

# Robert Shrock

## List of Publications by Year in descending order

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165  
papers

5,607  
citations

76196

40  
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91712

69  
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167  
all docs

167  
docs citations

167  
times ranked

4270  
citing authors

#	ARTICLE	IF	CITATIONS
1	Some recent results on renormalization-group properties of quantum field theories. SciPost Physics Proceedings, 2022, , .	0.2	0
2	Neutrino masses and mixing in models with large extra dimensions and localized fermions. Physical Review D, 2021, 103, .	1.6	9
3	Exponential growth constants for spanning forests on Archimedean lattices: Values and comparisons of upper bounds. International Journal of Modern Physics B, 2021, 35, 2150085.	1.0	1
4	Prospects for beyond the Standard Model physics searches at the Deep Underground Neutrino Experiment. European Physical Journal C, 2021, 81, 322.	1.4	69
5	New high-sensitivity searches for neutrons converting into antineutrons and/or sterile neutrons at the HIBEAM/NNBAR experiment at the European Spallation Source. Journal of Physics G: Nuclear and Particle Physics, 2021, 48, 070501.	1.4	33
6	Exact results for average cluster numbers in bond percolation on infinite-length lattice strips. Physical Review E, 2021, 104, 044107.	0.8	1
7	Upper limits on branching ratios of the lepton-flavor-violating decays $\tilde{l}_i \rightarrow \tilde{l}_j \gamma$ and $\tilde{l}_i \rightarrow \tilde{l}_j \gamma \gamma$ and $\tilde{l}_i \rightarrow \tilde{l}_j \gamma \tilde{l}_k \tilde{l}_l$ in the $\tilde{l}_i \rightarrow \tilde{l}_j \gamma$ decays. Physical Review D, 2021, 104, .	1.6	6
8	Extra-dimensional model of dark matter. Physical Review D, 2021, 104, .	1.6	6
9	Asymptotic behavior of acyclic and cyclic orientations of directed lattice graphs. Physica A: Statistical Mechanics and Its Applications, 2020, 540, 123059.	1.2	3
10	Baryon-number-violating nucleon and dinucleon decays in a model with large extra dimensions. Physical Review D, 2020, 101, .	1.6	15
11	Nucleon decay and $n \rightarrow \tilde{p} \tilde{e} \tilde{e}$ oscillations in a left-right symmetric model with large extra dimensions. Physical Review D, 2020, 101, .	1.6	14
12	Scheme-independent series for anomalous dimensions of higher-spin operators at an infrared fixed point in a gauge theory. Physical Review D, 2020, 101, .	1.6	7
13	Renormalization-group behavior of $\tilde{l}_i \rightarrow \tilde{l}_j \gamma$ decays in $\tilde{l}_i \rightarrow \tilde{l}_j \gamma$ theories in $d=6$ dimensions. Physical Review D, 2020, 102, .	1.6	6
14	Renormalization-group behavior of $\tilde{l}_i \rightarrow \tilde{l}_j \gamma$ theories in $d=6$ dimensions. Physical Review D, 2020, 102, .	1.6	7
15	Effect of scheme transformations on a beta function with vanishing one-loop term. Physical Review D, 2020, 102, .	1.6	4
16	$q$ -plane zeros of the Potts partition function on diamond hierarchical graphs. Journal of Mathematical Physics, 2020, 61, .	0.5	13
17	Improved upper limits on baryon-number violating dinucleon decays to dileptons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 803, 135296.	1.5	12
18	Asymptotic behavior of spanning forests and connected spanning subgraphs on two-dimensional lattices. International Journal of Modern Physics B, 2020, 34, 2050249.	1.0	2



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37	the question of an ultraviolet zero in the six-loop beta function of the $O(N)$ model. <i>Physical Review D</i> , 2016, 94, .	1.6	33
38	Recent results on renormalization-group evolution of theories with gauge, fermion, and scalar fields. <i>International Journal of Modern Physics A</i> , 2017, 32, 1747007.	0.5	1
39	Scheme-independent calculation of $\beta(\lambda)$ and value of $\beta(\lambda)$ for an $SU(3)$ gauge theory. <i>Physical Review D</i> , 2016, 94, .	1.6	33
40	Dynamical symmetry breaking in chiral gauge theories with direct-product gauge groups. <i>Physical Review D</i> , 2016, 94, .	1.6	4
41	Integral formalism for the construction of scheme transformations in quantum field theory. <i>Physical Review D</i> , 2016, 94, .	1.6	14
42	Infrared zero of $\beta(\lambda)$ and value of $\beta(\lambda)$ for an $SU(3)$ gauge theory at the five-loop level. <i>Physical Review D</i> , 2016, 94, .	1.6	47
43	Study of the renormalization-group evolution of $N=1$ supersymmetric gauge theories using Padé approximants. <i>Physical Review D</i> , 2016, 93, .	1.6	11
44	A facility to search for hidden particles at the CERN SPS: the SHiP physics case. <i>Reports on Progress in Physics</i> , 2016, 79, 124201.	8.1	496
45	Scheme-independent series expansions at an infrared zero of the beta function in asymptotically free gauge theories. <i>Physical Review D</i> , 2016, 94, .	1.6	37
46	Neutron-antineutron oscillations: Theoretical status and experimental prospects. <i>Physics Reports</i> , 2016, 612, 1-45.	10.3	138
47	Analysis of a zero of a beta function using all-orders summation of diagrams. <i>Physical Review D</i> , 2015, 91, .	1.6	18
48	Renormalization-group evolution and nonperturbative behavior of chiral gauge theories with fermions in higher-dimensional representations. <i>Physical Review D</i> , 2015, 92, .	1.6	18
49	Improved lower bounds on the ground-state entropy of the antiferromagnetic Potts model. <i>Physical Review E</i> , 2015, 91, 052142.	0.8	1
50	$k$ chiral gauge theories. <i>Physical Review D</i> , 2015, 92, .	1.6	18
51	Renormalization-group evolution of chiral gauge theories. <i>Physical Review D</i> , 2015, 91, .	1.6	12
52	Determination of $SU(4)$ technicolor gauge group from embedding in extended technicolor. <i>Physical Review D</i> , 2015, 91, .	1.6	10
53	Exact Partition Functions for the $q$ -State Potts Model with a Generalized Magnetic Field on Lattice Strip Graphs. <i>Journal of Statistical Physics</i> , 2015, 161, 915-932.	0.5	3
54	HIGHER-LOOP CALCULATIONS OF THE UV TO IR EVOLUTION OF GAUGE THEORIES AND REMARKS ON NEUTRINO PROPERTIES. , 2015, , .		0

#	ARTICLE	IF	CITATIONS
55	New scheme transformations and application to study scheme dependence of an infrared zero of the beta function in gauge theories. Physical Review D, 2014, 90, .	1.6	28
56	Generalized scheme transformations for the elimination of higher-loop terms in the beta function of a gauge theory. Physical Review D, 2014, 90, .	1.6	33
57	Question of an ultraviolet zero of the beta function of the $\mathcal{N}=4$ supersymmetric Yang-Mills theory. Physical Review D, 2014, 90, . $\frac{d\alpha_s}{d\ln\mu} = -\beta(\alpha_s)$		

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73	Ground state entropy of the Potts antiferromagnet on homeomorphic expansions of kagom� lattice strips. Physical Review E, 2011, 83, 041109.	0.8	1
74	Condensates in quantum chromodynamics and the cosmological constant. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 45-50.	3.3	102
75	Weighted Graph Colorings. Journal of Statistical Physics, 2010, 138, 496-542.	0.5	7
76	Exact Results on Potts Model Partition Functions in�Generalized External Field and Weighted-Set Graph Colorings. Journal of Statistical Physics, 2010, 141, 909-939.	0.5	5
77	Weighted-Set Graph Colorings. Journal of Statistical Physics, 2010, 139, 27-61.	0.5	6
78	A little statistical mechanics for the graph theorist. Discrete Mathematics, 2010, 310, 2037-2053.	0.4	30
79	New perspectives on the quark condensate. Physical Review C, 2010, 82, .	1.1	111
80	Lower bounds on the ground-state entropy of the Potts antiferromagnet on slabs of the simple cubic lattice. Physical Review E, 2010, 81, 031134.	0.8	1
81	Patterns of dynamical gauge symmetry breaking. Physical Review D, 2010, 82, .	1.6	16
82	Upper limits on a possible gluon mass. Physical Review D, 2010, 82, .	1.6	6
83	Generational structure of models with dynamical symmetry breaking. Physical Review D, 2010, 81, .	1.6	20
84	Some exact results on the Potts model partition function in a magnetic field. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 385004.	0.7	8
85	Structure of the Partition Function and Transfer Matrices for the Potts Model in a Magnetic Field on�Lattice Strips. Journal of Statistical Physics, 2009, 137, 667-699.	0.5	7
86	On the�and�bound states and approximate Nambu-Goldstone bosons. Physical Review D, 2009, 79, .	1.6	17
87	Gluon-gluon duality and gluon searches. Physical Review D, 2009, 80, .	1.6	6
88	Gedanken worlds without Higgs fields: QCD-induced electroweak symmetry breaking. Physical Review D, 2009, 79, .	1.6	28
89	Exact Potts Model Partition Functions for Strips of the Honeycomb Lattice. Journal of Statistical Physics, 2008, 130, 1011-1024.	0.5	3
90	Gauge-invariant quantities characterizing gauge fields in chromodynamics. Physical Review D, 2008, 77, .	1.6	6

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91	Further study of an approach to the unification of gauge symmetries in theories with dynamical symmetry breaking. Physical Review D, 2008, 78, .	1.6	8
92	Variants of the standard model with electroweak-singlet quarks. Physical Review D, 2008, 78, .	1.6	7
93	Light-Front Holography and Hadronization at the Amplitude Level. AIP Conference Proceedings, 2008, , .	0.3	17
94	Study of the Change from Walking to Non-Walking Behavior in a Vectorial Gauge Theory as a Function of $N_f$ . , 2008, , .		1
95	SOME RECENT RESULTS ON MODELS OF DYNAMICAL ELECTROWEAK SYMMETRY BREAKING. , 2008, , .		2
96	ZEROS OF THE POTTS MODEL PARTITION FUNCTION IN THE LARGE- $q$ LIMIT. International Journal of Modern Physics B, 2007, 21, 979-994.	1.0	5
97	Constraints on $N_c$ extensions of the standard model. Physical Review D, 2007, 76, .	1.6	6
98	Theory of neutrinos: a white paper. Reports on Progress in Physics, 2007, 70, 1757-1867.	8.1	372
99	Extended technicolor models with two extended technicolor groups. Physical Review D, 2006, 74, .	1.6	10
100	Technifermion representations and precision electroweak constraints. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2006, 632, 92-98.	1.5	47
101	Some exact results for spanning trees on lattices. Journal of Physics A, 2006, 39, 5653-5658.	1.6	27
102	Transfer matrices for the zero-temperature Potts antiferromagnet on cyclic and Möbius lattice strips. Physica A: Statistical Mechanics and Its Applications, 2005, 346, 400-450.	1.2	5
103	Transfer matrices for the partition function of the Potts model on cyclic and Möbius lattice strips. Physica A: Statistical Mechanics and Its Applications, 2005, 347, 314-352.	1.2	11
104	Implications of Dynamical Generation of Standard-Model Fermion Masses. Physical Review Letters, 2005, 94, .	2.9	35
105	Unification of gauge symmetries in theories with dynamical symmetry breaking. Physical Review D, 2005, 72, .	1.6	24
106	Fermion masses and mixing in extended technicolor models. Physical Review D, 2004, 69, .	1.6	113
107	Exact results for average cluster numbers in bond percolation on lattice strips. Physical Review E, 2004, 70, 056130.	0.8	5
108	Flavor-changing processes in extended technicolor. Physical Review D, 2004, 70, .	1.6	55

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109	Neutrino Masses in Theories with Dynamical Symmetry Breaking. AIP Conference Proceedings, 2004, , .	0.3	3
110	Exact Potts Model Partition Functions for Strips of the Triangular Lattice. Journal of Statistical Physics, 2004, 114, 763-823.	0.5	30
111	Tutte polynomials and related asymptotic limiting functions for recursive families of graphs. Advances in Applied Mathematics, 2004, 32, 44-87.	0.4	24
112	Lepton dipole moments in extended technicolor models. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 593, 175-180.	1.5	54
113	Quark dipole operators in extended technicolor models. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 595, 442-452.	1.5	31
114	Flow Polynomials and Their Asymptotic Limits for Lattice Strip Graphs. Journal of Statistical Physics, 2003, 112, 815-879.	0.5	7
115	Reliability Polynomials and Their Asymptotic Limits for Families of Graphs. Journal of Statistical Physics, 2003, 112, 1019-1077.	0.5	16
116	Dynamical Symmetry Breaking of Extended Gauge Symmetries. Physical Review Letters, 2003, 90, 201801.	2.9	102
117	INTRODUCTION TO THE CONFERENCE. , 2003, , .		1
118	NEUTRINO MASSES IN THEORIES WITH DYNAMICAL BREAKING OF ELECTROWEAK AND EXTENDED GAUGE SYMMETRIES. , 2003, , .		1
119	$n\hat{A}$ Oscillations in Models with Large Extra Dimensions. Physical Review Letters, 2002, 88, 171601.	2.9	49
120	Coulombic effects on fermion masses in models with standard model fields in large extra dimensions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 526, 137-143.	1.5	25
121	Neutrino masses in theories with dynamical electroweak symmetry breaking. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 548, 204-214.	1.5	115
122	Exact Potts Model Partition Functions for Strips of the Square Lattice. Journal of Statistical Physics, 2002, 107, 1207-1253.	0.5	36
123	ON THE LARGE- $N_{C}$ LIMIT AND ELECTROWEAK INTERACTIONS: SOME PROPERTIES OF THE $N_{C}$ -EXTENDED STANDARD MODEL. , 2002, , .		0
124	EXACT PARTITION FUNCTION FOR THE POTTS MODEL WITH NEXT-NEAREST NEIGHBOR COUPLINGS ON ARBITRARY-LENGTH LADDERS. International Journal of Modern Physics B, 2001, 15, 443-478.	1.0	24
125	Ground state entropy of the Potts antiferromagnet on strips of the square lattice. Physica A: Statistical Mechanics and Its Applications, 2001, 290, 402-430.	1.2	29
126	$T=0$ partition functions for Potts antiferromagnets on lattice strips with fully periodic boundary conditions. Physica A: Statistical Mechanics and Its Applications, 2001, 292, 307-345.	1.2	22



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127	Exact Potts model partition functions on wider arbitrary-length strips of the square lattice. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 296, 234-288.	1.2	47
128	Exact Potts model partition functions on strips of the honeycomb lattice. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 296, 183-233.	1.2	32
129	Structural properties of Potts model partition functions and chromatic polynomials for lattice strips. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 296, 131-182.	1.2	38
130	Potts model partition functions for self-dual families of strip graphs. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 301, 301-329.	1.2	22
131	Ground State Entropy of the Potts Antiferromagnet on Triangular Lattice Strips. <i>Annals of Physics</i> , 2001, 290, 124-155.	1.0	22
132	Chromatic polynomials and their zeros and asymptotic limits for families of graphs. <i>Discrete Mathematics</i> , 2001, 231, 421-446.	0.4	32
133	Weak and Electromagnetic Nuclear Decay Signatures for Neutrino Reactions in Super-Kamiokande. <i>Physical Review Letters</i> , 2001, 86, 2223-2226.	2.9	13
134	Exact $T=0$ partition functions for Potts antiferromagnets on sections of the simple cubic lattice. <i>Physical Review E</i> , 2001, 64, 011111.	0.8	9
135	Complex-temperature phase diagrams for the $q$ -state Potts model on self-dual families of graphs and the nature of the $q \rightarrow 1$ limit. <i>Physical Review E</i> , 2001, 64, 066116.	0.8	22
136	Implication of improved upper bounds on $ \hat{\Gamma}^L _{=2}$ processes. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2000, 491, 285-290.	1.5	76
137	Exact Potts model partition functions on ladder graphs. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000, 283, 388-446.	1.2	68
138	Exact Potts model partition function on strips of the triangular lattice. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000, 286, 189-238.	1.2	52
139	Exact partition functions for Potts antiferromagnets on cyclic lattice strips. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000, 275, 429-449.	1.2	42
140	Matter effects on long baseline neutrino oscillation experiments. <i>AIP Conference Proceedings</i> , 2000, , .	0.3	0
141	Spanning trees on graphs and lattices in dimensions. <i>Journal of Physics A</i> , 2000, 33, 3881-3902.	1.6	117
142	Ground-state entropy of the Potts antiferromagnet with next-nearest-neighbor spin-spin couplings on strips of the square lattice. <i>Physical Review E</i> , 2000, 62, 4650-4664.	0.8	18
143	Ground-state entropy of the Potts antiferromagnet on cyclic strip graphs. <i>Journal of Physics A</i> , 1999, 32, L195-L200.	1.6	26
144	$T=0$ partition functions for Potts antiferromagnets on square lattice strips with (twisted) periodic boundary conditions. <i>Journal of Physics A</i> , 1999, 32, L489-L493.	1.6	36

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145	Ground-state degeneracy of Potts antiferromagnets on two-dimensional lattices: Approach using infinite cyclic strip graphs. <i>Physical Review E</i> , 1999, 60, 3512-3515.	0.8	31
146	Some remarks on theories with large compact dimensions and TeV-scale quantum gravity. <i>Physical Review D</i> , 1999, 59, .	1.6	137
147	New constraints on chiral gauge theories. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1999, 459, 235-241.	1.5	44
148	T=0 partition functions for Potts antiferromagnets on Möbius strips and effects of graph topology. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1999, 261, 57-62.	0.9	35
149	Chromatic polynomials for $J(\hat{H})$ strip graphs and their asymptotic limits. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1998, 259, 367-387.	1.2	42
150	Chromatic polynomials for families of strip graphs and their asymptotic limits. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1998, 252, 505-546.	1.2	56
151	Ground state entropy of Potts antiferromagnets on homeomorphic families of strip graphs. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1998, 259, 315-348.	1.2	45
152	A mapping relating complex and physical temperatures in the 2D $q$ -state Potts model and some applications. <i>Journal of Physics A</i> , 1997, 30, L663-L668.	1.6	17
153	Families of graphs with chromatic zeros lying on circles. <i>Physical Review E</i> , 1997, 56, 1342-1345.	0.8	32
154	Ground-state entropy of Potts antiferromagnets: $\epsilon$ -Bounds, series, and Monte Carlo measurements. <i>Physical Review E</i> , 1997, 56, 2733-2737.	0.8	31
155	Lower bounds and series for the ground-state entropy of the Potts antiferromagnet on Archimedean lattices and their duals. <i>Physical Review E</i> , 1997, 56, 4111-4124.	0.8	47
156	Asymptotic limits and zeros of chromatic polynomials and ground-state entropy of Potts antiferromagnets. <i>Physical Review E</i> , 1997, 55, 5165-5178.	0.8	78
157	Upper and lower bounds for the ground state entropy of antiferromagnetic Potts models. <i>Physical Review E</i> , 1997, 55, 6791-6794.	0.8	33
158	Complex-temperature singularities in Potts models on the square lattice. <i>Physical Review E</i> , 1996, 54, 6174-6185.	0.8	38
159	Models of fermion mass matrices based on a flavor- and generation-dependent $U(1)$ gauge symmetry. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1995, 352, 83-91.	1.5	104
160	Complex-temperature properties of the Ising model on 2D heteropolygonal lattices. <i>Journal of Physics A</i> , 1995, 28, 5235-5256.	1.6	42
161	New model for fermion masses in supersymmetric grand unified theories. <i>Physical Review D</i> , 1994, 49, 4962-4965.	1.6	12
162	An experiment to search for a 17 KeV neutrino. <i>AIP Conference Proceedings</i> , 1992, , .	0.3	0

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163	PHYSICS GOALS OF THE QCD TERAFLOP PROJECT. International Journal of Modern Physics C, 1991, 02, 829-947.	0.8	18
164	$n \rightarrow \pi^0$ transition operators and their matrix elements in the MIT bag model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1982, 116, 238-242.	1.5	92
165	Decay of $\pi^0$ into two photons in gauge theories of weak and electromagnetic interactions. Physical Review D, 1974, 9, 743-748.	1.6	49