

# Romualdo Pastor-Satorras

## List of Publications by Year in descending order

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131  
papers

26,672  
citations

34105

52  
h-index

15266

126  
g-index

134  
all docs

134  
docs citations

134  
times ranked

12205  
citing authors

#	ARTICLE	IF	CITATIONS
1	Epidemic Spreading in Scale-Free Networks. <i>Physical Review Letters</i> , 2001, 86, 3200-3203.	7.8	4,633
2	The architecture of complex weighted networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 3747-3752.	7.1	3,160
3	Epidemic processes in complex networks. <i>Reviews of Modern Physics</i> , 2015, 87, 925-979.	45.6	2,484
4	Epidemic dynamics and endemic states in complex networks. <i>Physical Review E</i> , 2001, 63, 066117.	2.1	1,273
5	Dynamical and Correlation Properties of the Internet. <i>Physical Review Letters</i> , 2001, 87, 258701.	7.8	1,130
6	Immunization of complex networks. <i>Physical Review E</i> , 2002, 65, 036104.	2.1	927
7	Reaction-diffusion processes and metapopulation models in heterogeneous networks. <i>Nature Physics</i> , 2007, 3, 276-282.	16.7	632
8	Generation of uncorrelated random scale-free networks. <i>Physical Review E</i> , 2005, 71, 027103.	2.1	574
9	Velocity and Hierarchical Spread of Epidemic Outbreaks in Scale-Free Networks. <i>Physical Review Letters</i> , 2004, 92, 178701.	7.8	560
10	Models of social networks based on social distance attachment. <i>Physical Review E</i> , 2004, 70, 056122.	2.1	549
11	Epidemic dynamics in finite size scale-free networks. <i>Physical Review E</i> , 2002, 65, 035108.	2.1	538
12	Large-scale topological and dynamical properties of the Internet. <i>Physical Review E</i> , 2002, 65, 066130.	2.1	530
13	Thresholds for Epidemic Spreading in Networks. <i>Physical Review Letters</i> , 2010, 105, 218701.	7.8	524
14	Activity driven modeling of time varying networks. <i>Scientific Reports</i> , 2012, 2, 469.	3.3	470
15	Absence of Epidemic Threshold in Scale-Free Networks with Degree Correlations. <i>Physical Review Letters</i> , 2003, 90, 028701.	7.8	436
16	Epidemic spreading in correlated complex networks. <i>Physical Review E</i> , 2002, 66, 047104.	2.1	395
17	Dynamical patterns of epidemic outbreaks in complex heterogeneous networks. <i>Journal of Theoretical Biology</i> , 2005, 235, 275-288.	1.7	390
18	Evolving protein interaction networks through gene duplication. <i>Journal of Theoretical Biology</i> , 2003, 222, 199-210.	1.7	347

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19	Class of correlated random networks with hidden variables. <i>Physical Review E</i> , 2003, 68, 036112.	2.1	313
20	Characterization and modeling of weighted networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005, 346, 34-43.	2.6	271
21	Cut-offs and finite size effects in scale-free networks. <i>European Physical Journal B</i> , 2004, 38, 205-209.	1.5	268
22	Networks in Cognitive Science. <i>Trends in Cognitive Sciences</i> , 2013, 17, 348-360.	7.8	267
23	A MODEL OF LARGE-SCALE PROTEOME EVOLUTION. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , 2002, 05, 43-54.	1.4	250
24	Nature of the Epidemic Threshold for the Susceptible-Infected-Susceptible Dynamics in Networks. <i>Physical Review Letters</i> , 2013, 111, 068701.	7.8	212
25	Epidemic thresholds of the susceptible-infected-susceptible model on networks: A comparison of numerical and theoretical results. <i>Physical Review E</i> , 2012, 86, 041125.	2.1	211
26	Self-organization of collaboration networks. <i>Physical Review E</i> , 2004, 70, 036106.	2.1	203
27	Nonlinear $q$ -voter model. <i>Physical Review E</i> , 2009, 80, 041129.	2.1	191
28	Universality Class of Absorbing Phase Transitions with a Conserved Field. <i>Physical Review Letters</i> , 2000, 85, 1803-1806.	7.8	175
29	Random walks on temporal networks. <i>Physical Review E</i> , 2012, 85, 056115.	2.1	173
30	Critical load and congestion instabilities in scale-free networks. <i>Europhysics Letters</i> , 2003, 62, 292-298.	2.0	164
31	Evolutionary dynamics of the cryptocurrency market. <i>Royal Society Open Science</i> , 2017, 4, 170623.	2.4	156
32	Epidemic Spreading in Complex Networks with Degree Correlations. <i>Lecture Notes in Physics</i> , 2003, , 127-147.	0.7	154
33	Random Walks and Search in Time-Varying Networks. <i>Physical Review Letters</i> , 2012, 109, 238701.	7.8	153
34	Competing activation mechanisms in epidemics on networks. <i>Scientific Reports</i> , 2012, 2, 371.	3.3	119
35	Non-Mean-Field Behavior of the Contact Process on Scale-Free Networks. <i>Physical Review Letters</i> , 2006, 96, 038701.	7.8	111
36	Modeling Human Dynamics of Face-to-Face Interaction Networks. <i>Physical Review Letters</i> , 2013, 110, 168701.	7.8	102

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37	Epidemics and immunization in scale-free networks. , 2004, , 111-130.		98
38	Langevin approach for the dynamics of the contact process on annealed scale-free networks. Physical Review E, 2009, 79, 036110.	2.1	94
39	Quantifying echo chamber effects in information spreading over political communication networks. EPJ Data Science, 2019, 8, .	2.8	82
40	Distinct types of eigenvector localization in networks. Scientific Reports, 2016, 6, 18847.	3.3	75
41	Burstiness and Aging in Social Temporal Networks. Physical Review Letters, 2015, 114, 108701.	7.8	74
42	Mean-field diffusive dynamics on weighted networks. Physical Review E, 2010, 82, 011111.	2.1	73
43	Diffusion-annihilation processes in complex networks. Physical Review E, 2005, 71, 056104.	2.1	71
44	Immunization strategies for epidemic processes in time-varying contact networks. Journal of Theoretical Biology, 2013, 337, 89-100.	1.7	71
45	Topology and correlations in structured scale-free networks. Physical Review E, 2003, 67, 046111.	2.1	70
46	Rate equation approach for correlations in growing network models. Physical Review E, 2005, 71, 036127.	2.1	70
47	Structure of cycles and local ordering in complex networks. European Physical Journal B, 2004, 38, 183-186.	1.5	66
48	Correlations in weighted networks. Physical Review E, 2006, 74, 055101.	2.1	61
49	Field theory of absorbing phase transitions with a nondiffusive conserved field. Physical Review E, 2000, 62, R5875-R5878.	2.1	59
50	Effect of risk perception on epidemic spreading in temporal networks. Physical Review E, 2018, 97, 012313.	2.1	59
51	Temporal percolation in activity-driven networks. Physical Review E, 2014, 89, 032807.	2.1	58
52	Random walks on complex trees. Physical Review E, 2008, 78, 011114.	2.1	54
53	Topological properties of a time-integrated activity-driven network. Physical Review E, 2013, 87, 062807.	2.1	53
54	Routes to Thermodynamic Limit on Scale-Free Networks. Physical Review Letters, 2008, 100, 148701.	7.8	52

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55	Kinetic growth of field-oriented chains in dipolar colloidal solutions. <i>Physical Review E</i> , 1999, 59, 826-834.	2.1	50
56	Particle-cluster aggregation with dipolar interactions. <i>Physical Review E</i> , 1995, 51, 5994-6003.	2.1	48
57	Quasistationary simulations of the contact process on quenched networks. <i>Physical Review E</i> , 2011, 84, 066102.	2.1	48
58	Analytic solution of a static scale-free network model. <i>European Physical Journal B</i> , 2005, 44, 241-248.	1.5	46
59	Bosonic reaction-diffusion processes on scale-free networks. <i>Physical Review E</i> , 2008, 78, 016111.	2.1	45
60	Voter models on weighted networks. <i>Physical Review E</i> , 2011, 83, 066117.	2.1	44
61	Virtual Round Table on ten leading questions for network research. <i>European Physical Journal B</i> , 2004, 38, 143-145.	1.5	43
62	Quasistationary analysis of the contact process on annealed scale-free networks. <i>Physical Review E</i> , 2011, 83, 066113.	2.1	39
63	Collective versus hub activation of epidemic phases on networks. <i>Physical Review E</i> , 2016, 93, 032314.	2.1	39
64	Relating Topological Determinants of Complex Networks to Their Spectral Properties: Structural and Dynamical Effects. <i>Physical Review X</i> , 2017, 7, .	8.9	39
65	Mean-Field Analysis of the q-Voter Model on Networks. <i>Journal of Statistical Physics</i> , 2013, 151, 113-130.	1.2	38
66	Eigenvector Localization in Real Networks and Its Implications for Epidemic Spreading. <i>Journal of Statistical Physics</i> , 2018, 173, 1110-1123.	1.2	37
67	Field theory for a reaction-diffusion model of quasispecies dynamics. <i>Physical Review E</i> , 2001, 64, 051909.	2.1	35
68	Stochastic Theory of Synchronization Transitions in Extended Systems. <i>Physical Review Letters</i> , 2003, 90, 204101.	7.8	35
69	Universality classes in directed sandpile models. <i>Journal of Physics A</i> , 2000, 33, L33-L39.	1.6	32
70	Effects of Heterogeneous Social Interactions on Flocking Dynamics. <i>Physical Review Letters</i> , 2018, 120, 068303.	7.8	32
71	Numerical estimates of the generalized dimensions of the Hölder attractor for negative $q$ . <i>Journal of Physics A</i> , 1996, 29, L391-L398.	1.6	31
72	Zero temperature Glauber dynamics on complex networks. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2006, 2006, P05001-P05001.	2.3	31

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73	Steady-state dynamics of the forest fire model on complex networks. <i>European Physical Journal B</i> , 2010, 76, 109-121.	1.5	29
74	Stochastic Equation for the Erosion of Inclined Topography. <i>Physical Review Letters</i> , 1998, 80, 4349-4352.	7.8	28
75	Ordering dynamics of the multi-state voter model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2012, 2012, P10027.	2.3	28
76	Effects of temporal correlations in social multiplex networks. <i>Scientific Reports</i> , 2017, 7, 8597.	3.3	27
77	Scaling of a Slope: The Erosion of Tilted Landscapes. <i>Journal of Statistical Physics</i> , 1998, 93, 477-500.	1.2	25
78	Castellano and Pastor-Satorras Reply.. <i>Physical Review Letters</i> , 2007, 98, .	7.8	24
79	Patterns of complexity. <i>Nature Physics</i> , 2010, 6, 480-481.	16.7	23
80	Irrelevance of information outflow in opinion dynamics models. <i>Physical Review E</i> , 2011, 83, 016113.	2.1	23
81	The Biological Origin of Linguistic Diversity. <i>PLoS ONE</i> , 2012, 7, e48029.	2.5	23
82	Multifractal properties of power-law time sequences: Application to rice piles. <i>Physical Review E</i> , 1997, 56, 5284-5294.	2.1	22
83	Corrections to scaling in the forest-fire model. <i>Physical Review E</i> , 2000, 61, 4854-4859.	2.1	22
84	Critical behavior and conservation in directed sandpiles. <i>Physical Review E</i> , 2000, 62, 6195-6205.	2.1	22
85	Effects of local population structure in a reaction-diffusion model of a contact process on metapopulation networks. <i>Physical Review E</i> , 2013, 88, 042820.	2.1	22
86	The maximum entropy principle and the nature of fractals. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1998, 251, 291-302.	2.6	21
87	Dipolar interactions induced order in assemblies of magnetic particles. <i>Journal of Magnetism and Magnetic Materials</i> , 2000, 221, 124-131.	2.3	21
88	Anomalous scaling in the Zhang model. <i>European Physical Journal B</i> , 2000, 18, 197-200.	1.5	21
89	Slow dynamics and rare-region effects in the contact process on weighted tree networks. <i>Physical Review E</i> , 2012, 86, 026117.	2.1	21
90	Spectral properties and the accuracy of mean-field approaches for epidemics on correlated power-law networks. <i>Physical Review Research</i> , 2019, 1, .	3.6	21

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91	Evolution in a Changing Environment. PLoS ONE, 2013, 8, e52742.	2.5	19
92	Topological structure and the $H$ index in complex networks. Physical Review E, 2017, 95, 022301.	2.1	19
93	Heterogenous mean-field analysis of a generalized voter-like model on networks. European Physical Journal B, 2012, 85, 1.	1.5	18
94	Model reproduces individual, group and collective dynamics of human contact networks. Social Networks, 2016, 47, 130-137.	2.1	18
95	Class transition and random walks on complex energy landscapes. Physical Review E, 2009, 80, 020102.	2.1	16
96	Robust Modeling of Human Contact Networks Across Different Scales and Proximity-Sensing Techniques. Lecture Notes in Computer Science, 2017, , 536-551.	1.3	15
97	Cumulative Merging Percolation and the Epidemic Transition of the Susceptible-Infected-Susceptible Model in Networks. Physical Review X, 2020, 10, .	8.9	15
98	Long-Range-Interaction Induced Ordered Structures in Deposition Processes. Physical Review Letters, 1998, 80, 5373-5376.	7.8	14
99	Reaction-diffusion system with self-organized critical behavior. European Physical Journal B, 2001, 19, 583-587.	1.5	14
100	Relevance of backtracking paths in recurrent-state epidemic spreading on networks. Physical Review E, 2018, 98, .	2.1	14
101	Generalized voterlike model on activity-driven networks with attractiveness. Physical Review E, 2018, 98, 022303.	2.1	14
102	Influential spreaders for recurrent epidemics on networks. Physical Review Research, 2020, 2, .	3.6	14
103	Branch distribution in diffusion-limited aggregation: a maximum entropy approach. Physica A: Statistical Mechanics and Its Applications, 1996, 224, 463-479.	2.6	13
104	On the numerical study of percolation and epidemic critical properties in networks. European Physical Journal B, 2016, 89, 1.	1.5	12
105	Velocity fluctuations and hydrodynamic diffusion in sedimentation. Europhysics Letters, 2001, 54, 45-50.	2.0	11
106	Slow relaxation dynamics and aging in random walks on activity driven temporal networks. European Physical Journal B, 2015, 88, 1.	1.5	11
107	Scale-free networks emerging from multifractal time series. Physical Review E, 2017, 95, 052311.	2.1	11
108	Complex networks and glassy dynamics: walks in the energy landscape. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P03032.	2.3	10

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109	Universal and nonuniversal features of the generalized voter class for ordering dynamics in two dimensions. <i>Physical Review E</i> , 2012, 86, 051123.	2.1	10
110	Phase transitions with infinitely many absorbing states in complex networks. <i>Physical Review E</i> , 2013, 87, 022820.	2.1	10
111	Lifespan method as a tool to study criticality in absorbing-state phase transitions. <i>Physical Review E</i> , 2015, 91, 052117.	2.1	9
112	The localization of non-backtracking centrality in networks and its physical consequences. <i>Scientific Reports</i> , 2020, 10, 21639.	3.3	9
113	Analytic model for the ballistic adsorption of polydisperse mixtures. <i>Physical Review E</i> , 1999, 59, 5701-5705.	2.1	8
114	Effects of mobility on ordering dynamics. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009, 2009, L11001.	2.3	8
115	Aging and percolation dynamics in a Non-Poissonian temporal network model. <i>Physical Review E</i> , 2016, 94, 022316.	2.1	8
116	Percolation analysis of force networks in anisotropic granular matter. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2012, 2012, P02008.	2.3	7
117	Random walks in non-Poissonian activity driven temporal networks. <i>New Journal of Physics</i> , 2019, 21, 093032.	2.9	6
118	Phase transitions on a class of generalized Vicsek-like models of collective motion. <i>Chaos</i> , 2021, 31, 043116.	2.5	6
119	Generalized Voter-Like Models on Heterogeneous Networks. <i>Modeling and Simulation in Science, Engineering and Technology</i> , 2013, , 285-300.	0.6	5
120	Model of correlated sequential adsorption of colloidal particles. <i>Physical Review E</i> , 2001, 64, 016103.	2.1	4
121	Scalar model of flocking dynamics on complex social networks. <i>Physical Review E</i> , 2019, 100, 042305.	2.1	4
122	Amplitude death and restoration in networks of oscillators with random-walk diffusion. <i>Communications Physics</i> , 2021, 4, .	5.3	4
123	Influence of individual nodes for continuous-time susceptible-infected-susceptible dynamics on synthetic and real-world networks. <i>Physical Review E</i> , 2021, 104, 014306.	2.1	3
124	Reaction-diffusion Processes in Scale-free Networks. <i>Bolyai Society Mathematical Studies</i> , 2008, , 203-237.	0.3	2
125	Ballistic adsorption of colloidal magnetic particles. <i>Computer Physics Communications</i> , 1999, 121-122, 265-267.	7.5	1
126	It's not always who you know. <i>Nature Physics</i> , 2015, 11, 528-529.	16.7	1



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127	Cumulative merging percolation: A long-range percolation process in networks. Physical Review E, 2022, 105, .	2.1	1
128	Growth of oriented chains in dipolar colloids. Computer Physics Communications, 1999, 121-122, 262-264.	7.5	0
129	Breaking of scale invariance symmetry in adsorption processes. Europhysics Letters, 2000, 51, 327-333.	2.0	0
130	A MODEL OF LARGE-SCALE PROTEOME EVOLUTION. , 2011, , 396-407.		0
131	Scale-Free Networks Out of Multifractal Chaos. Communications in Computer and Information Science, 2017, , 3-13.	0.5	0