

# Bikas K Chakrabarti

## List of Publications by Year in descending order

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134  
papers

3,608  
citations

236912

25  
h-index

138468

58  
g-index

153  
all docs

153  
docs citations

153  
times ranked

1903  
citing authors

#	ARTICLE	IF	CITATIONS
1	<i>Colloquium</i> : Quantum annealing and analog quantum computation. <i>Reviews of Modern Physics</i> , 2008, 80, 1061-1081.	45.6	502
2	Dynamic transitions and hysteresis. <i>Reviews of Modern Physics</i> , 1999, 71, 847-859.	45.6	409
3	Failure processes in elastic fiber bundles. <i>Reviews of Modern Physics</i> , 2010, 82, 499-555.	45.6	283
4	Pareto law in a kinetic model of market with random saving propensity. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 335, 155-163.	2.6	242
5	Response of Ising systems to oscillating and pulsed fields: Hysteresis, ac, and pulse susceptibility. <i>Physical Review B</i> , 1995, 52, 6550-6568.	3.2	200
6	Quantum Ising Phases and Transitions in Transverse Ising Models. <i>Lecture Notes in Physics</i> , 2013, , .	0.7	171
7	Statistical physics of fracture, friction, and earthquakes. <i>Reviews of Modern Physics</i> , 2012, 84, 839-884.	45.6	168
8	Infinite-range Ising ferromagnet in a time-dependent transverse magnetic field: Quench and ac dynamics near the quantum critical point. <i>Physical Review B</i> , 2006, 74, .	3.2	87
9	Master equation for a kinetic model of a trading market and its analytic solution. <i>Physical Review E</i> , 2005, 72, 026126.	2.1	80
10	Statistical mechanics of competitive resource allocation using agent-based models. <i>Physics Reports</i> , 2015, 552, 1-25.	25.6	79
11	Opinion formation in kinetic exchange models: Spontaneous symmetry-breaking transition. <i>Physical Review E</i> , 2010, 82, 056112.	2.1	78
12	Inequality in societies, academic institutions and science journals: Gini and $k$ -indices. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014, 410, 30-34.	2.6	67
13	Money in Gas-Like Markets: Gibbs and Pareto Laws. <i>Physica Scripta</i> , 2003, T106, 36.	2.5	66
14	Microeconomics of the ideal gas like market models. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009, 388, 4151-4158.	2.6	57
15	Precursors of catastrophe in the Bak-Tang-Wiesenfeld, Manna, and random-fiber-bundle models of failure. <i>Physical Review E</i> , 2001, 65, 016113.	2.1	52
16	FAILURE PROPERTIES OF FIBER BUNDLE MODELS. <i>International Journal of Modern Physics B</i> , 2003, 17, 5565-5581.	2.0	49
17	Phase transition in fiber bundle models with recursive dynamics. <i>Physical Review E</i> , 2003, 67, 046122.	2.1	48
18	Stick-slip statistics for two fractal surfaces: a model for earthquakes. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1999, 270, 27-34.	2.6	44

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19	A Review of Empirical Studies and Models of Income Distributions in Society. , 0, , 131-159.		40
20	Deterministic stochastic resonance in a piecewise linear chaotic map. Physical Review E, 1998, 58, 8009-8012.	2.1	39
21	Socio-economic inequality: Relationship between Gini and Kolkata indices. Physica A: Statistical Mechanics and Its Applications, 2017, 466, 583-595.	2.6	38
22	Monte Carlo study of hysteretic response and relaxation in Ising models. Physica A: Statistical Mechanics and Its Applications, 1993, 192, 471-485.	2.6	34
23	Quantum annealing in a kinetically constrained system. Physical Review E, 2005, 72, 026701.	2.1	29
24	Crossover behavior in a mixed-mode fiber bundle model. Physical Review E, 2005, 71, 036149.	2.1	29
25	Universality of Citation Distributions for Academic Institutions and Journals. PLoS ONE, 2016, 11, e0146762.	2.5	29
26	Failure due to fatigue in fiber bundles and solids. Physical Review E, 2003, 67, 046124.	2.1	27
27	Phase transitions and non-equilibrium relaxation in kinetic models of opinion formation. Journal of Physics: Conference Series, 2011, 297, 012004.	0.4	26
28	Ideal-gas-like market models with savings: Quenched and annealed cases. Physica A: Statistical Mechanics and Its Applications, 2007, 382, 36-41.	2.6	22
29	Zipf's law in city size from a resource utilization model. Physical Review E, 2014, 90, 042815.	2.1	22
30	Fluctuation cumulant behavior for the field-pulse-induced magnetization-reversal transition in Ising models. Physical Review E, 2003, 67, 046113.	2.1	21
31	Inequality measures in kinetic exchange models of wealth distributions. Physica A: Statistical Mechanics and Its Applications, 2016, 451, 465-474.	2.6	20
32	Growth of breakdown susceptibility in random composites and the stick-slip model of earthquakes: Prediction of dielectric breakdown and other catastrophes. Physical Review E, 1996, 53, 140-147.	2.1	19
33	A common mode of origin of power laws in models of market and earthquake. Physica A: Statistical Mechanics and Its Applications, 2007, 381, 377-382.	2.6	19
34	Response of random dielectric composites and earthquake models to pulses: prediction possibilities. Physica A: Statistical Mechanics and Its Applications, 1996, 224, 254-266.	2.6	18
35	Dynamic magnetization-reversal transition in the Ising model. Physical Review E, 1998, 58, 4277-4283.	2.1	18
36	Spin-reversal transition in Ising model under pulsed field. Physica A: Statistical Mechanics and Its Applications, 1997, 246, 510-518.	2.6	17

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37	A fiber bundle model of traffic jams. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006, 372, 162-166.	2.6	17
38	A self-organising model of market with single commodity. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 297, 253-259.	2.6	16
39	Magnitude Distribution of Earthquakes: Two Fractal Contact Area Distribution. <i>Physica Scripta</i> , 2003, T106, 77.	2.5	15
40	A fractal model of earthquake occurrence: Theory, simulations and comparisons with the aftershock data. <i>Journal of Physics: Conference Series</i> , 2011, 319, 012004.	0.4	15
41	How "Hit" is Born: The Emergence of Popularity from the Dynamics of Collective Choice. , 0, , 417-447.		15
42	Classical-to-quantum crossover in the critical behavior of the transverse-field Sherrington-Kirkpatrick spin glass model. <i>Physical Review E</i> , 2015, 92, 042107.	2.1	14
43	Self-organization Principles in Supply Networks and Production Systems. , 0, , 535-559.		14
44	Competing field pulse induced dynamic transition in Ising Models. <i>Phase Transitions</i> , 2004, 77, 581-600.	1.3	13
45	Self-organized dynamics in local load-sharing fiber bundle models. <i>Physical Review E</i> , 2013, 88, 042112.	2.1	13
46	A Thermodynamic Formulation of Social Science. , 0, , 279-309.		13
47	Magnetic hysteresis loops as Lissajous plots of relaxationally delayed response to periodic field variation. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1994, 202, 467-481.	2.6	12
48	Statistical Theories of Income and Wealth Distribution. <i>Economics</i> , 2010, 4, .	0.6	12
49	Near universal values of social inequality indices in self-organized critical models. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2022, 596, 127121.	2.6	12
50	Threshold-induced phase transition in kinetic exchange models. <i>Physical Review E</i> , 2011, 83, 061130.	2.1	11
51	Crossover behaviors in one and two dimensional heterogeneous load sharing fiber bundle models. <i>European Physical Journal B</i> , 2013, 86, 1.	1.5	11
52	Possible ergodic-nonergodic regions in the quantum Sherrington-Kirkpatrick spin glass model and quantum annealing. <i>Physical Review E</i> , 2018, 97, 022146.	2.1	11
53	Reaching the ground state of a quantum spin glass using a zero-temperature quantum Monte Carlo method. <i>Physical Review E</i> , 2008, 78, 061121.	2.1	10
54	Noise-induced rupture process: Phase boundary and scaling of waiting time distribution. <i>Physical Review E</i> , 2013, 88, 012123.	2.1	9

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55	Social Opinion Dynamics. , 0, , 339-366.		9
56	Mean-field and Monte Carlo studies of the magnetization-reversal transition in the Ising model. Journal of Physics A, 2000, 33, 4249-4264.	1.6	8
57	Two-fractal overlap time series: Earthquakes and market crashes. Pramana - Journal of Physics, 2008, 71, 203-210.	1.8	8
58	Cooperative Dynamics in the Fiber Bundle Model. Frontiers in Physics, 2021, 8, .	2.1	8
59	Quantum phase transition in a disordered long-range transverse Ising antiferromagnet. Physical Review E, 2010, 81, 021101.	2.1	7
60	Social inequality: from data to statistical physics modeling. Journal of Physics: Conference Series, 2015, 638, 012014.	0.4	7
61	Econophysics of the Kolkata Restaurant Problem and Related Games. New Economic Windows, 2017, , .	1.0	7
62	Hydrodynamic descriptions for surface roughness in fracture front propagation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20170387.	3.4	7
63	Development of Econophysics: A Biased Account and Perspective from Kolkata. Entropy, 2021, 23, 254.	2.2	7
64	A Thermodynamic Formulation of Economics. , 0, , 1-33.		7
65	Social inequality analysis of fiber bundle model statistics and prediction of materials failure. Physical Review E, 2021, 104, 044308.	2.1	7
66	Equivalence of the train model of earthquake and boundary driven Edwards-Wilkinson interface. European Physical Journal B, 2013, 86, 1.	1.5	6
67	Phase transition in the Kolkata Paise Restaurant problem. Chaos, 2020, 30, 083116.	2.5	6
68	Flory-like statistics of fracture in the fiber bundle model as obtained via Kolmogorov dispersion for turbulence: A conjecture. Physical Review E, 2020, 102, 012113.	2.1	6
69	Models of Wealth Distributionsâ€“ A Perspective. , 0, , 161-190.		6
70	Quantum Annealing. Lecture Notes in Physics, 2013, , 225-289.	0.7	6
71	Comments on â€œWorrying Trends in Econophysicsâ€“ Income Distribution Models. , 2006, , 244-253.		6
72	AC susceptibility and hysteresis in Ising magnets. Journal of Magnetism and Magnetic Materials, 1994, 136, L29-L32.	2.3	5

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73	Dynamic transitions in pure Ising magnets under pulsed and oscillating fields. Computer Physics Communications, 2002, 147, 120-125.	7.5	5
74	Crowd Dynamics. , 0, , 449-472.		5
75	Complexities of Social Networks: A Physicist's Perspective. , 0, , 473-506.		5
76	Econophysics of Stock and Foreign Currency Exchange Markets. , 0, , 249-278.		5
77	Critical fatigue behaviour in brittle glasses. Bulletin of Materials Science, 2001, 24, 161-164.	1.7	4
78	Opinion Dynamics, Minority Spreading and Heterogeneous Beliefs. , 0, , 367-391.		4
79	Neural network modeling. Progress in Brain Research, 2007, 168, 155-270.	1.4	4
80	A novel quantum transition in a fully frustrated transverse Ising antiferromagnet. Journal of Physics: Conference Series, 2009, 143, 012013.	0.4	4
81	A Zero-Temperature Quantum Monte Carlo Algorithm and Quantum Spin Glasses. Computing in Science and Engineering, 2010, 12, 64-72.	1.2	4
82	Response of the two-dimensional kinetic Ising model under a stochastic field. Journal of Statistical Mechanics: Theory and Experiment, 2013, 2013, P11015.	2.3	4
83	Introduction to critical phenomena through the fiber bundle model of fracture. European Journal of Physics, 2019, 40, 014004.	0.6	4
84	Computer Simulation of Language Competition by Physicists. , 0, , 311-337.		4
85	Kinetic Exchange Opinion Model: Solution in the Single Parameter Map Limit. New Economic Windows, 2014, , 131-143.	1.0	4
86	Kinetic exchange income distribution models with saving propensities: inequality indices and self-organized poverty level. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210163.	3.4	4
87	IMPROVED PERFORMANCE OF THE HOPFIELD AND LITTLE NEURAL NETWORK MODELS WITH TIME DELAYED DYNAMICS. International Journal of Modern Physics B, 1995, 09, 3025-3037.	2.0	3
88	Effect of fractal disorder on static friction in the Tomlinson model. Physical Review E, 2010, 82, 041124.	2.1	3
89	Ideal-Gas Like Markets: Effect of Savings. New Economic Windows, 2005, , 79-92.	1.0	3
90	Study of the Response to Pulses and Possible Prediction of Catastrophes. Journal De Physique, I, 1995, 5, 153-158.	1.2	3

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91	Global Terrorism versus Social Permeability to Underground Activities. , 0, , 393-416.		2
92	Story of the Developments in Statistical Physics of Fracture, Breakdown and Earthquake: A Personal Account. Reports in Advances of Physical Sciences, 2017, 01, 1750013.	0.2	2
93	Statistical physics of fracture and earthquakes. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180202.	3.4	2
94	Zero-intelligence Models of Limit-order Markets. , 0, , 35-63.		2
95	Growth of Firms and Networks. , 0, , 99-129.		2
96	The Contribution of Money-transfer Models to Economics. , 0, , 191-217.		2
97	Scaling theory of quantum breakdown in solids. Physical Review B, 2010, 81, .	3.2	1
98	Opinion Formation in the Kinetic Exchange Models. New Economic Windows, 2011, , 289-304.	1.0	1
99	Can economics afford not to become natural science?. European Physical Journal: Special Topics, 2016, 225, 3121-3125.	2.6	1
100	Optimization and Quantum Annealing. Texts and Readings in Physical Sciences, 2011, , 251-277.	0.2	1
101	ISING SYSTEM IN OSCILLATING FIELD: HYSTERETIC RESPONSE. , 1995, , 107-148.		1
102	Understanding and Managing the Future Evolution of a Competitive Multi-agent Population. , 0, , 65-98.		1
103	Fluctuations in Foreign Exchange markets. , 0, , 219-247.		1
104	Dynamics of Quantum Ising Systems. Lecture Notes in Physics, 2013, , 179-223.	0.7	0
105	Income and wealth distribution data for different countries. , 0, , 7-34.		0
106	Major socioeconomic modelling. , 0, , 35-54.		0
107	Market exchanges and scattering process. , 0, , 55-113.		0
108	Analytic structure of the kinetic exchange market models. , 0, , 114-149.		0

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109	Microeconomic foundation of the kinetic exchange models. , 0, , 150-167.		0
110	Dynamics: generation of income, inequality and development. , 0, , 168-192.		0
111	The Loschmidt Echo for the One-Dimensional XY Model. , 0, , 281-282.		0
112	Quantum Phase Transitions. , 0, , 3-31.		0
113	Information Theoretic Measures Close to a Quantum Critical Point. , 0, , 32-43.		0
114	Non-Equilibrium Dynamics across Quantum Critical Points. , 0, , 44-56.		0
115	Transverse Ising Models in Higher Dimensions. , 0, , 59-64.		0
116	Transverse Field Models in One Dimension. , 0, , 65-74.		0
117	Quantum Phase Transitions in Related Models. , 0, , 75-99.		0
118	Role of Quenched Disorder. , 0, , 100-111.		0
119	Related Models with Frustration. , 0, , 112-121.		0
120	Quantum Information Theoretic Measures: Transverse Field and Related Models. , 0, , 122-148.		0
121	Non-Equilibrium Dynamics Across Quantum Critical Points: Slow Quenching. , 0, , 151-173.		0
122	Further Studies on Non-Equilibrium Dynamics. , 0, , 174-193.		0
123	Quenching and Quantum Information. , 0, , 194-206.		0
124	Some Recent Developments in Information and Dynamics. , 0, , 207-228.		0
125	Experimental Realizations of Transverse Field Ising Systems. , 0, , 231-244.		0
126	Adiabatic Quantum Computations and Transverse Field Models. , 0, , 247-264.		0



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127	Derivation of a Matrix Product Hamiltonian. , 0, , 267-268.		0
128	Landauâ€™Zener Tunneling: Calculation of Non-Adiabatic Transition Probability. , 0, , 283-291.		0
129	A Note on the Theoretical Studies of Hysteresis. , 0, , 292-294.		0
130	Polymers in random media: An introduction. , 2005, , 1-7.		0
131	Phase Transitions in Disordered Quantum Systems: Transverse Ising Models. Texts and Readings in Physical Sciences, 2012, , 49-84.	0.2	0
132	Inequality Measures in Kinetic Exchange Models of Wealth Distributions. SSRN Electronic Journal, 0, , .	0.4	0
133	Emergence of Memory in Networks of Nonlinear Units: From Neurons to Plant Cells. , 0, , 507-533.		0
134	Can we Recognize an Innovation?: Perspective from an Evolving Network Model. , 0, , 561-591.		0