

# Romualdo Pastor-Satorras

## List of Publications by Citations

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129  
papers

21,416  
citations

49  
h-index

134  
g-index

134  
ext. papers

24,185  
ext. citations

3.9  
avg, IF

7.25  
L-index

#	Paper	IF	Citations
129	Epidemic spreading in scale-free networks. <i>Physical Review Letters</i> , <b>2001</b> , 86, 3200-3	7.4	3811
128	The architecture of complex weighted networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2004</b> , 101, 3747-52	11.5	2401
127	Epidemic processes in complex networks. <i>Reviews of Modern Physics</i> , <b>2015</b> , 87, 925-979	40.5	1761
126	Epidemic dynamics and endemic states in complex networks. <i>Physical Review E</i> , <b>2001</b> , 63, 066117	2.4	1041
125	Dynamical and correlation properties of the internet. <i>Physical Review Letters</i> , <b>2001</b> , 87, 258701	7.4	964
124	Immunization of complex networks. <i>Physical Review E</i> , <b>2002</b> , 65, 036104	2.4	701
123	Evolution and Structure of the Internet: A Statistical Physics Approach <b>2004</b> ,		663
122	Generation of uncorrelated random scale-free networks. <i>Physical Review E</i> , <b>2005</b> , 71, 027103	2.4	506
121	Reaction-diffusion processes and metapopulation models in heterogeneous networks. <i>Nature Physics</i> , <b>2007</b> , 3, 276-282	16.2	500
120	Velocity and hierarchical spread of epidemic outbreaks in scale-free networks. <i>Physical Review Letters</i> , <b>2004</b> , 92, 178701	7.4	483
119	Large-scale topological and dynamical properties of the Internet. <i>Physical Review E</i> , <b>2002</b> , 65, 066130	2.4	454
118	Epidemic dynamics in finite size scale-free networks. <i>Physical Review E</i> , <b>2002</b> , 65, 035108	2.4	451
117	Models of social networks based on social distance attachment. <i>Physical Review E</i> , <b>2004</b> , 70, 056122	2.4	441
116	Thresholds for epidemic spreading in networks. <i>Physical Review Letters</i> , <b>2010</b> , 105, 218701	7.4	435
115	Absence of epidemic threshold in scale-free networks with degree correlations. <i>Physical Review Letters</i> , <b>2003</b> , 90, 028701	7.4	379
114	Activity driven modeling of time varying networks. <i>Scientific Reports</i> , <b>2012</b> , 2, 469	4.9	354
113	Epidemic spreading in correlated complex networks. <i>Physical Review E</i> , <b>2002</b> , 66, 047104	2.4	336

112	Dynamical patterns of epidemic outbreaks in complex heterogeneous networks. <i>Journal of Theoretical Biology</i> , <b>2005</b> , 235, 275-88	2.3	320
111	Evolving protein interaction networks through gene duplication. <i>Journal of Theoretical Biology</i> , <b>2003</b> , 222, 199-210	2.3	304
110	Class of correlated random networks with hidden variables. <i>Physical Review E</i> , <b>2003</b> , 68, 036112	2.4	272
109	Cut-offs and finite size effects in scale-free networks. <i>European Physical Journal B</i> , <b>2004</b> , 38, 205-209	1.2	244
108	Characterization and modeling of weighted networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2005</b> , 346, 34-43	3.3	225
107	Networks in cognitive science. <i>Trends in Cognitive Sciences</i> , <b>2013</b> , 17, 348-60	14	208
106	A MODEL OF LARGE-SCALE PROTEOME EVOLUTION. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , <b>2002</b> , 05, 43-54	0.8	207
105	Nature of the epidemic threshold for the susceptible-infected-susceptible dynamics in networks. <i>Physical Review Letters</i> , <b>2013</b> , 111, 068701	7.4	182
104	Universality class of absorbing phase transitions with a conserved field. <i>Physical Review Letters</i> , <b>2000</b> , 85, 1803-6	7.4	166
103	Self-organization of collaboration networks. <i>Physical Review E</i> , <b>2004</b> , 70, 036106	2.4	164
102	Epidemic thresholds of the susceptible-infected-susceptible model on networks: a comparison of numerical and theoretical results. <i>Physical Review E</i> , <b>2012</b> , 86, 041125	2.4	163
101	Nonlinear q-voter model. <i>Physical Review E</i> , <b>2009</b> , 80, 041129	2.4	141
100	Critical load and congestion instabilities in scale-free networks. <i>Europhysics Letters</i> , <b>2003</b> , 62, 292-298	1.6	137
99	Random walks and search in time-varying networks. <i>Physical Review Letters</i> , <b>2012</b> , 109, 238701	7.4	133
98	Random walks on temporal networks. <i>Physical Review E</i> , <b>2012</b> , 85, 056115	2.4	133
97	Competing activation mechanisms in epidemics on networks. <i>Scientific Reports</i> , <b>2012</b> , 2, 371	4.9	107
96	Non-mean-field behavior of the contact process on scale-free networks. <i>Physical Review Letters</i> , <b>2006</b> , 96, 038701	7.4	103
95	Epidemic Spreading in Complex Networks with Degree Correlations. <i>Lecture Notes in Physics</i> , <b>2003</b> , 127-147	97	

94	Evolutionary dynamics of the cryptocurrency market. <i>Royal Society Open Science</i> , <b>2017</b> , 4, 170623	3.3	94
93	Langevin approach for the dynamics of the contact process on annealed scale-free networks. <i>Physical Review E</i> , <b>2009</b> , 79, 036110	2.4	80
92	Modeling human dynamics of face-to-face interaction networks. <i>Physical Review Letters</i> , <b>2013</b> , 110, 168701	7.4	78
91	Mean-field diffusive dynamics on weighted networks. <i>Physical Review E</i> , <b>2010</b> , 82, 011111	2.4	69
90	Diffusion-annihilation processes in complex networks. <i>Physical Review E</i> , <b>2005</b> , 71, 056104	2.4	65
89	Rate equation approach for correlations in growing network models. <i>Physical Review E</i> , <b>2005</b> , 71, 036127	2.4	64
88	Distinct types of eigenvector localization in networks. <i>Scientific Reports</i> , <b>2016</b> , 6, 18847	4.9	63
87	Topology and correlations in structured scale-free networks. <i>Physical Review E</i> , <b>2003</b> , 67, 046111	2.4	61
86	Immunization strategies for epidemic processes in time-varying contact networks. <i>Journal of Theoretical Biology</i> , <b>2013</b> , 337, 89-100	2.3	59
85	Burstiness and aging in social temporal networks. <i>Physical Review Letters</i> , <b>2015</b> , 114, 108701	7.4	58
84	Field theory of absorbing phase transitions with a nondiffusive conserved field. <i>Physical Review E</i> , <b>2000</b> , 62, R5875-8	2.4	58
83	Structure of cycles and local ordering in complex networks. <i>European Physical Journal B</i> , <b>2004</b> , 38, 183-186	2.4	56
82	Correlations in weighted networks. <i>Physical Review E</i> , <b>2006</b> , 74, 055101	2.4	51
81	Effect of risk perception on epidemic spreading in temporal networks. <i>Physical Review E</i> , <b>2018</b> , 97, 012313	2.4	50
80	Temporal percolation in activity-driven networks. <i>Physical Review E</i> , <b>2014</b> , 89, 032807	2.4	48
79	Topological properties of a time-integrated activity-driven network. <i>Physical Review E</i> , <b>2013</b> , 87, 062807	2.4	47
78	Random walks on complex trees. <i>Physical Review E</i> , <b>2008</b> , 78, 011114	2.4	47
77	Routes to thermodynamic limit on scale-free networks. <i>Physical Review Letters</i> , <b>2008</b> , 100, 148701	7.4	47

76	Kinetic growth of field-oriented chains in dipolar colloidal solutions. <i>Physical Review E</i> , <b>1999</b> , 59, 826-834	2.4	46
75	Particle-cluster aggregation with dipolar interactions. <i>Physical Review E</i> , <b>1995</b> , 51, 5994-6003	2.4	46
74	Bosonic reaction-diffusion processes on scale-free networks. <i>Physical Review E</i> , <b>2008</b> , 78, 016111	2.4	43
73	Quasistationary simulations of the contact process on quenched networks. <i>Physical Review E</i> , <b>2011</b> , 84, 066102	2.4	42
72	Epidemics and immunization in scale-free networks <b>2004</b> , 111-130		41
71	Analytic solution of a static scale-free network model. <i>European Physical Journal B</i> , <b>2005</b> , 44, 241-248	1.2	39
70	Collective versus hub activation of epidemic phases on networks. <i>Physical Review E</i> , <b>2016</b> , 93, 032314	2.4	36
69	Voter models on weighted networks. <i>Physical Review E</i> , <b>2011</b> , 83, 066117	2.4	36
68	Virtual Round Table on ten leading questions for network research. <i>European Physical Journal B</i> , <b>2004</b> , 38, 143-145	1.2	35
67	Stochastic theory of synchronization transitions in extended systems. <i>Physical Review Letters</i> , <b>2003</b> , 90, 204101	7.4	34
66	Quasistationary analysis of the contact process on annealed scale-free networks. <i>Physical Review E</i> , <b>2011</b> , 83, 066113	2.4	33
65	Relating Topological Determinants of Complex Networks to Their Spectral Properties: Structural and Dynamical Effects. <i>Physical Review X</i> , <b>2017</b> , 7,	9.1	32
64	Field theory for a reaction-diffusion model of quasispecies dynamics. <i>Physical Review E</i> , <b>2001</b> , 64, 051909	2.4	32
63	Mean-Field Analysis of the q-Voter Model on Networks. <i>Journal of Statistical Physics</i> , <b>2013</b> , 151, 113-130	1.5	30
62	Universality classes in directed sandpile models. <i>Journal of Physics A</i> , <b>2000</b> , 33, L33-L39		30
61	Quantifying echo chamber effects in information spreading over political communication networks. <i>EPJ Data Science</i> , <b>2019</b> , 8,	3.4	29
60	Numerical estimates of the generalized dimensions of the Hénon attractor for negative q. <i>Journal of Physics A</i> , <b>1996</b> , 29, L391-L398		28
59	Eigenvector Localization in Real Networks and Its Implications for Epidemic Spreading. <i>Journal of Statistical Physics</i> , <b>2018</b> , 173, 1110-1123	1.5	27

58	Zero temperature Glauber dynamics on complex networks. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2006</b> , 2006, P05001-P05001	1.9	27
57	Ordering dynamics of the multi-state voter model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2012</b> , 2012, P10027	1.9	24
56	Scaling of a Slope: The Erosion of Tilted Landscapes. <i>Journal of Statistical Physics</i> , <b>1998</b> , 93, 477-500	1.5	24
55	Castellano and Pastor-Satorras Reply:. <i>Physical Review Letters</i> , <b>2007</b> , 98,	7.4	23
54	Stochastic Equation for the Erosion of Inclined Topography. <i>Physical Review Letters</i> , <b>1998</b> , 80, 4349-4352	7.4	23
53	Steady-state dynamics of the forest fire model on complex networks. <i>European Physical Journal B</i> , <b>2010</b> , 76, 109-121	1.2	22
52	Critical behavior and conservation in directed sandpiles. <i>Physical Review E</i> , <b>2000</b> , 62, 6195-205	2.4	22
51	Effects of temporal correlations in social multiplex networks. <i>Scientific Reports</i> , <b>2017</b> , 7, 8597	4.9	20
50	Irrelevance of information outflow in opinion dynamics models. <i>Physical Review E</i> , <b>2011</b> , 83, 016113	2.4	20
49	Dipolar interactions induced order in assemblies of magnetic particles. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2000</b> , 221, 124-131	2.8	20
48	Effects of Heterogeneous Social Interactions on Flocking Dynamics. <i>Physical Review Letters</i> , <b>2018</b> , 120, 068303	7.4	19
47	Effects of local population structure in a reaction-diffusion model of a contact process on metapopulation networks. <i>Physical Review E</i> , <b>2013</b> , 88, 042820	2.4	19
46	Slow dynamics and rare-region effects in the contact process on weighted tree networks. <i>Physical Review E</i> , <b>2012</b> , 86, 026117	2.4	19
45	Multifractal properties of power-law time sequences: Application to rice piles. <i>Physical Review E</i> , <b>1997</b> , 56, 5284-5294	2.4	19
44	Anomalous scaling in the Zhang model. <i>European Physical Journal B</i> , <b>2000</b> , 18, 197-200	1.2	19
43	Corrections to scaling in the forest-fire model. <i>Physical Review E</i> , <b>2000</b> , 61, 4854-9	2.4	19
42	Spectral properties and the accuracy of mean-field approaches for epidemics on correlated power-law networks. <i>Physical Review Research</i> , <b>2019</b> , 1,	3.9	18
41	Topological structure and the H index in complex networks. <i>Physical Review E</i> , <b>2017</b> , 95, 022301	2.4	17

40	The biological origin of linguistic diversity. <i>PLoS ONE</i> , <b>2012</b> , 7, e48029	3.7	16
39	The maximum entropy principle and the nature of fractals. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>1998</b> , 251, 291-302	3.3	16
38	Heterogenous mean-field analysis of a generalized voter-like model on networks. <i>European Physical Journal B</i> , <b>2012</b> , 85, 1	1.2	15
37	Reaction-diffusion system with self-organized critical behavior. <i>European Physical Journal B</i> , <b>2001</b> , 19, 583-587	1.2	14
36	Model reproduces individual, group and collective dynamics of human contact networks. <i>Social Networks</i> , <b>2016</b> , 47, 130-137	3.9	13
35	Glass transition and random walks on complex energy landscapes. <i>Physical Review E</i> , <b>2009</b> , 80, 020102	2.4	13
34	Long-Range-Interaction Induced Ordered Structures in Deposition Processes. <i>Physical Review Letters</i> , <b>1998</b> , 80, 5373-5376	7.4	13
33	Branch distribution in diffusion-limited aggregation: a maximum entropy approach. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>1996</b> , 224, 463-479	3.3	12
32	Evolution in a changing environment. <i>PLoS ONE</i> , <b>2013</b> , 8, e52742	3.7	11
31	Velocity fluctuations and hydrodynamic diffusion in sedimentation. <i>Europhysics Letters</i> , <b>2001</b> , 54, 45-50	1.6	11
30	Robust Modeling of Human Contact Networks Across Different Scales and Proximity-Sensing Techniques. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 536-551	0.9	10
29	Cumulative Merging Percolation and the Epidemic Transition of the Susceptible-Infected-Susceptible Model in Networks. <i>Physical Review X</i> , <b>2020</b> , 10,	9.1	10
28	Universal and nonuniversal features of the generalized voter class for ordering dynamics in two dimensions. <i>Physical Review E</i> , <b>2012</b> , 86, 051123	2.4	10
27	Relevance of backtracking paths in recurrent-state epidemic spreading on networks. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	10
26	Generalized voterlike model on activity-driven networks with attractiveness. <i>Physical Review E</i> , <b>2018</b> , 98, 022303	2.4	10
25	On the numerical study of percolation and epidemic critical properties in networks. <i>European Physical Journal B</i> , <b>2016</b> , 89, 1	1.2	9
24	Slow relaxation dynamics and aging in random walks on activity driven temporal networks. <i>European Physical Journal B</i> , <b>2015</b> , 88, 1	1.2	9
23	Complex networks and glassy dynamics: walks in the energy landscape. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2011</b> , 2011, P03032	1.9	9

22	Phase transitions with infinitely many absorbing states in complex networks. <i>Physical Review E</i> , <b>2013</b> , 87, 022820	2.4	8
21	Lifespan method as a tool to study criticality in absorbing-state phase transitions. <i>Physical Review E</i> , <b>2015</b> , 91, 052117	2.4	8
20	Effects of mobility on ordering dynamics. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2009</b> , 2009, L11001	1.9	8
19	Analytic model for the ballistic adsorption of polydisperse mixtures. <i>Physical Review E</i> , <b>1999</b> , 59, 5701-5	2.4	8
18	Scale-free networks emerging from multifractal time series. <i>Physical Review E</i> , <b>2017</b> , 95, 052311	2.4	7
17	Influential spreaders for recurrent epidemics on networks. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	7
16	Data-driven estimate of SARS-CoV-2 herd immunity threshold in populations with individual contact pattern variations		7
15	Aging and percolation dynamics in a Non-Poissonian temporal network model. <i>Physical Review E</i> , <b>2016</b> , 94, 022316	2.4	6
14	Percolation analysis of force networks in anisotropic granular matter. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2012</b> , 2012, P02008	1.9	6
13	Topology, Hierarchy, and Correlations in Internet Graphs. <i>Lecture Notes in Physics</i> , 425-440	0.8	6
12	The localization of non-backtracking centrality in networks and its physical consequences. <i>Scientific Reports</i> , <b>2020</b> , 10, 21639	4.9	6
11	Model of correlated sequential adsorption of colloidal particles. <i>Physical Review E</i> , <b>2001</b> , 64, 016103	2.4	4
10	Random walks in non-Poissonian activity driven temporal networks. <i>New Journal of Physics</i> , <b>2019</b> , 21, 093032	2.9	3
9	Generalized Voter-Like Models on Heterogeneous Networks. <i>Modeling and Simulation in Science, Engineering and Technology</i> , <b>2013</b> , 285-300	0.8	3
8	Scalar model of flocking dynamics on complex social networks. <i>Physical Review E</i> , <b>2019</b> , 100, 042305	2.4	2
7	Reaction-diffusion Processes in Scale-free Networks. <i>Bolyai Society Mathematical Studies</i> , <b>2008</b> , 203-237	0.4	2
6	Amplitude death and restoration in networks of oscillators with random-walk diffusion. <i>Communications Physics</i> , <b>2021</b> , 4,	5.4	1
5	Phase transitions on a class of generalized Vicsek-like models of collective motion. <i>Chaos</i> , <b>2021</b> , 31, 043116	3.6	0



- 4 Influence of individual nodes for continuous-time susceptible-infected-susceptible dynamics on synthetic and real-world networks. *Physical Review E*, **2021**, 104, 014306 2.4 0
- 3 Scale-Free Networks Out of Multifractal Chaos. *Communications in Computer and Information Science*, **2017**, 3-13 0.3
- 2 A MODEL OF LARGE-SCALE PROTEOME EVOLUTION **2011**, 396-407
- 1 Breaking of scale invariance symmetry in adsorption processes. *Europhysics Letters*, **2000**, 51, 327-333 1.6