

Joaquin Marro

List of Publications by Year in descending order

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157
papers

3,963
citations

236833

25
h-index

182361

51
g-index

162
all docs

162
docs citations

162
times ranked

1442
citing authors

#	ARTICLE	IF	CITATIONS
1	Physics Clues on the Mind Substrate and Attributes. <i>Frontiers in Computational Neuroscience</i> , 2022, 16, 836532.	1.2	1
2	Uncovering the Critical. , 2021, , 1-10.		0
3	By Completing a Bestiary. , 2021, , 1-28.		0
4	Mind Atoms. , 2021, , 1-12.		0
5	Shaping Relationships. , 2021, , 1-20.		0
6	Penetrating the Mind. , 2021, , 1-16.		0
7	EEGs Disclose Significant Brain Activity Correlated with Synaptic Fickleness. <i>Biology</i> , 2021, 10, 647.	1.3	2
8	Growth strategy determines the memory and structural properties of brain networks. <i>Neural Networks</i> , 2021, 142, 44-56.	3.3	7
9	Criticality, Complexity, and Allied Dynamics. , 2021, , 1-28.		0
10	The Brain In Silico. , 2021, , 1-36.		0
11	A theoretical description of inverse stochastic resonance in nature. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2020, 80, 104975.	1.7	16
12	Emergence and interpretation of oscillatory behaviour similar to brain waves and rhythms. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2020, 83, 105093.	1.7	9
13	How Memory Conforms to Brain Development. <i>Frontiers in Computational Neuroscience</i> , 2019, 13, 22.	1.2	14
14	Concurrence of form and function in developing networks and its role in synaptic pruning. <i>Nature Communications</i> , 2018, 9, 2236.	5.8	20
15	Brain Performance versus Phase Transitions. <i>Scientific Reports</i> , 2015, 5, 12216.	1.6	18
16	Efficient Transmission of Subthreshold Signals in Complex Networks of Spiking Neurons. <i>PLoS ONE</i> , 2015, 10, e0121156.	1.1	19
17	Signal transmission competing with noise in model excitable brains. , 2013, , .		4
18	Robust Short-Term Memory without Synaptic Learning. <i>PLoS ONE</i> , 2013, 8, e50276.	1.1	25

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19	Stochastic Resonance Crossovers in Complex Networks. PLoS ONE, 2012, 7, e51170.	1.1	18
20	Can intrinsic noise induce various resonant peaks?. New Journal of Physics, 2011, 13, 053014.	1.2	33
21	Nonequilibrium Behavior in Neural Networks: Criticality and Optimal Performance. , 2011, , 597-603.		0
22	EXCITABLE NETWORKS: NONEQUILIBRIUM CRITICALITY AND OPTIMUM TOPOLOGY. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2010, 20, 869-875.	0.7	1
23	Evolving networks and the development of neural systems. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P03003.	0.9	15
24	Unstable dynamics, nonequilibrium phases, and criticality in networked excitable media. Physical Review E, 2010, 82, 041105.	0.8	9
25	Entropic Origin of Disassortativity in Complex Networks. Physical Review Letters, 2010, 104, 108702.	2.9	106
26	Nonlinear preferential rewiring in fixed-size networks as a diffusion process. Physical Review E, 2009, 79, 050104.	0.8	13
27	CHAOS IN HETEROGENEOUS NETWORKS WITH TEMPORALLY INERT NODES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2009, 19, 677-686.	0.7	1
28	Development of Neural Network Structure with Biological Mechanisms. Lecture Notes in Computer Science, 2009, , 228-235.	1.0	0
29	Demagnetization via Nucleation of the Nonequilibrium Metastable Phase in a Model of Disorder. Journal of Statistical Physics, 2008, 133, 29-58.	0.5	7
30	A brief comment on the modeling of flow. Computer Physics Communications, 2008, 179, 144-149.	3.0	4
31	Instabilities in attractor networks with fast synaptic fluctuations and partial updating of the neurons activity. Neural Networks, 2008, 21, 1272-1277.	3.3	12
32	Complex behavior in a network with time-dependent connections and silent nodes. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P02017.	0.9	8
33	Functional optimization in complex excitable networks. Europhysics Letters, 2008, 83, 46006.	0.7	16
34	Modelling Neural Systems with Short-Term Depression and Facilitation. AIP Conference Proceedings, 2007, , .	0.3	1
35	Competition Between Synaptic Depression and Facilitation in Attractor Neural Networks. Neural Computation, 2007, 19, 2739-2755.	1.3	35
36	Information processing with unstable memories. AIP Conference Proceedings, 2007, , .	0.3	1

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37	The effect of topology on neural networks with unstable memories. AIP Conference Proceedings, 2007, , .	0.3	0
38	Control of neural chaos by synaptic noise. BioSystems, 2007, 87, 186-190.	0.9	7
39	Chaotic hopping between attractors in neural networks. Neural Networks, 2007, 20, 230-235.	3.3	26
40	Attractor neural networks with activity-dependent synapses: The role of synaptic facilitation. Neurocomputing, 2007, 70, 2022-2025.	3.5	5
41	On the similarities and differences between lattice and off-lattice models of driven fluids. European Physical Journal: Special Topics, 2007, 143, 269-272.	1.2	1
42	Networks with heterogeneously weighted connections and partial synchronization of nodes. Computer Physics Communications, 2007, 177, 180-183.	3.0	1
43	Lattice Versus Lennard-Jones Models with a Net Particle Flow. , 2007, , 53-62.		1
44	Stochastic resonance and scale invariance in nonequilibrium metastable states. European Physical Journal B, 2006, 49, 103-108.	0.6	0
45	Understanding scale invariance in a minimal model of complex relaxation phenomena. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P02004-P02004.	0.9	2
46	Effects of Fast Presynaptic Noise in Attractor Neural Networks. Neural Computation, 2006, 18, 614-633.	1.3	25
47	Nonequilibrium anisotropic phases, nucleation, and critical behavior in a driven Lennard-Jones fluid. Physical Review B, 2006, 73, .	1.1	3
48	Metastability, nucleation, and noise-enhanced stabilization out of equilibrium. Physical Review E, 2006, 74, 050101.	0.8	33
49	Effects of fast presynaptic noise in attractor neural networks. Neural Computation, 2006, 18, 614-33.	1.3	17
50	Effects of static and dynamic disorder on the performance of neural automata. Biophysical Chemistry, 2005, 115, 285-288.	1.5	7
51	Algorithms for identification and categorization. AIP Conference Proceedings, 2005, , .	0.3	4
52	Lennard-Jones and lattice models of driven fluids. Physical Review E, 2005, 72, 026103.	0.8	7
53	Instability of Attractors in Auto-associative Networks with Bio-inspired Fast Synaptic Noise. Lecture Notes in Computer Science, 2005, , 161-167.	1.0	1
54	Reentrant behavior of the spinodal curve in a nonequilibrium ferromagnet. Physical Review E, 2004, 70, 021101.	0.8	8

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55	Analysis of the interface in a nonequilibrium two-temperature Ising model. Physical Review B, 2004, 70, .	1.1	9
56	Switching between memories in neural automata with synaptic noise. Neurocomputing, 2004, 58-60, 67-71.	3.5	14
57	Influence of topology on the performance of a neural network. Neurocomputing, 2004, 58-60, 229-234.	3.5	67
58	Kinetics of phase separation in the driven lattice gas: Self-similar pattern growth under anisotropic nonequilibrium conditions. Physical Review B, 2003, 67, .	1.1	13
59	Coarsening under Anisotropic Conditions in a Lattice Gas Model. AIP Conference Proceedings, 2003, , .	0.3	0
60	Metastability and Avalanches in a Nonequilibrium Ferromagnetic System. AIP Conference Proceedings, 2003, , .	0.3	0
61	Growth and scaling in anisotropic spinodal decomposition. Europhysics Letters, 2002, 59, 14-20.	0.7	8
62	Modeling nonequilibrium phase transitions and critical behavior in complex systems. Computer Physics Communications, 2002, 147, 115-119.	3.0	1
63	Is the Particle Current a Relevant Feature in Driven Lattice Gases?. Physical Review Letters, 2001, 87, 195702.	2.9	29
64	Critical properties of nonequilibrium anisotropic lattice gases. Physica A: Statistical Mechanics and Its Applications, 2000, 279, 143-150.	1.2	1
65	Monte Carlo study of the CO-poisoning dynamics in a model for the catalytic oxidation of CO. Journal of Chemical Physics, 2000, 113, 10279-10283.	1.2	13
66	On the effect of synaptic fluctuations during retrieval processes in neural network models. Computer Physics Communications, 1999, 121-122, 98-102.	3.0	0
67	Neural Networks in Which Synaptic Patterns Fluctuate with Time. Journal of Statistical Physics, 1999, 94, 837-858.	0.5	6
68	Anisotropic Lattice Gases. Journal of Statistical Physics, 1998, 90, 817-826.	0.5	12
69	Nonequilibrium neural network with competing dynamics. Physica A: Statistical Mechanics and Its Applications, 1998, 253, 57-65.	1.2	1
70	Modeling ionic diffusion in magnetic systems. Physical Review B, 1998, 58, 11488-11492.	1.1	14
71	Effect of Correlated Fluctuations of Synapses in the Performance of Neural Networks. Physical Review Letters, 1998, 81, 2827-2830.	2.9	10
72	Granada hosts a world venture in computational science. Computers in Physics, 1998, 12, 301.	0.6	1

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73	Neural networks with fast time-variation of synapses. <i>Journal of Physics A</i> , 1997, 30, 7801-7816.	1.6	19
74	Demagnetization of spin systems at low temperature. <i>Physical Review B</i> , 1997, 56, 8863-8866.	1.1	5
75	Magnetic relaxation via competing dynamics. <i>Lecture Notes in Physics</i> , 1997, , 299-299.	0.3	0
76	Neural networks with fluctuating synapses. <i>Lecture Notes in Physics</i> , 1997, , 304-304.	0.3	0
77	A kinetic description of disorder. , 1997, , 450-462.		0
78	On the equilibrium and time relaxation of a lattice gas in several boxes. <i>Molecular Physics</i> , 1996, 88, 1157-1171.	0.8	2
79	Phase transitions in driven lattice gases. <i>Physical Review E</i> , 1996, 53, 6038-6047.	0.8	22
80	Phase transitions in a driven lattice gas in two planes. <i>Journal of Statistical Physics</i> , 1995, 78, 1493-1520.	0.5	34
81	Interacting particle lattice systems: Some recent results on nonequilibrium steady states and phase transitions. <i>Chaos, Solitons and Fractals</i> , 1995, 6, 305-314.	2.5	0
82	Critical and scaling properties of cluster distributions in nonequilibrium Ising-like systems. <i>Physical Review E</i> , 1995, 52, 6006-6012.	0.8	7
83	Non-equilibrium layered lattice gases. <i>Journal of Physics A</i> , 1995, 28, 4669-4678.	1.6	4
84	Ising Systems with Conflicting Dynamics: Exact Results for Random Interactions and Fields. <i>Europhysics Letters</i> , 1994, 25, 169-174.	0.7	10
85	A kinetic ANNNI model. <i>Journal of Physics A</i> , 1994, 27, 1111-1119.	1.6	4
86	Monte Carlo study of a kinetic lattice model with random diffusion of disorder. <i>Physical Review E</i> , 1994, 49, 2041-2048.	0.8	8
87	Ising critical behavior of a non-Hamiltonian lattice system. <i>Physical Review E</i> , 1994, 50, 3237-3240.	0.8	5
88	Kinetic lattice models of disorder. <i>Journal of Statistical Physics</i> , 1994, 74, 663-686.	0.5	13
89	Diffusion in a one-dimensional gas of hard point particles. <i>Journal of Statistical Physics</i> , 1993, 71, 225-233.	0.5	2
90	Magnetic system under a fluctuating field. <i>Phase Transitions</i> , 1993, 42, 141-148.	0.6	0

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91	STEADY STATES IN NONEQUILIBRIUM LATTICE SYSTEMS. International Journal of Modern Physics C, 1993, 04, 357-364.	0.8	0
92	Reaction-diffusion lattice gas: Theory and computer results. Physical Review E, 1993, 47, 885-898.	0.8	6
93	Nonequilibrium impure lattice systems. Journal of Physics A, 1992, 25, 1453-1471.	1.6	15
94	Non-equilibrium phase transitions in lattice systems with random-field competing kinetics: mean-field theory. Journal of Physics Condensed Matter, 1992, 4, 9309-9320.	0.7	4
95	Mean-field solution of a nonequilibrium random-exchange Ising-model system. Physical Review B, 1992, 45, 10408-10418.	1.1	10
96	Nonequilibrium phase transitions in lattice systems with random-field competing kinetics. Physical Review B, 1992, 46, 8244-8262.	1.1	13
97	Lattice gas near two dimensions. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 172, 29-33.	0.9	2
98	Fast-ionic-conductor behavior of driven lattice-gas models. Phase Transitions, 1991, 29, 129-156.	0.6	7
99	Nonequilibrium model of neural networks. , 1991, , 25-32.		4
100	A Nonequilibrium Version of the Spin-Glass Problem. Europhysics Letters, 1991, 15, 375-380.	0.7	19
101	Nonequilibrium steady states and phase transitions in driven diffusive systems. Annals of Physics, 1990, 199, 366-411.	1.0	23
102	Monte Carlo study of the generalized reaction-diffusion lattice-gas model system. Journal of Statistical Physics, 1990, 61, 1283-1293.	0.5	3
103	Stationary distributions for systems with competing creation-annihilation dynamics. Journal of Physics A, 1990, 23, 3809-3823.	1.6	14
104	Kinetically disordered lattice systems. , 1990, , 397-409.		0
105	Effective Hamiltonian description of nonequilibrium spin systems. Physical Review Letters, 1989, 62, 1929-1932.	2.9	62
106	Nonequilibrium Ising models with competing, reaction-diffusion dynamics. Physical Review A, 1989, 40, 5802-5814.	1.0	17
107	One-dimensional mixtures of hard points with stochastic boundary conditions. Journal of Physics A, 1989, 22, 1355-1369.	1.6	2
108	Critical and finite-size-scaling behaviours of short-range order parameters. Journal of Physics Condensed Matter, 1989, 1, 8147-8154.	0.7	5

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109	Phase transition in the Ising ferromagnetic model with fixed spins. <i>Physical Review B</i> , 1988, 38, 500-507.	1.1	3
110	Phase transition in Ising ferromagnetic lattices with fixed spins (abstract). <i>Journal of Applied Physics</i> , 1988, 63, 3041-3041.	1.1	0
111	Cluster kinetics in the lattice gas model: the Becker-Doring type of equations. <i>Journal of Physics C: Solid State Physics</i> , 1987, 20, 2491-2500.	1.5	6
112	Critical behavior in nonequilibrium phase transitions. <i>Physical Review B</i> , 1987, 35, 3372-3375.	1.1	25
113	Integral equations for dense fluids: A priori controllable approximations. <i>Journal of Chemical Physics</i> , 1987, 87, 4042-4047.	1.2	0
114	Nonequilibrium phase diagram of Ising model with competing dynamics. <i>Physical Review Letters</i> , 1987, 59, 1934-1937.	2.9	69
115	Exactly soluble Ising models with anisotropic interactions and arbitrary external magnetic field. <i>Journal of Physics A</i> , 1987, 20, 1829-1838.	1.6	3
116	Stationary nonequilibrium states in the Ising model with locally competing temperatures. <i>Journal of Statistical Physics</i> , 1987, 49, 551-568.	0.5	54
117	Nonequilibrium second-order phase transitions in stochastic lattice systems: A finite-size scaling analysis in two dimensions. <i>Journal of Statistical Physics</i> , 1987, 49, 89-119.	0.5	70
118	Nonequilibrium discontinuous phase transitions in a fast ionic conductor model: Coexistence and spinodal lines. <i>Journal of Statistical Physics</i> , 1987, 49, 121-137.	0.5	26
119	Ising models with anisotropic interactions: Stationary nonequilibrium states with a nonuniform temperature profile. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1987, 144, 585-603.	1.2	10
120	Phase transitions and stationary nonequilibrium states. , 1987, , 227-257.		1
121	Nucleation theory and the cloud-point. <i>Surface Science</i> , 1986, 177, 14-24.	0.8	1
122	A comment on clusters free-energy models. <i>Surface Science</i> , 1986, 172, L539-L543.	0.8	2
123	A comment on clusters free-energy models. <i>Surface Science Letters</i> , 1986, 172, L539-L543.	0.1	0
124	Dynamics of phase separation: Cluster kinetics and self-similarity property of the structure function. <i>Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics</i> , 1986, 142, 253-262.	0.9	3
125	Three-dimensional ferromagnetic Ising models with quenched, random non-magnetic impurities. <i>Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics</i> , 1986, 142, 31-40.	0.9	3
126	On exact bounds for the cluster free energy in the three-dimensional lattice-gas model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1986, 135, 620-626.	1.2	2

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127	Nonequilibrium phase transitions in stochastic lattice systems: Influence of the hopping rates. Journal of Statistical Physics, 1986, 43, 441-461.	0.5	48
128	Model studies of the thermal and magnetic properties in disordered systems. Journal of Magnetism and Magnetic Materials, 1986, 54-57, 54-56.	1.0	2
129	Effective-field theory for the magnetic and thermal properties of site- and bond-impure systems. Journal of Physics C: Solid State Physics, 1986, 19, 1567-1580.	1.5	3
130	Microscopic observations on a kinetic Ising model. American Journal of Physics, 1986, 54, 1114-1121.	0.3	4
131	Critical behavior of Ising models with static site dilution. Physical Review B, 1986, 34, 347-349.	1.1	36
132	Nonequilibrium phase transition in stochastic lattice gases: Simulation of a three-dimensional system. Journal of Statistical Physics, 1985, 38, 725-733.	0.5	52
133	Time evolution of the excess energy in supersaturated solid solutions: microcalorimetric experiments, computer simulations and theory. Journal of Physics C: Solid State Physics, 1985, 18, 1377-1386.	1.5	4
134	A numerical study of one-dimensional systems: kinetics and equilibrium states. Journal of Physics C: Solid State Physics, 1985, 18, 4691-4701.	1.5	7
135	Scaling of the Excess Energy in Thermodynamically Unstable Solutions. Physical Review Letters, 1985, 54, 1424-1427.	2.9	14
136	Long-time tails in the velocity autocorrelation function of hard-rod binary mixtures. Physical Review Letters, 1985, 54, 731-734.	2.9	16
137	Kinetics of a first-order phase transition: computer simulations and theory. Journal of Statistical Physics, 1984, 34, 399-426.	0.5	27
138	Time Evolution of Phase Separation in Binary Mixtures. , 1984, , 125-129.		0
139	Relevance of the Cahn-Hilliard-Cook theory at early times in spinodal decomposition. Physics Letters, Section A: General, Atomic and Solid State Physics, 1983, 95, 443-446.	0.9	21
140	Kinetics of a finite one-dimensional mixture of hard rods with different masses. Journal of Statistical Physics, 1983, 31, 565-575.	0.5	18
141	The interpretation of structure functions in quenched binary alloys. Acta Metallurgica, 1983, 31, 1849-1860.	2.1	106
142	Equilibrium cluster distributions of the three-dimensional Ising model in the one phase region. Physica A: Statistical Mechanics and Its Applications, 1983, 122, 563-586.	1.2	19
143	Modified Fisher Droplet Model. Materials Research Society Symposia Proceedings, 1982, 21, 13.	0.1	0
144	Dynamical scaling of structure function in quenched binary alloys. Acta Metallurgica, 1982, 30, 297-310.	2.1	270

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145	Computer Simulation of the Time Evolution of a Quenched Model Alloy in the Nucleation Region. <i>Physical Review Letters</i> , 1979, 43, 282-285.	2.9	262
146	Computer experiments on phase separation in binary alloys. <i>Advances in Colloid and Interface Science</i> , 1979, 10, 173-214.	7.0	73
147	Growth of clusters in a first-order phase transition. <i>Journal of Statistical Physics</i> , 1978, 19, 243-267.	0.5	71
148	Time-displaced correlation functions in an infinite one-dimensional mixture of hard rods with different diameters. <i>Journal of Statistical Physics</i> , 1978, 18, 179-190.	0.5	16
149	Statistical approach to the kinetics of nonuniform fluids. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1978, 94, 297-320.	1.2	1
150	Time evolution of a quenched binary alloy. IV. Computer simulation of a three-dimensional model system. <i>Physical Review B</i> , 1977, 15, 3014-3026.	1.1	120
151	Monte Carlo studies of percolation phenomena for a simple cubic lattice. <i>Journal of Statistical Physics</i> , 1976, 15, 345-353.	0.5	93
152	Universality test for critical amplitudes in two dimensional percolation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1976, 59, 180-182.	0.9	12
153	Time evolution of a quenched binary alloy. III. Computer simulation of a two-dimensional model system. <i>Physical Review B</i> , 1976, 13, 4328-4335.	1.1	121
154	Time evolution of a quenched binary alloy. II. Computer simulation of a three-dimensional model system. <i>Physical Review B</i> , 1975, 12, 2000-2011.	1.1	189
155	On the generalization of the Boltzmann equation. <i>Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods</i> , 1974, 20, 25-54.	0.2	4
156	On the existence of kinetic equations. <i>Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods</i> , 1974, 20, 55-63.	0.2	2
157	A kinetic equation for dense gases. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1973, 44, 41-42.	0.9	2