Stephen R Sharpe

List of Publications by Year
in descending order

69 papers	2,767 citations	186265 28 h-index	175258 52 g-index
72 all docs	72 docs citations	72 times ranked	741 citing authors

#	Article	IF	Citations
1	Finite-volume effects for two-hadron states in moving frames. Nuclear Physics B, 2005, 727, 218-243.	2.5	227
2	Multiple-channel generalization of Lellouch-LÃ¼scher formula. Physical Review D, 2012, 86, .	4.7	201
3	Relativistic, model-independent, three-particle quantization condition. Physical Review D, 2014, 90, .	4.7	158
4	Expressing the three-particle finite-volume spectrum in terms of the three-to-three scattering amplitude. Physical Review D, 2015, 92, .	4.7	144
5	Relating the finite-volume spectrum and the two-and-three-particle <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>S</mml:mi></mml:mrow></mml:math> matrix for relativistic systems of identical scalar particles. Physical Review D, 2017, 95, .	4.7	120
6	A tool kit for staggered fermions. Nuclear Physics B, 1987, 283, 493-550.	2.5	113
7	Lattice QCD and Three-Particle Decays of Resonances. Annual Review of Nuclear and Particle Science, 2019, 69, 65-107.	10.2	92
8	Matrix elements of four-fermion operators with quenched Wilson fermions. Physical Review D, 1997, 55, 4036-4054.	4.7	88
9	Lattice calculation of I = 2 pion scattering length. Nuclear Physics B, 1992, 383, 309-354.	2.5	84
10	<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:math> Three-Pion Scattering Amplitude from Lattice QCD. Physical Review Letters, 2020, 124, 032001.	7.8	66
11	Twisted mass chiral perturbation theory at next-to-leading order. Physical Review D, 2005, 71, .	4.7	64
12	Threshold expansion of the three-particle quantization condition. Physical Review D, 2016, 93, .	4.7	64
13	Three-particle systems with resonant subprocesses in a finite volume. Physical Review D, 2019, 99, .	4.7	63
14	Implementing the three-particle quantization condition including higher partial waves. Journal of High Energy Physics, 2019, 2019, 1.	4.7	62
15	Phase diagram of twisted mass lattice QCD. Physical Review D, 2004, 70, .	4.7	58
16	Improved bilinears in lattice QCD with nondegenerate quarks. Physical Review D, 2006, 73, .	4.7	57
17	Numerical study of the relativistic three-body quantization condition in the isotropic approximation. Physical Review D, 2018, 98, .	4.7	56
18	Numerical exploration of three relativistic particles in a finite volume including two-particle resonances and bound states. Journal of High Energy Physics, 2019, 2019, 1.	4.7	56

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19	Weak interaction matrix elements with staggered fermions (I). Theory and a trial run. Nuclear Physics B, 1987, 286, 253-292.	2.5	52
20	Perturbative corrections for staggered fermion bilinears. Nuclear Physics B, 1993, 395, 701-732.	2.5	49
21	Generalizing the relativistic quantization condition to include all three-pion isospin channels. Journal of High Energy Physics, 2020, 2020, 1.	4.7	48
22	Perturbative corrections for staggered four-fermion operators. Nuclear Physics B, 1994, 417, 307-356.	2.5	45
23	Perturbative results for two- and three-particle threshold energies in finite volume. Physical Review D, 2016, 93, .	4.7	44
24	Unitarity of the infinite-volume three-particle scattering amplitude arising from a finite-volume formalism. Physical Review D, 2019, 100, .	4.7	41
25	Applying the relativistic quantization condition to a three-particle bound state in a periodic box. Physical Review D, 2017, 95, .	4.7	33
26	One-loop matching coefficients for improved staggered bilinears. Physical Review D, 2002, 66, .	4.7	31
27	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>B</mml:mi><mml:mi>K</mml:mi></mml:msub></mml:math>using HYP-smeared staggered fermions in<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> QCD. Physical Review D, 2010, 82, .	4.7	30
28	Alternative derivation of the relativistic three-particle quantization condition. Physical Review D, 2020, 102, .	4.7	29
29	â€™t Hooft vertices, partial quenching, and rooted staggered QCD. Physical Review D, 2008, 77, .	4.7	28
30	Equivalence of relativistic three-particle quantization conditions. Physical Review D, 2020, 102, .	4.7	28
31	Staggered fermion matrix elements using smeared operators. Physical Review D, 1998, 57, 1654-1665.	4.7	27
32	Testing the threshold expansion for three-particle energies at fourth order in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>ϕ</mml:mi><mml:mn>4</mml:mn></mml:msup></mml:math> theory. Physical Review D, 2017, 96, .	4.7	26
33	Observations on discretization errors in twisted-mass lattice QCD. Physical Review D, 2005, 72, .	4.7	24
34	Effective theory for quenched lattice QCD and the Aoki phase. Physical Review D, 2005, 71, .	4.7	24
35	Opportunities for Lattice QCD in quark and lepton flavor physics. European Physical Journal A, 2019, 55, 1.	2.5	24
36	Discretization errors in the spectrum of the Hermitian Wilson-Dirac operator. Physical Review D, 2006, 74, .	4.7	23

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37	KaonBParameter from Improved Staggered Fermions inNf=2+1QCD. Physical Review Letters, 2012, 109, 041601.	7.8	23
38	Relativistic three-particle quantization condition for nondegenerate scalars. Physical Review D, 2021, 103, .	4.7	22
39	Unphysical operators in partially quenched QCD. Physical Review D, 2004, 69, .	4.7	21
40	Kaon BSM<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>B</mml:mi></mml:math>-parameters using improved staggered fermions 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:m QCD. Physical Review D, 2016, 93, .	4.7	21
41	Interactions of two and three mesons including higher partial waves from lattice QCD. Journal of High Energy Physics, 2021, 2021, 1.	4.7	21
42	Three-particle finite-volume formalism for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Ï€</mml:mi><mml:mo>+</mml:mo></mml:msup><mml:msup><mml:mi>Ï€</mml:mi><mml:mo and related systems. Physical Review D, 2021, 104, .	4.7	20
43	PHYSICAL RESULTS FROM PARTIALLY QUENCHED SIMULATIONS. International Journal of Modern Physics A, 2001, 16, 1219-1224.	1.5	17
44	Decay amplitudes to three hadrons from finite-volume matrix elements. Journal of High Energy Physics, 2021, 2021, 1.	4.7	17
45	Constraint on the low energy constants of Wilson chiral perturbation theory. Physical Review D, 2012, 85, .	4.7	16
46	Large-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>N</mml:mi></mml:math>reduction in QCD with two adjoint Dirac fermions. Physical Review D, 2012, 85, .	4.7	14
47	Neutral kaon mixing from new physics: Matrix elements inNf=2+1lattice QCD. Physical Review D, 2013, 88, .	4.7	14
48	Finite volume effects inBKwith improved staggered fermions. Physical Review D, 2011, 83, .	4.7	12
49	Kaon mixing matrix elements from beyond-the-standard-model operators in staggered chiral perturbation theory. Physical Review D, 2012, 85, .	4.7	12
50	Improved determination ofBKwith staggered quarks. Physical Review D, 2014, 89, .	4.7	12
51	Testing improved staggered fermions withmsandBK. Physical Review D, 2005, 71, .	4.7	11
52	Reply to â€œComment on â€˜ â€™t Hooft vertices, partial quenching, and rooted staggered QCDâ€™ â€• Physical Review D, 2008, 78, .	4.7	10
53	Implementing the three-particle quantization condition for Ï€+Ï€+K+ and related systems. Journal of High Energy Physics, 2022, 2022, 1.	4.7	10
54	One-loop matching of improved four-fermion staggered operators with an improved gluon action. Physical Review D, 2011, 83, .	4.7	9

#	Article	IF	Citations
55	Determining low-energy constants in partially quenched Wilson chiral perturbation theory. Physical Review D, 2012, 85, .	4.7	9
56	Nonperturbative renormalization for improved staggered bilinears. Physical Review D, 2013, 88, .	4.7	9
57	Scaling behavior of discretization errors in renormalization and improvement constants. Physical Review D, 2006, 73, .	4.7	8
58	Taste symmetry breaking with hypercubic-smeared staggered fermions. Physical Review D, 2008, 77, .	4.7	8
59	Vector and axial currents in Wilson chiral perturbation theory. Physical Review D, 2009, 80, .	4.7	6
60	One-loop matching factors for staggered bilinear operators with improved gauge actions. Physical Review D, 2010, 81, .	4.7	6
61	Phase diagram of nondegenerate twisted mass fermions. Physical Review D, 2014, 90, .	4.7	5
62	Impact of electromagnetism on phase structure for Wilson and twisted-mass fermions including isospin breaking. Physical Review D, 2015, 92, .	4.7	3
63	Progress in three-particle scattering from LQCD. EPJ Web of Conferences, 2017, 137, 05004.	0.3	3
64	Applicability of the two-particle quantization condition to partially-quenched theories. Physical Review D, 2021, 104, .	4.7	3
65	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Ï€</mml:mi><mml:mi>Ï€</mml:mi></mml:math> scattering in partially-quenched twisted-mass chiral perturbation theory. Physical Review D, 2022, 105, .	4.7	3
66	Phase structure with nonzeroÎ˜QCDand twisted mass fermions. Physical Review D, 2015, 92, .	4.7	2
67	Lattice QCD: Going beyond the mass spectrum. Journal of Statistical Physics, 1986, 43, 1129-1145.	1.2	1
68	Toolkit for staggered Î”S=2 matrix elements. Physical Review D, 2014, 90, .	4.7	1
69	APPLICATIONS OF CHIRAL PERTURBATION THEORY TO LATTICE QCD. , 2007, , .		1