Carsten Urbach

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7857171/publications.pdf

Version: 2024-02-01

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	Digitising SU(2) gauge fields and the freezing transition. European Physical Journal C, 2022, 82, 1.	3.9	13
2	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
3	Relativistic N-particle energy shift in finite volume. Journal of High Energy Physics, 2021, 2021, 1.	4.7	24
4	Nucleon axial and pseudoscalar form factors from lattice QCD at the physical point. Physical Review D, 2021, 103, .	4.7	35
5	Scattering of two and three physical pions at maximal isospin from lattice QCD. European Physical Journal C, 2021, 81, 1.	3.9	32
6	Beer mats make bad frisbees. European Physical Journal Plus, 2021, 136, 1.	2.6	1
7	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
8	PhenoFlex - an integrated model to predict spring phenology in temperate fruit trees. Agricultural and Forest Meteorology, 2021, 307, 108491.	4.8	28
9	Simulating both parity sectors of the Hubbard model with tensor networks. Physical Review B, 2021, 104, .	3.2	8
10	Antiferromagnetic character of the quantum phase transition in the Hubbard model on the honeycomb lattice. Physical Review B, 2021, 104, .	3.2	9
11	Quark masses using twisted-mass fermion gauge ensembles. Physical Review D, 2021, 104, .	4.7	19
12	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><mml:mn> Wilson-clover twisted-mass fermions. Physical Review D, 2021, 104, .	4.7	12
13	Testing a new method for scattering in finite volume in the $$phi ^4$$ theory. European Physical Journal C, 2021, 81, 1.	3.9	1
14	Topical issue on Lattice Field Theory during the Covid-19 pandemic. European Physical Journal A, 2021, 57, 326.	2.5	0
15	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:mn> Lattice QCD. Physical Review Letters, 2021, 127, 252001.	7.8	5
16	Moments of nucleon generalized parton distributions from lattice QCD simulations at physical pion mass. Physical Review D, 2020, 101, .	4.7	32
17	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
18	Semimetalâ€“Mott insulator quantum phase transition of the Hubbard model on the honeycomb lattice. Physical Review B, 2020, 102, .	3.2	20

#	Article	IF	Citations
19	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
20	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
21	Dynamical Generation of Elementary Fermion Mass: First Lattice Evidence. Physical Review Letters, 2019, 123, 061802.	7.8	4
22	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><mml:mo stretchy="false">â</mml:mo><mml:mi>x</mml:mi><mml:mo stretchy="false">â©</mml:mo></mml:math> lattice QCD at the physical point. Physical Review D, 2019, 99, .	4.7	13
23	and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mo stretchy="false">â¨</mml:mo><mml:msup><mml:mi>x</mml:mi><mml:mn>2</mml:mn></mml:msup><mml:mo stretchy="false">â©</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
24	Accelerating Hybrid Monte Carlo simulations of the Hubbard model on the hexagonal lattice. Computer Physics Communications, 2019, 236, 15-25.	7.5	9
25	Pion vector form factor from lattice QCD at the physical point. Physical Review D, 2018, 97, .	4.7	18
26	Reversibility violation in the Hybrid Monte Carlo algorithm. Computer Physics Communications, 2018, 224, 44-51.	7.5	4
27	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:mrow> 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="fals. Physical Review D, 2018, 98, .	4.7	13
28	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
29	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
30	Two- and three-body interactions in $$varphi ^4$$ Ït 4 theory from lattice simulations. European Physical Journal C, 2018, 78, 1.	3.9	48
31	Simulating twisted mass fermions at physical light, strange, and charm quark masses. Physical Review D, 2018, 98, .	4.7	58
32	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> twisted mass lattice QCD. Physical Review D, 2018, 97, .	4.7	30
33	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
34	Hadron-Hadron Interactions from Nf=2+1+1 lattice QCD: Isospin-1 KK scattering length. Physical Review D, 2017, 96, .	4.7	15
35	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
36	Properties of flavour-singlet pseudoscalar mesons from lattice QCD. EPJ Web of Conferences, 2017, 134, 04004.	0.3	3

#	Article	IF	Citations
37	Nucleon and pion structure with lattice QCD simulations at physical value of the pion mass. Physical Review D, 2015, 92, .	4.7	115
38	Non-perturbative test of the Witten-Veneziano formula from lattice QCD. Journal of High Energy Physics, 2015, 2015, 1.	4.7	18
39	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
40	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/...	2.5	9
41	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
42	Investigation of light and heavy tetraquark candidates using lattice QCD. Journal of Physics: Conference Series, 2014, 503, 012031.	0.4	9
43	Recent development in the tmLQCD software suite. , 2014, , .		8
44	Experiences with OpenMP in tmLQCD. , 2014, , .		5
45	Determination of low-energy constants of Wilson chiral perturbation theory. Journal of High Energy Physics, 2013, 2013, 1.	4.7	17
46	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
47	<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
48	Quark mass and chiral condensate from the Wilson twisted mass lattice quark propagator. Physical Review D, 2013, 87, .	4.7	15
49	Thermal QCD transition with two flavors of twisted mass fermions. Physical Review D, 2013, 87, .	4.7	31
50	Scalar Mesons and Tetraquarks from Twisted Mass Lattice QCD. Acta Physica Polonica B, Proceedings Supplement, 2013, 6, 847.	0.1	12
51	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, 2012, 2	7	2
52	Lemon: An MPI parallel I/O library for data encapsulation using LIME. Computer Physics Communications, 2012, 183, 1321-1335.	7.5	23
53	Exploratory investigation of nucleon-nucleon interactions using Euclidean Monte Carlo simulations. European Physical Journal A, 2012, 48, 1.	2.5	9
54	Lattice investigation of the tetraquark candidates a0(980) and kappa. , 2012, , .		2

#	Article	IF	Citations
55	Computing K and D meson masses with twisted mass lattice QCD. Computer Physics Communications, 2011, 182, 299-316.	7.5	56
56	Comparing topological charge definitions using topology fixing actions. European Physical Journal A, 2010, 43, 303-311.	2.5	10
57	A proposal for B-physics on current lattices. Journal of High Energy Physics, 2010, 2010, 1.	4.7	43
58	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
59	Light meson physics from maximally twisted mass lattice QCD. Journal of High Energy Physics, 2010, 2010, 1.	4.7	103
60	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 ETQq0 0 0 rgBT /Overlock 10 Tf 50 532 Td (stretchy="false">)</m Particle and High-Energy Physics, 2010, 690, 491-494.	4.1	9
61	O(<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML") Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 507 Td (display=" cutoff effects in lattice Wilson fermion simulations. Physical Review D, 2010, 81, .	4.7	22
62	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
63	tmLQCD: A program suite to simulate Wilson twisted mass lattice QCD. Computer Physics Communications, 2009, 180, 2717-2738.	7.5	59
64	Meson masses and decay constants from unquenched lattice QCD. Physical Review D, 2009, 80, .	4.7	43
65	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
66	Dynamical twisted mass fermions with light quarks: simulation and analysis details. Computer Physics Communications, 2008, 179, 695-715.	7.5	135
67	The Î·â€² meson from lattice QCD. European Physical Journal C, 2008, 58, 261-269.	3.9	38
68	Dealing with virtual aggregation â€“ a new index for analysing heterogeneous point patterns. Ecography, 2008, 31, 545-555.	4.5	30
69	Light baryon masses with dynamical twisted mass fermions. Physical Review D, 2008, 78, .	4.7	62
70	Iterative methods for overlap and twisted mass fermions. Computational Science & Discovery, 2008, 1, 015001.	1.5	3
71	Monte Carlo simulations of the randomly forced Burgers equation. Europhysics Letters, 2008, 84, 40002.	2.0	10
72	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

#	Article	IF	Citations
73	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
74	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
75	HMC algorithm with multiple time scale integration and mass preconditioning. Computer Physics Communications, 2006, 174, 87-98.	7.5	135
76	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
77	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
78	Lattice QCD and Chiral Perturbation Theory. Nuclear Physics, Section B, Proceedings Supplements, 2006, 153, 283-290.	0.4	3
79	Exploring the phase structure of lattice QCD with twisted mass quarks. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 240-245.	0.4	36
80	Comparing iterative methods for overlap and twisted mass fermions. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 853-855.	0.4	4
81	Light quarks with twisted mass fermions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 619, 184-191.	4.1	30
82	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
83	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
84	Comparison between overlap and twisted mass fermions towards the chiral limit. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 683-685.	0.4	2
85	Twisted mass quarks and the phase structure of lattice QCD. European Physical Journal C, 2005, 39, 421.	3.9	64
86	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
87	Wilson twisted mass towards the chiral limit. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 746-748.	0.4	2
88	Quenched scaling of Wilson twisted mass fermions. Journal of High Energy Physics, 2005, 2005, 071-071.	4.7	17
89	Dynamical twisted mass fermions. , 2005, , .		3
90	A (P)HMC algorithm for N_F=2+1+1 flavours of twisted mass fermions. , 2005, , .		1

#	Article	IF	Citations
91	Going chiral: overlap versus twisted mass fermions. Journal of High Energy Physics, 2004, 2004, 044-044.	4.7	20
92	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
93	Quark mass and chiral condensate from the Wilson twisted mass lattice quark propagator. , 0, .		1