

Youjin Deng

List of Publications by Year in descending order

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151
papers

4,850
citations

136740

32
h-index

106150

65
g-index

154
all docs

154
docs citations

154
times ranked

3379
citing authors

#	ARTICLE	IF	CITATIONS
1	Realization of two-dimensional spin-orbit coupling for Bose-Einstein condensates. <i>Science</i> , 2016, 354, 83-88.	6.0	570
2	Collective Dipole Oscillations of a Spin-Orbit Coupled Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2012, 109, 115301.	2.9	471
3	Solutions of the Two-Dimensional Hubbard Model: Benchmarks and Results from a Wide Range of Numerical Algorithms. <i>Physical Review X</i> , 2015, 5, .	2.8	398
4	Cluster Monte Carlo simulation of the transverse Ising model. <i>Physical Review E</i> , 2002, 66, 066110.	0.8	164
5	Preparation and storage of frequency-uncorrelated entangled photons from cavity-enhanced spontaneous parametric downconversion. <i>Nature Photonics</i> , 2011, 5, 628-632.	15.6	159
6	Simultaneous analysis of several models in the three-dimensional Ising universality class. <i>Physical Review E</i> , 2003, 68, 036125.	0.8	129
7	Bond and site percolation in three dimensions. <i>Physical Review E</i> , 2013, 87, 052107.	0.8	117
8	Percolation transitions in two dimensions. <i>Physical Review E</i> , 2008, 78, 031136.	0.8	116
9	Uncover Topology by Quantum Quench Dynamics. <i>Physical Review Letters</i> , 2018, 121, 250403.	2.9	114
10	Softening of Roton and Phonon Modes in a Bose-Einstein Condensate with Spin-Orbit Coupling. <i>Physical Review Letters</i> , 2015, 114, 105301.	2.9	106
11	Realization of an ideal Weyl semimetal band in a quantum gas with 3D spin-orbit coupling. <i>Science</i> , 2021, 372, 271-276.	6.0	104
12	Monte Carlo study of the site-percolation model in two and three dimensions. <i>Physical Review E</i> , 2005, 72, 016126.	0.8	89
13	Simultaneous analysis of three-dimensional percolation models. <i>Frontiers of Physics</i> , 2014, 9, 113-119.	2.4	89
14	Observation of Coupled Vortex Lattices in a Mass-Imbalance Bose and Fermi Superfluid Mixture. <i>Physical Review Letters</i> , 2016, 117, 145301.	2.9	88
15	Deconfined Criticality Flow in the Heisenberg Model with Ring-Exchange Interactions. <i>Physical Review Letters</i> , 2013, 110, 185701.	2.9	82
16	Cooling and entangling ultracold atoms in optical lattices. <i>Science</i> , 2020, 369, 550-553.	6.0	78
17	Highly Controllable and Robust 2D Spin-Orbit Coupling for Quantum Gases. <i>Physical Review Letters</i> , 2018, 121, 150401.	2.9	72
18	Emergent BCS regime of the two-dimensional fermionic Hubbard model: Ground-state phase diagram. <i>Europhysics Letters</i> , 2015, 110, 57001.	0.7	64

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19	Extended Crossover from a Fermi Liquid to a Quasiantiferromagnet in the Half-Filled 2D Hubbard Model. <i>Physical Review Letters</i> , 2020, 124, 017003.	2.9	54
20	Surface and bulk transitions in three-dimensional $O(n)$ models. <i>Physical Review E</i> , 2005, 72, 016128.	0.8	52
21	Dirac-, Rashba-, and Weyl-type spin-orbit couplings: Toward experimental realization in ultracold atoms. <i>Physical Review A</i> , 2018, 97, .	1.0	51
22	Phase diagram of the toric code model in a parallel magnetic field. <i>Physical Review B</i> , 2012, 85, .	1.1	49
23	Universal Conductivity in a Two-Dimensional Superfluid-to-Insulator Quantum Critical System. <i>Physical Review Letters</i> , 2014, 112, 030402.	2.9	49
24	Backbone exponents of the two-dimensional q -state Potts model: A Monte Carlo investigation. <i>Physical Review E</i> , 2004, 69, 026114.	0.8	46
25	Dynamics of Topological Excitations in a Model Quantum Spin Ice. <i>Physical Review Letters</i> , 2018, 120, 167202.	2.9	45
26	Spin-Ice State of the Quantum Heisenberg Antiferromagnet on the Pyrochlore Lattice. <i>Physical Review Letters</i> , 2016, 116, 177203.	2.9	39
27	Universal Properties of the Higgs Resonance in $U(1)$ Critical Systems. <i>Physical Review Letters</i> , 2013, 110, 170403.	2.9	37
28	Dilute Potts model in two dimensions. <i>Physical Review E</i> , 2005, 72, 056132.	0.8	36
29	Modified Bethe-Peierls boundary condition for ultracold atoms with spin-orbit coupling. <i>Physical Review A</i> , 2012, 86, .	1.0	36
30	Constrained tricritical Blume-Capel model in three dimensions. <i>Physical Review E</i> , 2004, 70, 046111.	0.8	34
31	Dynamic Critical Behavior of the Worm Algorithm for the Ising Model. <i>Physical Review Letters</i> , 2007, 99, 110601.	2.9	34
32	Monte Carlo study of the triangular lattice gas with first- and second-neighbor exclusions. <i>Physical Review E</i> , 2008, 78, 031103.	0.8	32
33	Geometric properties of two-dimensional critical and tricritical Potts models. <i>Physical Review E</i> , 2004, 69, 026123.	0.8	31
34	Bulk and surface phase transitions in the three-dimensional $O(4)$ spin model. <i>Physical Review E</i> , 2006, 73, 056116.	0.8	30
35	Shortest-path fractal dimension for percolation in two and three dimensions. <i>Physical Review E</i> , 2012, 86, 061101.	0.8	30
36	Scattering and effective interactions of ultracold atoms with spin-orbit coupling. <i>Physical Review A</i> , 2013, 87, .	1.0	29

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37	Ferromagnetic Phase Transition for the Spanning-Forest Model ($q \uparrow$ -Limit of the Potts Model) in Three or More Dimensions. <i>Physical Review Letters</i> , 2007, 98, 030602.	2.9	28
38	Cluster Simulations of Loop Models on Two-Dimensional Lattices. <i>Physical Review Letters</i> , 2007, 98, 120601.	2.9	27
39	Stability of excited dressed states with spin-orbit coupling. <i>Physical Review A</i> , 2013, 87, .	1.0	27
40	Finite-Temperature Phase Transition in a Class of Four-State Potts Antiferromagnets. <i>Physical Review Letters</i> , 2011, 107, 150601.	2.9	24
41	The $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"} \rangle \langle \text{mml:mi mathvariant="normal"} \rangle \text{O} \langle \text{mml:mi} \rangle \langle \text{mml:mo stretchy="false"} \rangle \langle \text{mml:mi} \rangle \text{n} \langle \text{mml:mi} \rangle \langle \text{mml:mo stretchy="false"} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:math} \rangle$ loop model on a three-dimensional lattice. <i>Nuclear Physics B</i> . 2012, 859, 107-128.	0.9	24
42	High-precision Monte Carlo study of several models in the three-dimensional U(1) universality class. <i>Physical Review B</i> , 2019, 100, .	1.1	24
43	High-precision Monte Carlo study of directed percolation in $(\langle \text{mml:math} \rangle \text{Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 512 Td} \langle \text{xmlns} \rangle$ dimensions. <i>Physical Review E</i> . 2013, 88, 042102.	0.8	23
44	Random-Length Random Walks and Finite-Size Scaling in High Dimensions. <i>Physical Review Letters</i> , 2018, 121, 185701.	2.9	23
45	Some geometric critical exponents for percolation and the random-cluster model. <i>Physical Review E</i> , 2010, 81, 020102.	0.8	22
46	Coulomb Liquid Phases of Bosonic Cluster Mott Insulators on a Pyrochlore Lattice. <i>Physical Review Letters</i> , 2015, 115, 037202.	2.9	22
47	Coupled dipole oscillations of a mass-imbalanced Bose-Fermi superfluid mixture. <i>Physical Review B</i> , 2018, 97, .	1.1	22
48	Geometric structure of percolation clusters. <i>Physical Review E</i> , 2014, 89, 012120.	0.8	21
49	Conformal Invariance of the Ising Model in Three Dimensions. <i>Physical Review Letters</i> , 2002, 88, 190602.	2.9	20
50	Critical Behavior of the Chayes-Machta-Swendsen-Wang Dynamics. <i>Physical Review Letters</i> , 2007, 99, 055701.	2.9	20
51	Short-range correlations in percolation at criticality. <i>Physical Review E</i> , 2014, 90, 042106.	0.8	20
52	Geometric Explanation of Anomalous Finite-Size Scaling in High Dimensions. <i>Physical Review Letters</i> , 2017, 118, 115701.	2.9	20
53	Ground-state phase diagram of the repulsive fermionic $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{t} \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \hat{\text{a}} \langle \text{mml:mo} \rangle \times \langle \text{mml:msup} \rangle \langle \text{mml:mi} \rangle$ model on the square lattice from weak coupling. <i>Physical Review B</i> , 2016, 94, .		
54	Extraordinary-Log Surface Phase Transition in the Three-Dimensional $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mi} \rangle \text{X} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \text{Y} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ Model. <i>Physical Review Letters</i> , 2021, 127, 120603.	2.9	19

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55	Phase transitions in self-dual generalizations of the Baxter-Wu model. Nuclear Physics B, 2010, 827, 406-425.	0.9	18
56	Percolation in the canonical ensemble. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 494006.	0.7	18
57	Critical Speeding-Up in the Local Dynamics of the Random-Cluster Model. Physical Review Letters, 2007, 98, 230602.	2.9	17
58	Worm Monte Carlo study of the honeycomb-lattice loop model. Nuclear Physics B, 2011, 846, 283-315.	0.9	17
59	Critical percolation clusters in seven dimensions and on a complete graph. Physical Review E, 2018, 97, 022107.	0.8	17
60	Geometric properties of the Fortuin-Kasteleyn representation of the Ising model. Physical Review E, 2019, 99, 042150.	0.8	16
61	Crossover from isotropic to directed percolation. Physical Review E, 2012, 86, 021102.	0.8	15
62	Critical polynomials in the nonplanar and continuum percolation models. Physical Review E, 2021, 103, 022127.	0.8	15
63	Unified approach for cluster variation method calculations of phase diagrams in fcc substitutional alloys with interstitial species. Physical Review B, 2006, 74, .	1.1	14
64	Sequential Path Entanglement for Quantum Metrology. Scientific Reports, 2013, 3, .	1.6	14
65	Two-dimensional Potts antiferromagnets with a phase transition at arbitrarily large q . Physical Review E, 2013, 87, 012136.	0.8	14
66	Two-species hard-core bosons on the triangular lattice: A quantum Monte Carlo study. Physical Review A, 2014, 89, .	1.0	14
67	Adaptive multi-GPU Exchange Monte Carlo for the 3D Random Field Ising Model. Computer Physics Communications, 2016, 205, 48-60.	3.0	14
68	Magnetic correlations in the two-dimensional repulsive Fermi-Hubbard model. Physical Review B, 2017, 96, .	1.1	13
69	History-dependent percolation on multiplex networks. National Science Review, 2020, 7, 1296-1305.	4.6	13
70	Massive Goldstone (Higgs) mode in two-dimensional ultracold atomic lattice systems. Physical Review B, 2015, 92, .	1.1	12
71	Irreversible Markov chain Monte Carlo algorithm for self-avoiding walk. Frontiers of Physics, 2017, 12, 1.	2.4	12
72	Percolation between vacancies in the two-dimensional Blume-Capel model. Physical Review E, 2005, 72, 016101.	0.8	11

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73	Geometric properties of two-dimensional $O(n)$ loop configurations. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 3305-3317.	0.7	11
74	Equivalent-neighbor percolation models in two dimensions: Crossover between mean-field and short-range behavior. Physical Review E, 2018, 98, .	0.8	11
75	Finite-size scaling of $O(n)$ systems at the upper critical dimensionality. National Science Review, 2021, 8, nwaa212.	4.6	11
76	Bulk and surface critical behavior of the three-dimensional Ising model and conformal invariance. Physical Review E, 2003, 67, 066116.	0.8	10
77	Percolation in one of q colors near criticality. Physical Review B, 2005, 71, .	1.1	10
78	Simulation algorithms for the random-cluster model. Physical Review E, 2005, 71, 016709.	0.8	10
79	Surface critical phenomena in three-dimensional percolation. Physical Review E, 2005, 71, 016117.	0.8	10
80	Clique percolation in random graphs. Physical Review E, 2015, 92, 042116.	0.8	10
81	Recursive percolation. Physical Review E, 2015, 92, 010103.	0.8	10
82	Emergent $O(1)$ Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 Td (xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi series of three-dimensional Potts models. Physical Review B, 2016, 94, .	1.1	10
83	No-Enclave Percolation Corresponds to Holes in the Cluster Backbone. Physical Review Letters, 2016, 117, 185701.	2.9	10
84	Equivalent-neighbor Potts models in two dimensions. Physical Review E, 2016, 94, 052103.	0.8	10
85	The length of self-avoiding walks on the complete graph. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 103206.	0.9	10
86	Complete graph and Gaussian fixed-point asymptotics in the five-dimensional Fortuin-Kasteleyn Ising model with periodic boundaries. Physical Review E, 2020, 102, 022125.	0.8	10
87	Scaling of cluster heterogeneity in the two-dimensional Potts model. Physical Review E, 2012, 86, 022105.	0.8	9
88	The Hintermannâ€“Merliniâ€“Baxterâ€“Wu and the infinite-coupling-limit Ashkinâ€“Teller models. Nuclear Physics B, 2013, 868, 492-538.	0.9	9
89	Lifted worm algorithm for the Ising model. Physical Review E, 2018, 97, 042126.	0.8	9
90	Worm-algorithm-type simulation of the quantum transverse-field Ising model. Physical Review B, 2020, 102, .	1.1	9

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91	Surface criticality of the antiferromagnetic Potts model. <i>Physical Review B</i> , 2022, 105, .	1.1	9
92	Conformal invariance and the Ising model on a spheroid. <i>Physical Review E</i> , 2003, 67, 036107.	0.8	8
93	Spontaneous edge order and geometric aspects of two-dimensional Potts models. <i>Physical Review E</i> , 2004, 70, 035107.	0.8	8
94	Anisotropic limit of the bond-percolation model and conformal invariance in curved geometries. <i>Physical Review E</i> , 2004, 69, 066129.	0.8	8
95	Percolation and critical configurations. <i>Physical Review E</i> , 2009, 79, 061118.		
96	A worm algorithm for the fully-packed loop model. <i>Nuclear Physics B</i> , 2009, 814, 461-484.	0.9	8
97	Universal critical wrapping probabilities in the canonical ensemble. <i>Nuclear Physics B</i> , 2015, 898, 157-172.	0.9	8
98	Trapping centers at the superfluid-Mott-insulator criticality: Transition between charge-quantized states. <i>Physical Review B</i> , 2016, 94, .	1.1	8
99	The three-state Potts antiferromagnet on plane quadrangulations. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2018, 51, 365001.	0.7	8
100	Clock Monte Carlo methods. <i>Physical Review E</i> , 2019, 99, 010105.	0.8	8
101	Extended Coulomb liquid of paired hardcore boson model on a pyrochlore lattice. <i>Physical Review Research</i> , 2020, 2, .	1.3	8
102	Constrained tricritical phenomena in two dimensions. <i>Physical Review E</i> , 2005, 71, 036115.	0.8	7
103	Quench dynamics of the topological quantum phase transition in the Wen-plaquette model. <i>Physical Review A</i> , 2011, 83, .	1.0	7
104	Phase transitions in XY antiferromagnets on plane triangulations. <i>Physical Review B</i> , 2013, 87, .	1.1	7
105	Red-bond exponents of the critical and the tricritical Ising model in three dimensions. <i>Physical Review E</i> , 2004, 70, 056132.	0.8	6
106	Deterministic spin-wave interferometer based on the Rydberg blockade. <i>Physical Review A</i> , 2011, 83, .	1.0	6
107	Worm-type Monte Carlo simulation of the Ashkin-Teller model on the triangular lattice. <i>Physical Review E</i> , 2011, 84, 021125.	0.8	6
108	Duality and the universality class of the three-state Potts antiferromagnet on plane quadrangulations. <i>Physical Review E</i> , 2018, 97, 040104.	0.8	6

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109	Medium-range percolation in two dimensions. <i>Journal of Physics: Conference Series</i> , 2019, 1163, 012001.	0.3	6
110	Observation of nonscalar and logarithmic correlations in two- and three-dimensional percolation. <i>Physical Review E</i> , 2019, 99, 050103.	0.8	6
111	N-cluster correlations in four- and five-dimensional percolation. <i>Frontiers of Physics</i> , 2020, 15, 1.	2.4	6
112	Pseudo-time-reversal-symmetry-protected topological Bogoliubov excitations of Bose-Einstein condensates in optical lattices. <i>Physical Review A</i> , 2020, 102, .	1.0	6
113	Dynamic formation of quasicondensate and spontaneous vortices in a strongly interacting Fermi gas. <i>Physical Review Research</i> , 2021, 3, .	1.3	6
114	Single-cluster dynamics for the random-cluster model. <i>Physical Review E</i> , 2009, 80, 036707.	0.8	5
115	Berezinskii-Kosterlitz-Thouless-like percolation transitions in the two-dimensional XY model. <i>Physical Review E</i> , 2011, 83, 011124.	0.8	5
116	Oscillatory-like expansion of a Fermionic superfluid. <i>Science Bulletin</i> , 2020, 65, 7-11.	4.3	5
117	Loop-Cluster Coupling and Algorithm for Classical Statistical Models. <i>Physical Review Letters</i> , 2020, 125, 200603.	2.9	5
118	Universal Dynamical Scaling of Quasi-Two-Dimensional Vortices in a Strongly Interacting Fermionic Superfluid. <i>Physical Review Letters</i> , 2021, 126, 185302.	2.9	5
119	Critical exponents and universal excess cluster number of percolation in four and five dimensions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2021, 580, 126124.	1.2	5
120	Machine learning for percolation utilizing auxiliary Ising variables. <i>Physical Review E</i> , 2022, 105, 024144.	0.8	5
121	Magnetic and backbone exponents of the percolation and Ising models in three dimensions. <i>Physical Review E</i> , 2004, 70, 046106.	0.8	4
122	Edge phase transitions of the tricritical Potts model in two dimensions. <i>Physical Review E</i> , 2005, 71, 026109.	0.8	4
123	Light pulse in $\hat{\rho}$ -type cold-atom gases. <i>Physical Review A</i> , 2010, 81, .	1.0	4
124	Reentrance of Berezinskii-Kosterlitz-Thouless-like transitions in a three-state Potts antiferromagnetic thin film. <i>Physical Review B</i> , 2014, 90, .	1.1	4
125	Halon: A quasiparticle featuring critical charge fractionalization. <i>Physical Review B</i> , 2018, 98, .	1.1	4
126	Revisiting the field-driven edge transition of the tricritical two-dimensional Blume-Capel model. <i>Physical Review E</i> , 2019, 99, 062133.	0.8	4

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127	History-dependent percolation in two dimensions. <i>Physical Review E</i> , 2020, 102, 052121.	0.8	4
128	Percolation effects in the Fortuin-Kasteleyn Ising model on the complete graph. <i>Physical Review E</i> , 2021, 103, 012102.	0.8	4
129	Superfluid ground state phase diagram of the two-dimensional Hubbard model in the emergent Bardeen-Cooper-Schrieffer regime. <i>Physical Review B</i> , 2021, 104, .	1.1	4
130	Logarithmic finite-size scaling of the self-avoiding walk at four dimensions. <i>Physical Review E</i> , 2021, 104, 064108.	0.8	4
131	Finite-size scaling of energylike quantities in percolation. <i>Physical Review E</i> , 2006, 73, 066116.	0.8	3
132	Precision mapping the topological bands of 2D spin-orbit coupling with microwave spin-injection spectroscopy. <i>Science Bulletin</i> , 2018, 63, 1464-1469.	4.3	3
133	Percolation of the two-dimensional XY model in the flow representation. <i>Physical Review E</i> , 2021, 103, 062131.	0.8	3
134	Interaction-induced particle-hole symmetry breaking and fractional exclusion statistics. <i>National Science Review</i> , 2022, 9, .	4.6	3
135	Unwrapped two-point functions on high-dimensional tori. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2022, 2022, 053208.	0.9	3
136	Geometric Upper Critical Dimensions of the Ising Model. <i>Chinese Physics Letters</i> , 2022, 39, 080502.	1.3	3
137	Crossing bonds in the random-cluster model. <i>Physical Review E</i> , 2009, 79, 061112.	0.8	2
138	Leaf-excluded percolation in two and three dimensions. <i>Physical Review E</i> , 2015, 91, 022140.	0.8	2
139	Overlap of two topological phases in the antiferromagnetic Potts model. <i>Physical Review E</i> , 2018, 97, 052131.	0.8	2
140	Two-Scale Scenario of Rigidity Percolation of Sticky Particles. <i>Physical Review Letters</i> , 2020, 124, 255501.	2.9	2
141	Conformal invariance and simulations in curved geometries. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 321, 59-70.	1.2	1
142	Phase transition of a two-dimensional, multiplicatively coupled XY Potts model. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 225001.	0.7	1
143	Computational study of a multistep height model. <i>Physical Review E</i> , 2012, 85, 061104.	0.8	1
144	Ising-like phase transition of an n -component Eulerian face-cubic model. <i>Physical Review E</i> , 2013, 88, 052125.	0.8	1

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145	Fermionic sign structure of high-order Feynman diagrams in a many-fermion system. Physical Review B, 2021, 103, .	1.1	1
146	Topological Higgs amplitude modes in strongly interacting superfluids. Physical Review A, 2021, 104, .	1.0	1
147	The elastic and directed percolation backbone. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 244002.	0.7	1
148	Self-similarity in the classification of finite-size scaling functions for toroidal boundary conditions. Physical Review E, 2008, 77, 010101.	0.8	0
149	A multi-GPU approach for the exchange Monte Carlo method. , 2015, , .		0
150	Nested closed paths in two-dimensional percolation. Journal of Physics A: Mathematical and Theoretical, 0, , .	0.7	0
151	Backbone and shortest-path exponents of the two-dimensional Q -state Potts model. Physical Review E, 2022, 105, 044122.	0.8	0