Lester Ingber

List of Publications by Year
in descending order

106 papers	5,166 citations	218381 26 h-index	110170 64 g-index
121 all docs	121 docs citations	121 times ranked	2312 citing authors

#	Article	IF	Citations
1	Very fast simulated re-annealing. Mathematical and Computer Modelling, 1989, 12, 967-973.	2.0	1,068
2	Simulated annealing: Practice versus theory. Mathematical and Computer Modelling, 1993, 18, 29-57.	2.0	846
3	Genetic Algorithms and Very Fast Simulated Reannealing: A comparison. Mathematical and Computer Modelling, 1992, 16, 87-100.	2.0	370
4	Encyclopedia of Artificial Intelligence. , 2009, , .		173
5	High-Energy Multiparticle Reactions. Reviews of Modern Physics, 1972, 44, 284-319.	16.4	164
6	Multiple scales of statistical physics of the neocortex: Application to electroencephalography. Mathematical and Computer Modelling, 1990, 13, 83-95.	2.0	156
7	Statistical mechanics of neocortical interactions. Physica D: Nonlinear Phenomena, 1982, 5, 83-107.	1.3	140
8	Statistical mechanics of neocortical interactions: A scaling paradigm applied to electroencephalography. Physical Review A, 1991, 44, 4017-4060.	1.0	116
9	Statistical mechanics of neocortical interactions. Dynamics of synaptic modification. Physical Review A, 1983, 28, 395-416.	1.0	115
10	Statistical mechanics of neocortical interactions. Derivation of short-term-memory capacity. Physical Review A, 1984, 29, 3346-3358.	1.0	113
11	Statistical mechanics of neocortical interactions: Path-integral evolution of short-term memory. Physical Review E, 1994, 49, 4652-4664.	0.8	107
12	Statistical mechanics of neocortical interactions: Stability and duration of the 7Â±2 rule of short-term-memory capacity. Physical Review A, 1985, 31, 1183-1186.	1.0	89
13	Statistical mechanics of neocortical interactions: High-resolution path-integral calculation of short-term memory. Physical Review E, 1995, 51, 5074-5083.	0.8	78
14	Statistical-mechanical aids to calculating term-structure models. Physical Review A, 1990, 42, 7057-7064.	1.0	77
15	Generic mesoscopic neural networks based on statistical mechanics of neocortical interactions. Physical Review A, 1992, 45, R2183-R2186.	1.0	67
16	Statistical mechanics of neocortical interactions: Canonical momenta indicatorsof electroencephalography. Physical Review E, 1997, 55, 4578-4593.	0.8	65
17	Towards a unified brain theory. Journal of Social and Biological Structures, 1981, 4, 211-224.	0.3	62
18	Statistical mechanics of nonlinear nonequilibrium financial markets. Mathematical Modelling, 1984, 5, 343-361.	0.2	60

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19	Neocortical dynamics at multiple scales: EEG standing waves, statistical mechanics, and physical analogs. Mathematical Biosciences, 2011, 229, 160-173.	0.9	58
20	Mathematical comparison of combat computer models to exercise data. Mathematical and Computer Modelling, 1991, 15, 65-90.	2.0	56
21	Statistical mechanics of neocortical interactions: Training and testing canonical momenta indicators of EEG. Mathematical and Computer Modelling, 1998, 27, 33-64.	2.0	54
22	Statistical Mechanics of Neocortical Interactions: EEG Dispersion Relations. IEEE Transactions on Biomedical Engineering, 1985, BME-32, 91-94.	2.5	49
23	Application of statistical mechanics methodology to term-structure bond-pricing models. Mathematical and Computer Modelling, 1991, 15, 77-98.	2.0	45
24	Statistical mechanics of nonlinear nonequilibrium financial markets: Applications to optimized trading. Mathematical and Computer Modelling, 1996, 23, 101-121.	2.0	41
25	High-resolution path-integral development of financial options. Physica A: Statistical Mechanics and Its Applications, 2000, 283, 529-558.	1.2	39
26	Nuclear Forces. Physical Review, 1968, 174, 1250-1263.	2.7	36
27	Canonical Momenta Indicators of Financial Markets and Neocortical EEG. SSRN Electronic Journal, 0, , .	0.4	35
28	Stochastic Global Optimization and Its Applications with Fuzzy Adaptive Simulated Annealing. Intelligent Systems Reference Library, 2012, , .	1.0	33
29	Adaptive Simulated Annealing. Intelligent Systems Reference Library, 2012, , 33-62.	1.0	32
30	Path-integral evolution of chaos embedded in noise: Duffing neocortical analog. Mathematical and Computer Modelling, 1996, 23, 43-53.	2.0	31
31	Statistical mechanics of financial markets: Exponential modifications to Black-Scholes. Mathematical and Computer Modelling, 2000, 31, 167-192.	2.0	30
32	Path-integral evolution of multivariate systems with moderate noise. Physical Review E, 1995, 51, 1616-1619.	0.8	26
33	Statistical mechanics of combat with human factors. Mathematical and Computer Modelling, 1991, 15, 99-127.	2.0	24
34	Statistical mechanics of neocortical interactions: Constraints on 40-Hz models of short-term memory. Physical Review E, 1995, 52, 4561-4563.	0.8	23
35	Electroencephalographic field influence on calcium momentum waves. Journal of Theoretical Biology, 2014, 343, 138-153.	0.8	23
36	Volatility of volatility of financial markets. Mathematical and Computer Modelling, 1999, 29, 39-57.	2.0	21

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37	A Reinforcement Learning Method Based on Adaptive Simulated Annealing. , 0, , .		21
38	Properties of the neutron gas and application to neutron stars. Nuclear Physics A, 1971, 170, 1-11.	0.6	20
39	Equation of State of Neutron-Star Matter at Subnuclear Densities. Astrophysical Journal, 1972, 176, 723.	1.6	20
40	Probability tree algorithm for general diffusion processes. Physical Review E, 2001, 64, 056702.	0.8	19
41	Probability Tree Algorithm for General Diffusion Processes. SSRN Electronic Journal, 0, , .	0.4	18
42	Developing Bid-Ask Probabilities for High-Frequency Trading. Virtual Economics, 2020, 3, 7-24.	0.8	17
43	Path-integral Riemannian contributions to nuclear SchrÃ¶dinger equation. Physical Review D, 1984, 29, 1171-1174.	1.6	15
44	Computational Algorithms Derived from Multiple Scales of Neocortical Processing. Cognitive Computation, 2012, 4, 38-50.	3.6	15
45	Quantum Path-Integral qPATHINT Algorithm. Open Cybernetics and Systemics Journal, 2017, 11, 119-133.	0.3	15
46	Riemannian contributions to the short-ranged velocity-dependent nucleon-nucleon interaction. Physical Review D, 1986, 33, 3781-3784.	1.6	14
47	Statistical mechanics of mesoscales in neocortex and in command, control and communications (C3). Mathematical and Computer Modelling, 1988, 11, 457-463.	2.0	13
48	Statistical Mechanics of Combat and Extensions. , 1993, , 117-149.		13
49	Data mining and knowledge discovery via statistical mechanics in nonlinear stochastic systems. Mathematical and Computer Modelling, 1998, 27, 9-31.	2.0	12
50	Optimization of trading physics models of markets. IEEE Transactions on Neural Networks, 2001, 12, 776-790.	4.8	12
51	Statistical Mechanics of Neocortical Interactions: Columnar EEG. SSRN Electronic Journal, 0, , .	0.4	12
52	Attention, physics and teaching. Journal of Social and Biological Structures, 1981, 4, 225-235.	0.3	11
53	Statistical mechanics of neocortical interactions: Large-scale EEG influences on molecular processes. Journal of Theoretical Biology, 2016, 395, 144-152.	0.8	11
54	Riemannian corrections to velocity-dependent nuclear forces. Physical Review C, 1983, 28, 2536-2539.	1.1	10

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55	Statistical Mechanics of Neocortical Interactions: Nonlinear Columnar Electroencephalography. NeuroQuantology, 2009, 7, .	0.1	9
56	Ideas by Statistical Mechanics (Ism). SSRN Electronic Journal, 0, , .	0.4	9
57	AI and Ideas by Statistical Mechanics. , 2009, , 58-64.		9
58	Nuclear Forces and Nuclear Energetics. Physical Review C, 1970, 1, 112-122.	1.1	8
59	Nonlinear nonequilibrium nonquantum nonchaotic statistical mechanics of neocortical interactions. Behavioral and Brain Sciences, 1996, 19, 300-301.	0.4	8
60	Quantum Calcium-Ion Interactions with EEG. Sci, 2019, 1, 20.	1.8	8
61	Electroluminescence. IEEE Spectrum, 1964, 1, 68-83.	0.5	7
62	Evolution of Regenerative Ca-Ion Wave-Packet in Neuronal-Firing Fields: Quantum Path-Integral with Serial Shocks. SSRN Electronic Journal, 0, , .	0.4	7
63	Options on Quantum Money: Quantum Path-Integral with Serial Shocks. SSRN Electronic Journal, 0, , .	0.4	7
64	Statistical mechanics of neocortical interactions: EEG eigenfunctions of short-term memory. Behavioral and Brain Sciences, 2000, 23, 403-405.	0.4	6
65	Statistical Mechanics of Neocortical Interactions: Testing Theories with Multiple Imaging Data. NeuroQuantology, 2008, 6, .	0.1	6
66	Some Applications of Statistical Mechanics of Financial Markets. SSRN Electronic Journal, 0, , .	0.4	6
67	Statistical Mechanics of Neocortical Interactions: Portfolio of Physiological Indicators. Open Cybernetics and Systemics Journal, 2009, 3, 13-26.	0.3	6
68	Influence of Macrocolumnar EEG on Ca Waves. SSRN Electronic Journal, 0, , .	0.4	5
69	A simple options training model. Mathematical and Computer Modelling, 1999, 30, 167-182.	2.0	4
70	Path-integral Quantum PATHTREE and PATHINT Algorithms. SSRN Electronic Journal, 0, , .	0.4	4
71	Statistical Mechanics of Neocortical Interactions: Portfolio of Physiological Indicators. SSRN Electronic Journal, 0, , .	0.4	4
72	Statistical Mechanics of Portfolios of Options. SSRN Electronic Journal, 0, , .	0.4	4

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73	Nonadiabatic Corrections to the Method of Perturbed Stationary States. Physical Review, 1965, 139, A35-A39.	2.7	3
74	Applications of biological intelligence to command, control and communications. , 1988, , 513-533.		3
75	Comment by Lester Ingber. Journal of Social and Biological Structures, 1983, 6, 144-145.	0.3	2
76	Brief note noise-induced extrema in time-dependent Ginsburg-Landau systems. Mathematical Modelling, 1986, 7, 525-528.	0.2	2
77	Neocortical Dynamics at Multiple Scales: EEG Standing Waves, Statistical Mechanics, and Physical Analogs. SSRN Electronic Journal, 2010, , .	0.4	2
78	Biological impact on military intelligence: application or metaphor?. International Journal of Intelligent Defence Support Systems, 2015, 5, 173.	0.1	2
79	Quantum Variables in Finance and Neuroscience II. SSRN Electronic Journal, 2018, , .	0.4	2
80	Statistical Mechanics of Financial Markets: Exponential Modifications to Black-Scholes. SSRN Electronic Journal, 0, , .	0.4	2
81	Real Options for Project Schedules (ROPS). SSRN Electronic Journal, 0, , .	0.4	2
82	High-Resolution Path-Integral Development of Financial Options. SSRN Electronic Journal, 0, , .	0.4	2
83	Multiple scales of brain-mind interactions. Behavioral and Brain Sciences, 1995, 18, 360-362.	0.4	1
84	Statistical mechanics of neocortical interactions: EEG correlates of reaction times. , 0, , .		1
85	Electroencephalographic Field Influence on Calcium Momentum Waves. SSRN Electronic Journal, 0, , .	0.4	1
86	Quantum Calcium-Ion Interactions with EEG. Sci, 2018, 1, 7.	1.8	1
87	Quantum Calcium-Ion Interactions with EEG. Sci, 2019, 1, 7.	1.8	1
88	Revisiting Our Quantum World. Advances in Human and Social Aspects of Technology Book Series, 2021, , 96-111.	0.3	1
89	Hybrid classical-quantum computing: Applications to statistical mechanics of financial markets. E3S Web of Conferences, 2021, 307, 04001.	0.2	1
90	Optimization of Trading Physics Models of Markets. SSRN Electronic Journal, 0, , .	0.4	1

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91	Quantum Variables in Finance and Neuroscience (Presentation Slides). SSRN Electronic Journal, 0, , .	0.4	1
92	Canonical Momenta of Nonlinear Combat. SSRN Electronic Journal, 0, , .	0.4	1
93	Statistical Mechanics of Neocortical Interactions: Nonlinear Columnar Electroencephalography. SSRN Electronic Journal, 0, , .	0.4	1
94	Columnar Electromagnetic Influences on Short-Term Memory at Multiple Scales. SSRN Electronic Journal, 0, , .	0.4	1
95	Data Mining and Knowledge Discovery via Statistical Mechanics in Nonlinear Stochastic Systems. SSRN Electronic Journal, 0, , .	0.4	1
96	Statistical Mechanics of Nonlinear Nonequilibrium Financial Markets: Applications to Optimized Trading. SSRN Electronic Journal, 0, , .	0.4	1
97	Volatility of Volatility of Financial Markets. SSRN Electronic Journal, 0, , .	0.4	1
98	Nonadiabatic Corrections to the Method of Perturbed Stationary States. Physical Review, 1965, 140, AB5-AB5.	2.7	0
99	Path-integral calculation of multivariate Fokker-Planck systems. Mathematical and Computer Modelling, 1995, 21, 61-67.	2.0	0
100	Nuclear forces. , 2013, , .		0
101	Biological Impact on Military Intelligence: Application or Metaphor?. SSRN Electronic Journal, 0, , .	0.4	0
102	Statistical Mechanics of Neocortical Interactions: Large-Scale EEG Influences on Molecular Processes. SSRN Electronic Journal, 0, , .	0.4	0
103	Developing Bid-Ask Probabilities for High-Frequency Trading. SSRN Electronic Journal, 0, , .	0.4	0
104	Automated Internet Trading Based On Optimized Physics Models Of Markets. SSRN Electronic Journal, 0, , .	0.4	0
105	Forecasting with Importance-Sampling and Path-Integrals: Applications to COVID-19. SSRN Electronic Journal, 0, , .	0.4	0
106	Forecasting COVID-19 with Importance-Sampling and Path-Integrals. SSRN Electronic Journal, 0, , .	0.4	0