

# 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	Cumulative merging percolation: A long-range percolation process in networks. <i>Physical Review E</i> , 2022, 105, .	2.1	1
2	Phase transitions on a class of generalized Vicsek-like models of collective motion. <i>Chaos</i> , 2021, 31, 043116.	2.5	6
3	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
4	Amplitude death and restoration in networks of oscillators with random-walk diffusion. <i>Communications Physics</i> , 2021, 4, .	5.3	4
5	The localization of non-backtracking centrality in networks and its physical consequences. <i>Scientific Reports</i> , 2020, 10, 21639.	3.3	9
6	Cumulative Merging Percolation and the Epidemic Transition of the Susceptible-Infected-Susceptible Model in Networks. <i>Physical Review X</i> , 2020, 10, .	8.9	15
7	Influential spreaders for recurrent epidemics on networks. <i>Physical Review Research</i> , 2020, 2, .	3.6	14
8	Random walks in non-Poissonian activity driven temporal networks. <i>New Journal of Physics</i> , 2019, 21, 093032.	2.9	6
9	Scalar model of flocking dynamics on complex social networks. <i>Physical Review E</i> , 2019, 100, 042305.	2.1	4
10	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
11	Quantifying echo chamber effects in information spreading over political communication networks. <i>EPJ Data Science</i> , 2019, 8, .	2.8	82
12	Eigenvector Localization in Real Networks and Its Implications for Epidemic Spreading. <i>Journal of Statistical Physics</i> , 2018, 173, 1110-1123.	1.2	37
13	Effect of risk perception on epidemic spreading in temporal networks. <i>Physical Review E</i> , 2018, 97, 012313.	2.1	59
14	Effects of Heterogeneous Social Interactions on Flocking Dynamics. <i>Physical Review Letters</i> , 2018, 120, 068303.	7.8	32
15	Relevance of backtracking paths in recurrent-state epidemic spreading on networks. <i>Physical Review E</i> , 2018, 98, .	2.1	14
16	Generalized voterlike model on activity-driven networks with attractiveness. <i>Physical Review E</i> , 2018, 98, 022303.	2.1	14
17	Scale-Free Networks Out of Multifractal Chaos. <i>Communications in Computer and Information Science</i> , 2017, , 3-13.	0.5	0
18	Topological structure and the $H$ index in complex networks. <i>Physical Review E</i> , 2017, 95, 022301.	2.1	19

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19	Relating Topological Determinants of Complex Networks to Their Spectral Properties: Structural and Dynamical Effects. <i>Physical Review X</i> , 2017, 7, .	8.9	39
20	Robust Modeling of Human Contact Networks Across Different Scales and Proximity-Sensing Techniques. <i>Lecture Notes in Computer Science</i> , 2017, , 536-551.	1.3	15
21	Effects of temporal correlations in social multiplex networks. <i>Scientific Reports</i> , 2017, 7, 8597.	3.3	27
22	Evolutionary dynamics of the cryptocurrency market. <i>Royal Society Open Science</i> , 2017, 4, 170623.	2.4	156
23	Scale-free networks emerging from multifractal time series. <i>Physical Review E</i> , 2017, 95, 052311.	2.1	11
24	Distinct types of eigenvector localization in networks. <i>Scientific Reports</i> , 2016, 6, 18847.	3.3	75
25	Aging and percolation dynamics in a Non-Poissonian temporal network model. <i>Physical Review E</i> , 2016, 94, 022316.	2.1	8
26	Collective versus hub activation of epidemic phases on networks. <i>Physical Review E</i> , 2016, 93, 032314.	2.1	39
27	Model reproduces individual, group and collective dynamics of human contact networks. <i>Social Networks</i> , 2016, 47, 130-137.	2.1	18
28	On the numerical study of percolation and epidemic critical properties in networks. <i>European Physical Journal B</i> , 2016, 89, 1.	1.5	12
29	Lifespan method as a tool to study criticality in absorbing-state phase transitions. <i>Physical Review E</i> , 2015, 91, 052117.	2.1	9
30	Epidemic processes in complex networks. <i>Reviews of Modern Physics</i> , 2015, 87, 925-979.	45.6	2,484
31	Burstiness and Aging in Social Temporal Networks. <i>Physical Review Letters</i> , 2015, 114, 108701.	7.8	74
32	Slow relaxation dynamics and aging in random walks on activity driven temporal networks. <i>European Physical Journal B</i> , 2015, 88, 1.	1.5	11
33	It's not always who you know. <i>Nature Physics</i> , 2015, 11, 528-529.	16.7	1
34	Temporal percolation in activity-driven networks. <i>Physical Review E</i> , 2014, 89, 032807.	2.1	58
35	Mean-Field Analysis of the q-Voter Model on Networks. <i>Journal of Statistical Physics</i> , 2013, 151, 113-130.	1.2	38
36	Topological properties of a time-integrated activity-driven network. <i>Physical Review E</i> , 2013, 87, 062807.	2.1	53

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37	Nature of the Epidemic Threshold for the Susceptible-Infected-Susceptible Dynamics in Networks. <i>Physical Review Letters</i> , 2013, 111, 068701.	7.8	212
38	Immunization strategies for epidemic processes in time-varying contact networks. <i>Journal of Theoretical Biology</i> , 2013, 337, 89-100.	1.7	71
39	Phase transitions with infinitely many absorbing states in complex networks. <i>Physical Review E</i> , 2013, 87, 022820.	2.1	10
40	Modeling Human Dynamics of Face-to-Face Interaction Networks. <i>Physical Review Letters</i> , 2013, 110, 168701.	7.8	102
41	Networks in Cognitive Science. <i>Trends in Cognitive Sciences</i> , 2013, 17, 348-360.	7.8	267
42	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
43	Evolution in a Changing Environment. <i>PLoS ONE</i> , 2013, 8, e52742.	2.5	19
44	Generalized Voter-Like Models on Heterogeneous Networks. <i>Modeling and Simulation in Science, Engineering and Technology</i> , 2013, , 285-300.	0.6	5
45	Percolation analysis of force networks in anisotropic granular matter. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2012, 2012, P02008.	2.3	7
46	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
47	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
48	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
49	Competing activation mechanisms in epidemics on networks. <i>Scientific Reports</i> , 2012, 2, 371.	3.3	119
50	Ordering dynamics of the multi-state voter model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2012, 2012, P10027.	2.3	28
51	Activity driven modeling of time varying networks. <i>Scientific Reports</i> , 2012, 2, 469.	3.3	470
52	Random Walks and Search in Time-Varying Networks. <i>Physical Review Letters</i> , 2012, 109, 238701.	7.8	153
53	Heterogenous mean-field analysis of a generalized voter-like model on networks. <i>European Physical Journal B</i> , 2012, 85, 1.	1.5	18
54	The Biological Origin of Linguistic Diversity. <i>PLoS ONE</i> , 2012, 7, e48029.	2.5	23

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55	Random walks on temporal networks. <i>Physical Review E</i> , 2012, 85, 056115.	2.1	173
56	A MODEL OF LARGE-SCALE PROTEOME EVOLUTION. , 2011, , 396-407.		0
57	Quasistationary analysis of the contact process on annealed scale-free networks. <i>Physical Review E</i> , 2011, 83, 066113.	2.1	39
58	Irrelevance of information outflow in opinion dynamics models. <i>Physical Review E</i> , 2011, 83, 016113.	2.1	23
59	Quasistationary simulations of the contact process on quenched networks. <i>Physical Review E</i> , 2011, 84, 066102.	2.1	48
60	Voter models on weighted networks. <i>Physical Review E</i> , 2011, 83, 066117.	2.1	44
61	Complex networks and glassy dynamics: walks in the energy landscape. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011, 2011, P03032.	2.3	10
62	Steady-state dynamics of the forest fire model on complex networks. <i>European Physical Journal B</i> , 2010, 76, 109-121.	1.5	29
63	Patterns of complexity. <i>Nature Physics</i> , 2010, 6, 480-481.	16.7	23
64	Thresholds for Epidemic Spreading in Networks. <i>Physical Review Letters</i> , 2010, 105, 218701.	7.8	524
65	Mean-field diffusive dynamics on weighted networks. <i>Physical Review E</i> , 2010, 82, 011111.	2.1	73
66	Langevin approach for the dynamics of the contact process on annealed scale-free networks. <i>Physical Review E</i> , 2009, 79, 036110.	2.1	94
67	Nonlinear $q$ -voter model. <i>Physical Review E</i> , 2009, 80, 041129.	2.1	191
68	Glass transition and random walks on complex energy landscapes. <i>Physical Review E</i> , 2009, 80, 020102.	2.1	16
69	Effects of mobility on ordering dynamics. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009, 2009, L11001.	2.3	8
70	Bosonic reaction-diffusion processes on scale-free networks. <i>Physical Review E</i> , 2008, 78, 016111.	2.1	45
71	Random walks on complex trees. <i>Physical Review E</i> , 2008, 78, 011114.	2.1	54
72	Routes to Thermodynamic Limit on Scale-Free Networks. <i>Physical Review Letters</i> , 2008, 100, 148701.	7.8	52

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73	Reaction-diffusion Processes in Scale-free Networks. Bolyai Society Mathematical Studies, 2008, , 203-237.	0.3	2
74	Castellano and Pastor-Satorras Reply:. Physical Review Letters, 2007, 98, .	7.8	24
75	Reaction-diffusion processes and metapopulation models in heterogeneous networks. Nature Physics, 2007, 3, 276-282.	16.7	632
76	Zero temperature Glauber dynamics on complex networks. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P05001-P05001.	2.3	31
77	Correlations in weighted networks. Physical Review E, 2006, 74, 055101.	2.1	61
78	Non-Mean-Field Behavior of the Contact Process on Scale-Free Networks. Physical Review Letters, 2006, 96, 038701.	7.8	111
79	Dynamical patterns of epidemic outbreaks in complex heterogeneous networks. Journal of Theoretical Biology, 2005, 235, 275-288.	1.7	390
80	Characterization and modeling of weighted networks. Physica A: Statistical Mechanics and Its Applications, 2005, 346, 34-43.	2.6	271
81	Analytic solution of a static scale-free network model. European Physical Journal B, 2005, 44, 241-248.	1.5	46
82	Diffusion-annihilation processes in complex networks. Physical Review E, 2005, 71, 056104.	2.1	71
83	Generation of uncorrelated random scale-free networks. Physical Review E, 2005, 71, 027103.	2.1	574
84	Rate equation approach for correlations in growing network models. Physical Review E, 2005, 71, 036127.	2.1	70
85	Velocity and Hierarchical Spread of Epidemic Outbreaks in Scale-Free Networks. Physical Review Letters, 2004, 92, 178701.	7.8	560
86	Self-organization of collaboration networks. Physical Review E, 2004, 70, 036106.	2.1	203
87	Structure of cycles and local ordering in complex networks. European Physical Journal B, 2004, 38, 183-186.	1.5	66
88	Cut-offs and finite size effects in scale-free networks. European Physical Journal B, 2004, 38, 205-209.	1.5	268
89	Virtual Round Table on ten leading questions for network research. European Physical Journal B, 2004, 38, 143-145.	1.5	43
90	The architecture of complex weighted networks. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 3747-3752.	7.1	3,160

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91	Models of social networks based on social distance attachment. <i>Physical Review E</i> , 2004, 70, 056122.	2.1	549
92	Epidemics and immunization in scale-free networks. , 2004, , 111-130.		98
93	Evolving protein interaction networks through gene duplication. <i>Journal of Theoretical Biology</i> , 2003, 222, 199-210.	1.7	347
94	Class of correlated random networks with hidden variables. <i>Physical Review E</i> , 2003, 68, 036112.	2.1	313
95	Topology and correlations in structured scale-free networks. <i>Physical Review E</i> , 2003, 67, 046111.	2.1	70
96	Absence of Epidemic Threshold in Scale-Free Networks with Degree Correlations. <i>Physical Review Letters</i> , 2003, 90, 028701.	7.8	436
97	Stochastic Theory of Synchronization Transitions in Extended Systems. <i>Physical Review Letters</i> , 2003, 90, 204101.	7.8	35
98	Critical load and congestion instabilities in scale-free networks. <i>Europhysics Letters</i> , 2003, 62, 292-298.	2.0	164
99	Epidemic Spreading in Complex Networks with Degree Correlations. <i>Lecture Notes in Physics</i> , 2003, , 127-147.	0.7	154
100	Epidemic dynamics in finite size scale-free networks. <i>Physical Review E</i> , 2002, 65, 035108.	2.1	538
101	A MODEL OF LARGE-SCALE PROTEOME EVOLUTION. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , 2002, 05, 43-54.	1.4	250
102	Immunization of complex networks. <i>Physical Review E</i> , 2002, 65, 036104.	2.1	927
103	Large-scale topological and dynamical properties of the Internet. <i>Physical Review E</i> , 2002, 65, 066130.	2.1	530
104	Epidemic spreading in correlated complex networks. <i>Physical Review E</i> , 2002, 66, 047104.	2.1	395
105	Epidemic Spreading in Scale-Free Networks. <i>Physical Review Letters</i> , 2001, 86, 3200-3203.	7.8	4,633
106	Epidemic dynamics and endemic states in complex networks. <i>Physical Review E</i> , 2001, 63, 066117.	2.1	1,273
107	Dynamical and Correlation Properties of the Internet. <i>Physical Review Letters</i> , 2001, 87, 258701.	7.8	1,130
108	Reaction-diffusion system with self-organized critical behavior. <i>European Physical Journal B</i> , 2001, 19, 583-587.	1.5	14

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109	Velocity fluctuations and hydrodynamic diffusion in sedimentation. <i>Europhysics Letters</i> , 2001, 54, 45-50.	2.0	11
110	Model of correlated sequential adsorption of colloidal particles. <i>Physical Review E</i> , 2001, 64, 016103.	2.1	4
111	Field theory for a reaction-diffusion model of quasispecies dynamics. <i>Physical Review E</i> , 2001, 64, 051909.	2.1	35
112	Dipolar interactions induced order in assemblies of magnetic particles. <i>Journal of Magnetism and Magnetic Materials</i> , 2000, 221, 124-131.	2.3	21
113	Anomalous scaling in the Zhang model. <i>European Physical Journal B</i> , 2000, 18, 197-200.	1.5	21
114	Breaking of scale invariance symmetry in adsorption processes. <i>Europhysics Letters</i> , 2000, 51, 327-333.	2.0	0
115	Universality classes in directed sandpile models. <i>Journal of Physics A</i> , 2000, 33, L33-L39.	1.6	32
116	Corrections to scaling in the forest-fire model. <i>Physical Review E</i> , 2000, 61, 4854-4859.	2.1	22
117	Universality Class of Absorbing Phase Transitions with a Conserved Field. <i>Physical Review Letters</i> , 2000, 85, 1803-1806.	7.8	175
118	Critical behavior and conservation in directed sandpiles. <i>Physical Review E</i> , 2000, 62, 6195-6205.	2.1	22
119	Field theory of absorbing phase transitions with a nondiffusive conserved field. <i>Physical Review E</i> , 2000, 62, R5875-R5878.	2.1	59
120	Kinetic growth of field-oriented chains in dipolar colloidal solutions. <i>Physical Review E</i> , 1999, 59, 826-834.	2.1	50
121	Analytic model for the ballistic adsorption of polydisperse mixtures. <i>Physical Review E</i> , 1999, 59, 5701-5705.	2.1	8
122	Growth of oriented chains in dipolar colloids. <i>Computer Physics Communications</i> , 1999, 121-122, 262-264.	7.5	0
123	Ballistic adsorption of colloidal magnetic particles. <i>Computer Physics Communications</i> , 1999, 121-122, 265-267.	7.5	1
124	Scaling of a Slope: The Erosion of Tilted Landscapes. <i>Journal of Statistical Physics</i> , 1998, 93, 477-500.	1.2	25
125	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
126	Long-Range-Interaction Induced Ordered Structures in Deposition Processes. <i>Physical Review Letters</i> , 1998, 80, 5373-5376.	7.8	14



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127	Stochastic Equation for the Erosion of Inclined Topography. <i>Physical Review Letters</i> , 1998, 80, 4349-4352.	7.8	28
128	Multifractal properties of power-law time sequences: Application to rice piles. <i>Physical Review E</i> , 1997, 56, 5284-5294.	2.1	22
129	Branch distribution in diffusion-limited aggregation: a maximum entropy approach. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1996, 224, 463-479.	2.6	13
130	Numerical estimates of the generalized dimensions of the Hénon attractor for negative $q$ . <i>Journal of Physics A</i> , 1996, 29, L391-L398.	1.6	31
131	Particle-cluster aggregation with dipolar interactions. <i>Physical Review E</i> , 1995, 51, 5994-6003.	2.1	48