

R K P Zia

List of Publications by Year in descending order

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95
papers

3,532
citations

136885

32
h-index

143943

57
g-index

96
all docs

96
docs citations

96
times ranked

1411
citing authors

#	ARTICLE	IF	CITATIONS
1	Non-equilibrium statistical mechanics: from a paradigmatic model to biological transport. Reports on Progress in Physics, 2011, 74, 116601.	8.1	398
2	Totally asymmetric exclusion process with extended objects: A model for protein synthesis. Physical Review E, 2003, 68, 021910.	0.8	312
3	Critical behaviour of the continuous n-component Potts model. Journal of Physics A, 1975, 8, 1495-1507.	1.6	164
4	Modeling Translation in Protein Synthesis with TASEP: A Tutorial and Recent Developments. Journal of Statistical Physics, 2011, 144, 405-428.	0.5	161
5	Probability currents as principal characteristics in the statistical mechanics of non-equilibrium steady states. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P07012-P07012.	0.9	150
6	Canonical Analysis of Condensation in Factorised Steady States. Journal of Statistical Physics, 2006, 123, 357-390.	0.5	101
7	Onset of Spatial Structures in Biased Diffusion of Two Species. Europhysics Letters, 1992, 19, 19-25.	0.7	91
8	Inhomogeneous exclusion processes with extended objects: The effect of defect locations. Physical Review E, 2007, 76, 051113.	0.8	88
9	Factorized steady states in mass transport models. Journal of Physics A, 2004, 37, L275-L280.	1.6	86
10	Towards a Model for Protein Production Rates. Journal of Statistical Physics, 2007, 128, 21-34.	0.5	77
11	Singularities induced by Goldstone modes. Physical Review B, 1975, 12, 5340-5342.	1.1	74
12	Getting more from pushing less: Negative specific heat and conductivity in nonequilibrium steady states. American Journal of Physics, 2002, 70, 384-392.	0.3	74
13	NEXUS/Physics: An interdisciplinary repurposing of physics for biologists. American Journal of Physics, 2014, 82, 368-377.	0.3	71
14	A possible classification of nonequilibrium steady states. Journal of Physics A, 2006, 39, L407-L413.	1.6	69
15	Critical properties of a randomly driven diffusive system. Physical Review Letters, 1991, 66, 357-360.	2.9	68
16	Competition between multiple totally asymmetric simple exclusion processes for a finite pool of resources. Physical Review E, 2009, 80, 031142.	0.8	60
17	Far-from-equilibrium transport with constrained resources. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P06009.	0.9	59
18	Essential Singularities at First-Order Phase Transitions. Physical Review Letters, 1976, 37, 639-642.	2.9	50

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19	Phase transitions in a driven lattice gas with repulsive interactions. <i>Physical Review Letters</i> , 1989, 62, 1772-1775.	2.9	50
20	The renormalisation group approach to scaling in physics. <i>Reports on Progress in Physics</i> , 1978, 41, 1-85.	8.1	49
21	The summertop construction: Crystals in a corner. <i>Journal of Statistical Physics</i> , 1988, 50, 727-736.	0.5	49
22	Long-range order in a quasi one-dimensional non-equilibrium three-state lattice gas. <i>Europhysics Letters</i> , 1999, 45, 431-436.	0.7	47
23	Suppression of Interface Roughness in Driven Nonequilibrium Systems. <i>Physical Review Letters</i> , 1988, 61, 1744-1747.	2.9	43
24	Factorized steady states in mass transport models on an arbitrary graph. <i>Journal of Physics A</i> , 2006, 39, 4859-4873.	1.6	42
25	Feedback and fluctuations in a totally asymmetric simple exclusion process with finite resources. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009, 2009, P02012.	0.9	42
26	Classical and semiclassical diamagnetism: A critique of treatment in elementary texts. <i>American Journal of Physics</i> , 1986, 54, 32-35.	0.3	41
27	Parametric models and the Ising equation of state at order ϵ^3 . <i>Journal of Physics C: Solid State Physics</i> , 1974, 7, 3480-3490.	1.5	38
28	Universality in the percolation problem—Anomalous dimensions of ϕ^4 operators. <i>Physical Review B</i> , 1977, 15, 4657-4666.	1.1	38
29	Characterization of the nonequilibrium steady state of a heterogeneous nonlinear q-voter model with zealotry. <i>Europhysics Letters</i> , 2016, 113, 48001.	0.7	38
30	Twenty Five Years After KLS: A Celebration of Non-equilibrium Statistical Mechanics. <i>Journal of Statistical Physics</i> , 2010, 138, 20-28.	0.5	34
31	Cyclic competition of four species: Mean-field theory and stochastic evolution. <i>Europhysics Letters</i> , 2010, 92, 58003.	0.7	34
32	“Weather” records: Musings on cold days after a long hot Indian summer. <i>American Journal of Physics</i> , 1999, 67, 1269-1276.	0.3	33
33	Saddles, arrows, and spirals: Deterministic trajectories in cyclic competition of four species. <i>Physical Review E</i> , 2011, 83, 051108.	0.8	31
34	Harmonic perturbations of generalized Heisenberg spin systems. <i>Journal of Physics C: Solid State Physics</i> , 1975, 8, 839-843.	1.5	30
35	Equilibrium shapes of crystals in a gravitational field: Crystals on a table. <i>Journal of Statistical Physics</i> , 1983, 33, 493-522.	0.5	30
36	Heterogeneous out-of-equilibrium nonlinear q -voter model with zealotry. <i>Physical Review E</i> , 2017, 95, 012104.	0.8	30

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37	Two-temperature kinetic Ising model in one dimension: Steady-state correlations in terms of energy and energy flux. <i>Physical Review E</i> , 1994, 49, 139-144.	0.8	29
38	Nonequilibrium phase transitions in a simple three-state lattice gas. <i>Journal of Statistical Physics</i> , 1997, 86, 721-748.	0.5	29
39	Spontaneous Structure Formation in Driven Systems with Two Species: Exact Solutions in a Mean-Field Theory. <i>Physical Review Letters</i> , 1994, 73, 2071-2074.	2.9	28
40	Extremal-point densities of interface fluctuations. <i>Physical Review E</i> , 2000, 62, 276-294.	0.8	28
41	Driven nonequilibrium lattice systems with shifted periodic boundary conditions. <i>Journal of Statistical Physics</i> , 1989, 56, 43-58.	0.5	27
42	Monte Carlo studies of a driven lattice gas. I. Growth and asymmetry during phase segregation. <i>Journal of Statistical Physics</i> , 1996, 82, 1133-1158.	0.5	26
43	Extraordinary variability and sharp transitions in a maximally frustrated dynamic network. <i>Europhysics Letters</i> , 2012, 100, 66007.	0.7	26
44	Spatial Structures with Non-zero Winding Number in Biased Diffusion of Two Species. <i>Europhysics Letters</i> , 1993, 24, 115-120.	0.7	25
45	Roughness, spatial, and temporal correlations of an interface in a driven nonequilibrium lattice gas. <i>Physical Review B</i> , 1989, 39, 9312-9317.	1.1	21
46	Stochastic evolution of four species in cyclic competition. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2012, 2012, P06014.	0.9	21
47	On the relationship between cyclic and hierarchical three-species predator-prey systems and the two-species Lotka-Volterra model. <i>European Physical Journal B</i> , 2012, 85, 1.	0.6	21
48	Epidemic Spreading on Preferred Degree Adaptive Networks. <i>PLoS ONE</i> , 2012, 7, e48686.	1.1	21
49	Anomalous interfacial correlations in non-equilibrium anisotropic systems. <i>Journal of Physics A</i> , 1993, 26, L737-L741.	1.6	19
50	Drifting spatial structures in a system with oppositely driven species. <i>Physical Review E</i> , 1997, 56, 308-315.	0.8	18
51	On the uniqueness of \vec{r}_4 interactions in two- and three-component spin systems. <i>Journal of Physics A</i> , 1975, 8, 1089-1096.	1.6	17
52	Three-point correlation functions in uniformly and randomly driven diffusive systems. <i>Physical Review E</i> , 1993, 48, 800-809.	0.8	16
53	Finger formation in a driven diffusive system. <i>Physical Review A</i> , 1991, 43, 5214-5222.	1.0	15
54	Interfacial correlation and dispersion in a non-equilibrium steady state system. <i>Journal of Physics A</i> , 1991, 24, L1399-L1404.	1.6	15

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55	Complete solution of the kinetics in a far-from-equilibrium Ising chain. <i>Journal of Physics A</i> , 2004, 37, L407-L413.	1.6	15
56	Power Spectra of the Total Occupancy in the Totally Asymmetric Simple Exclusion Process. <i>Physical Review Letters</i> , 2007, 99, 020601.	2.9	13
57	Extreme Thouless effect in a minimal model of dynamic social networks. <i>Physical Review E</i> , 2015, 91, 042102.	0.8	13
58	Nonequilibrium Oscillations, Probability Angular Momentum, and the Climate System. <i>Journal of Statistical Physics</i> , 2020, 179, 1010-1027.	0.5	13
59	Understanding the edge effect in TASEP with mean-field theoretic approaches. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 015002.	0.7	12
60	Viability of competing field theories for the driven lattice gas. <i>Physical Review E</i> , 2000, 61, 5977-5980.	0.8	11
61	Convection cells induced by spontaneous symmetry breaking. <i>Europhysics Letters</i> , 2010, 89, 50001.	0.7	11
62	On singularities in the disordered phase of a driven diffusive system. <i>European Physical Journal B</i> , 1995, 97, 327-332.	0.6	10
63	Power spectra of a constrained totally asymmetric simple exclusion process. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2010, 2010, P07014.	0.9	10
64	Networks with preferred degree: a mini-review and some new results. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2015, 2015, P07013.	0.9	10
65	Title is missing!. <i>Journal of Statistical Physics</i> , 1998, 91, 525-539.	0.5	9
66	Exact dynamics of a reaction-diffusion model with spatially alternating rates. <i>Physical Review E</i> , 2005, 71, 056129.	0.8	9
67	Percolation of a collection of finite random walks: a model for gas permeation through thin polymeric membranes. <i>Journal of Mathematical Chemistry</i> , 2009, 45, 58-64.	0.7	9
68	Exact microcanonical statistical analysis of transition behavior in Ising chains and strips. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2020, 2020, 073204.	0.9	9
69	A lattice-gas hamiltonian for micellar binary solutions. <i>Journal of Statistical Physics</i> , 1988, 50, 839-848.	0.5	8
70	Phase transitions in a nonequilibrium Potts model: A Monte Carlo study of critical behavior. <i>Physical Review E</i> , 1994, 49, 5871-5874.	0.8	8
71	Competition for finite resources. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2012, 2012, P05008.	0.9	8
72	Modeling interacting dynamic networks: I. Preferred degree networks and their characteristics. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2013, 2013, P08001.	0.9	8

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73	Nonequilibrium statistical mechanics of a two-temperature Ising ring with conserved dynamics. <i>Physical Review E</i> , 2014, 90, 062113.	0.8	8
74	Phase Transitions in a Driven Lattice Gas with Anisotropic Interactions. <i>Journal of Statistical Physics</i> , 1999, 95, 981-996.	0.5	7
75	Energy flux near the junction of two Ising chains at different temperatures. <i>Europhysics Letters</i> , 2010, 91, 50003.	0.7	7
76	Modeling interacting dynamic networks: II. Systematic study of the statistical properties of cross-links between two networks with preferred degrees. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P05021.	0.9	7
77	Exact results for a simple epidemic model on a directed network: Explorations of a system in a nonequilibrium steady state. <i>Physical Review E</i> , 2014, 90, 032107.	0.8	7
78	Symmetric Fresnel equations: An energy conservation approach. <i>American Journal of Physics</i> , 1988, 56, 555-558.	0.3	6
79	Subtleties in data analysis related to the size of critical region. <i>Journal of Statistical Physics</i> , 1996, 83, 1219-1223.	0.5	6
80	Driven Widom-Rowlinson lattice gas. <i>Physical Review E</i> , 2018, 97, 062126.	0.8	6
81	Network evolution induced by the dynamical rules of two populations. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2010, 2010, P10018.	0.9	5
82	Manifest and Subtle Cyclic Behavior in Nonequilibrium Steady States. <i>Journal of Physics: Conference Series</i> , 2016, 750, 012003.	0.3	5
83	How does homophily shape the topology of a dynamic network?. <i>Physical Review E</i> , 2021, 104, 044311.	0.8	5
84	Classical orbits of a charged particle in a magnetic monopole field. <i>American Journal of Physics</i> , 1979, 47, 700-703.	0.3	4
85	The variety of singularities in models of first order phase transitions. <i>Zeitschrift für Physik B Condensed Matter and Quanta</i> , 1981, 41, 129-138.	1.9	4
86	Coevolution of nodes and links: Diversity-driven coexistence in cyclic competition of three species. <i>Physical Review E</i> , 2019, 99, 022309.	0.8	4
87	Mass transport perspective on an accelerated exclusion process: Analysis of augmented current and unit-velocity phases. <i>Physical Review E</i> , 2013, 87, 022146.	0.8	3
88	Microemulsions in the driven Widom-Rowlinson lattice gas. <i>Physical Review E</i> , 2021, 104, 064135.	0.8	3
89	Periodic one-dimensional hopping model with one mobile directional impurity. <i>Journal of Statistical Physics</i> , 1997, 87, 545-575.	0.5	2
90	Effects of homophily and heterophily on preferred-degree networks: mean-field analysis and overwhelming transition. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2022, 2022, 013402.	0.9	2

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91	Watching a drunkard for 10 nights: A study of distributions of variances. American Journal of Physics, 2003, 71, 859-865.	0.3	1
92	Statistical mechanics of driven lattice gas models. AIP Conference Proceedings, 1992, , .	0.3	0
93	Spatial structures in a simple model of population dynamics for parasite-host interactions. Europhysics Letters, 2015, 111, 48001.	0.7	0
94	Emergence of a spectral gap in a class of random matrices associated with split graphs. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 014002.	0.7	0
95	Exact results for the extreme Thouless effect in a model of network dynamics. Europhysics Letters, 2018, 124, 60008.	0.7	0