networks. Physical Review B, 2021, 104, .	3.2	8
74	Unusually warm winter seasons may compromise the performance of current phenology models â€“ Predicting bloom dates in young apple trees with PhenoFlex. Agricultural and Forest Meteorology, 2022, 322, 109020.	4.8	8
75	Experiences with OpenMP in tmLQCD. , 2014, , .		5
76	Quark and Gluon Momentum Fractions in the Pion from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>N</mml:mi><mml:mi>f</mml:mi></mml:msub><mml:mo>=</mml:mo><mml:mn>2</mml:mn><mml:mo> Lattice QCD. Physical Review Letters, 2021, 127, 252001.	7.8	5
77	Comparing iterative methods for overlap and twisted mass fermions. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 853-855.	0.4	4
78	Reversibility violation in the Hybrid Monte Carlo algorithm. Computer Physics Communications, 2018, 224, 44-51.	7.5	4
79	Dynamical Generation of Elementary Fermion Mass: First Lattice Evidence. Physical Review Letters, 2019, 123, 061802.	7.8	4
80	Lattice QCD and Chiral Perturbation Theory. Nuclear Physics, Section B, Proceedings Supplements, 2006, 153, 283-290.	0.4	3
81	Iterative methods for overlap and twisted mass fermions. Computational Science & Discovery, 2008, 1, 015001.	1.5	3
82	Properties of flavour-singlet pseudoscalar mesons from lattice QCD. EPJ Web of Conferences, 2017, 134, 04004.	0.3	3
83	Simulation of an ensemble of Nf = 2 + 1 + 1 twisted mass cloverimproved fermions at physical quark masses. EPJ Web of Conferences, 2018, 175, 02003.	0.3	3
84	Dynamical twisted mass fermions. , 2005, , .		3
85	Comparison between overlap and twisted mass fermions towards the chiral limit. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 683-685.	0.4	2
86	Wilson twisted mass towards the chiral limit. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 746-748.	0.4	2
87	The Î·â€² meson at the physical point with Nf = 2 Wilson twisted mass fermions. EPJ Web of Conferences, 2018, 175, 05025.	0.3	2
88	Lattice investigation of the tetraquark candidates a0(980) and kappa. , 2012, , .		2
89	Beer mats make bad frisbees. European Physical Journal Plus, 2021, 136, 1.	2.6	1
90	Quark mass and chiral condensate from the Wilson twisted mass lattice quark propagator. , 0, .		1

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91	A (P)HMC algorithm for N_F=2+1+1 flavours of twisted mass fermions. , 2005, , .		1
92	Testing a new method for scattering in finite volume in the $$phi ^4$$ theory. European Physical Journal C, 2021, 81, 1.	3.9	1
93	Topical issue on Lattice Field Theory during the Covid-19 pandemic. European Physical Journal A, 2021, 57, 326.	2.5	0