

# Simon M Catterall

## List of Publications by Year in descending order

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Version: 2024-02-01

80  
papers

2,034  
citations

236612

25  
h-index

243296

44  
g-index

81  
all docs

81  
docs citations

81  
times ranked

3266  
citing authors

#	ARTICLE	IF	CITATIONS
1	Minimal walking on the lattice. Physical Review D, 2007, 76, .	1.6	161
2	Exact lattice supersymmetry. Physics Reports, 2009, 484, 71-130.	10.3	131
3	Phase diagram of $SU(2)$ with 2 flavors of dynamical adjoint quarks. Journal of High Energy Physics, 2008, 2008, 009-009.	1.6	126
4	A geometrical approach to $N=2$ super Yang-Mills theory on the two dimensional lattice. Journal of High Energy Physics, 2004, 2004, 006-006.	1.6	91
5	Black hole thermodynamics from simulations of lattice Yang-Mills theory. Physical Review D, 2008, 78, .	1.6	84
6	Lattice supersymmetry and topological field theory. Journal of High Energy Physics, 2003, 2003, 038-038.	1.6	83
7	Towards lattice simulation of the gauge theory duals to black holes and hot strings. Journal of High Energy Physics, 2007, 2007, 104-104.	1.6	81
8	Exact lattice supersymmetry: The two-dimensional $N=2$ Wess-Zumino model. Physical Review D, 2002, 65, .	1.6	79
9	Lattice formulation of $N = 4$ super Yang-Mills theory. Journal of High Energy Physics, 2005, 2005, 027-027.	1.6	67
10	From twisted supersymmetry to orbifold lattices. Journal of High Energy Physics, 2008, 2008, 048-048.	1.6	61
11	Extracting black hole physics from the lattice. Journal of High Energy Physics, 2010, 2010, 1.	1.6	54
12	Thermal phases of D1-branes on a circle from lattice super Yang-Mills. Journal of High Energy Physics, 2010, 2010, 1.	1.6	49
13	A lattice path integral for supersymmetric quantum mechanics. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 487, 349-356.	1.5	48
14	Lattice Sigma Models with Exact Supersymmetry. Journal of High Energy Physics, 2004, 2004, 044-044.	1.6	42
15	Perturbative renormalization of lattice $N = 4$ super Yang-Mills theory. Journal of High Energy Physics, 2011, 2011, 1.	1.6	41
16	Lattice study of the two-dimensional Wess-Zumino model. Physical Review D, 2003, 68, .	1.6	40
17	Fermion mass without symmetry breaking. Journal of High Energy Physics, 2016, 2016, 1.	1.6	40
18	Lattice super-Yang-Mills using domain wall fermions in the chiral limit. Physical Review D, 2009, 79, .	1.6	37

#	ARTICLE	IF	CITATIONS
19	First results from simulations of supersymmetric lattices. Journal of High Energy Physics, 2009, 2009, 040-040.	1.6	33
20	Simulations of Script $N = 2$ super Yang-Mills theory in two dimensions. Journal of High Energy Physics, 2006, 2006, 032-032.	1.6	32
21	Monte Carlo renormalization group minimal walking technicolor. Physical Review D, 2012, 85, .	1.6	32
22	$\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi mathvariant="script"} \rangle N \langle \text{mml:mi} \langle \text{mml:mo} \rangle = \langle \text{mml:mo} \langle \text{mml:mn} \rangle 4 \langle \text{mml:mn} \rangle \langle \text{mml:math} \rangle$ supersymmetry on a space-time lattice. Physical Review D, 2014, 90, .	1.6	32
23	Tensor renormalization group study of the non-Abelian Higgs model in two dimensions. Physical Review D, 2019, 99, .	1.6	32
24	On the sign problem in 2D lattice super Yang-Mills. Journal of High Energy Physics, 2012, 2012, 1.	1.6	26
25	Critique of the link approach to exact lattice supersymmetry. Physical Review D, 2007, 75, .	1.6	25
26	Testing holography using lattice super-Yang-Mills theory on a 2-torus. Physical Review D, 2018, 97, .	1.6	24
27	Tensor network formulation of the massless Schwinger model with staggered fermions. Physical Review D, 2020, 101, .	1.6	24
28	Twisted supersymmetries in lattice $\mathcal{N} = 4$ super Yang-Mills theory. Journal of High Energy Physics, 2013, 2013, 1.	1.6	23
29	Novel phases in strongly coupled four-fermion theories. Physical Review D, 2017, 96, .	1.6	23
30	Lattice gauge theory for physics beyond the Standard Model. European Physical Journal A, 2019, 55, 1.	1.0	23
31	Phase structure of lattice $\mathcal{N}=4$ super Yang-Mills. Journal of High Energy Physics, 2012, 2012, 1.	1.6	22
32	Twisted supersymmetric sigma model on the lattice. Journal of High Energy Physics, 2006, 2006, 063-063.	1.6	20
33	First results from lattice simulation of the PWMM. Journal of High Energy Physics, 2010, 2010, 1.	1.6	20
34	Realization of center symmetry in two adjoint flavor large- $N$ Yang-Mills. Journal of High Energy Physics, 2010, 2010, 1.	1.6	19
35	Real space renormalization group for twisted lattice $\mathcal{N} = 4$ super Yang-Mills. Journal of High Energy Physics, 2014, 2014, 1.	1.6	19
36	Lifting flat directions in lattice supersymmetry. Journal of High Energy Physics, 2015, 2015, 1.	1.6	18

#	ARTICLE	IF	CITATIONS
37	Supersymmetry on the lattice. International Journal of Modern Physics A, 2016, 31, 1643005.	0.5	18
38	$S \cdot O(4)$ Tj ETQq0 0 0 rgBT /Overlock 10.7f 50 6977Td (stretc staggered fermions. Physical Review D, 2018, 98, .		
39	Topological fermion condensates from anomalies. Journal of High Energy Physics, 2018, 2018, 1.	1.6	17
40	Anomalies and symmetric mass generation for Kähler-Dirac fermions. Physical Review D, 2021, 104, .	1.6	17
41	Testing a Fourier-accelerated hybrid Monte Carlo algorithm. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 528, 301-305.	1.5	16
42	On the restoration of supersymmetry in twisted two-dimensional lattice Yang-Mills theory. Journal of High Energy Physics, 2007, 2007, 015-015.	1.6	16
43	Topology and strong four fermion interactions in four dimensions. Physical Review D, 2018, 97, .	1.6	16
44	An object oriented code for simulating supersymmetric Yang-Mills theories. Computer Physics Communications, 2012, 183, 1336-1353.	3.0	13
45	Chiral lattice fermions from staggered fields. Physical Review D, 2021, 104, .	1.6	12
46	Nonperturbative study of dynamical SUSY breaking in $N=(2,2)$ Yang-Mills theory. Physical Review D, 2018, 97, .	1.6	10
47	Three-dimensional super-Yang-Mills theory on the lattice and dual black branes. Physical Review D, 2020, 102, .	1.6	10
48	Non-perturbative renormalization group flows in two-dimensional quantum gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 345, 422-428.	1.5	9
49	Non-Abelian gauged Nambu-Jona-Lasinio models on the lattice. Physical Review D, 2012, 86, .	1.6	9
50	Lattice actions for Yang-Mills quantum mechanics with exact supersymmetry. Physical Review D, 2008, 77, .	1.6	8
51	Spontaneous supersymmetry breaking in two dimensional lattice super QCD. Journal of High Energy Physics, 2015, 2015, 1.	1.6	8
52	Testing the holographic principle using lattice simulations. EPJ Web of Conferences, 2018, 175, 08004.	0.1	8
53	Maximally supersymmetric Yang-Mills on the lattice. International Journal of Modern Physics A, 2017, 32, 1747019.	0.5	7
54	Lattice Supersymmetry via Twisting. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 751-753.	0.5	6

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55	Four fermion interactions in non-Abelian gauge theory. Physical Review D, 2013, 87, .	1.6	6
56	Dirac-Kahler fermions and exact lattice supersymmetry. , 2005, , .		6
57	Symmetric Mass Generation in Lattice Gauge Theory. Symmetry, 2021, 13, 2276.	1.1	6
58	Java simulations for physics education. , 1997, 9, 477-484.		4
59	Dynamical gauge symmetry breaking in strongly coupled lattice theories. Physical Review D, 2013, 88, .	1.6	4
60	Gauge theory duals of black hole ↔ black string transitions of gravitational theories on a circle. Journal of Physics: Conference Series, 2013, 462, 012022.	0.3	4
61	Phase diagram of three-dimensional dynamical triangulations with a boundary. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 442, 266-272.	1.5	3
62	SimScience: Interactive educational modules based on large simulations. Computer Physics Communications, 2000, 127, 1-5.	3.0	3
63	Lattice $N = 4$ super Yang-Mills at strong coupling. Journal of High Energy Physics, 2020, 2020, 1.	1.6	3
64	Maximally Supersymmetric Yang-Mills on the Lattice. , 2018, , .		3
65	Phase diagram of four-dimensional dynamical triangulations with a boundary. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 493, 389-394.	1.5	2
66	Topological gravity on the lattice. Journal of High Energy Physics, 2010, 2010, 1.	1.6	2
67	Truncation of lattice $N = 4$ super Yang-Mills. EPJ Web of Conferences, 2018, 175, 11008.	0.1	2
68	Removal of the trace mode in lattice $N=4$ super Yang-Mills theory. Physical Review D, 2018, 98, .	1.6	2
69	Glueballs Condensing at the CCNI: 4096 CPUs Weigh In. , 2008, , .		2
70	Phase structure of 3D dynamical triangulations with a boundary. , 1998, , .		1
71	Supersymmetric lattices. Journal of Physics: Conference Series, 2013, 462, 012006.	0.3	1
72	Simulations of $SU(2)$ lattice gauge theory with dynamical reduced staggered fermions. Physical Review D, 2019, 99, .	1.6	1

#	ARTICLE	IF	CITATIONS
73	A RG transformation for dynamical triangulations. Nuclear Physics, Section B, Proceedings Supplements, 1996, 47, 629-632.	0.5	0
74	Investigation by Monte Carlo renormalization of 2-D simplicial quantum gravity coupled to Gaussian matter. , 1998, , .		0
75	The Ising model on a fluctuating disk. , 1999, , .		0
76	The Ising model on a dynamically triangulated disk with a boundary magnetic field. Nuclear Physics B, 2001, 614, 467-493.	0.9	0
77	A complete lattice technicolor model. International Journal of Modern Physics A, 2014, 29, 1445002.	0.5	0
78	Supersymmetry on a Lattice. Journal of Physics: Conference Series, 2015, 640, 012050.	0.3	0
79	Two dimensional super QCD on a lattice. EPJ Web of Conferences, 2018, 175, 08005.	0.1	0
80	SUPERSYMMETRY ON THE LATTICE. , 2001, , .		0