

Albert Diaz-Guilera

List of Publications by Year in descending order

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117
papers

11,809
citations

101384

36
h-index

26548

107
g-index

119
all docs

119
docs citations

119
times ranked

7378
citing authors

#	ARTICLE	IF	CITATIONS
1	Synchronization in complex networks. <i>Physics Reports</i> , 2008, 469, 93-153.	10.3	2,928
2	Comparing community structure identification. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2005, 2005, P09008-P09008.	0.9	1,889
3	Self-similar community structure in a network of human interactions. <i>Physical Review E</i> , 2003, 68, 065103.	0.8	1,092
4	Synchronization Reveals Topological Scales in Complex Networks. <i>Physical Review Letters</i> , 2006, 96, 114102.	2.9	692
5	Models of social networks based on social distance attachment. <i>Physical Review E</i> , 2004, 70, 056122.	0.8	549
6	Optimal Network Topologies for Local Search with Congestion. <i>Physical Review Letters</i> , 2002, 89, 248701.	2.9	501
7	Communication in Networks with Hierarchical Branching. <i>Physical Review Letters</i> , 2001, 86, 3196-3199.	2.9	390
8	Remote Synchronization Reveals Network Symmetries and Functional Modules. <i>Physical Review Letters</i> , 2013, 110, 174102.	2.9	209
9	Spectral properties of the Laplacian of multiplex networks. <i>Physical Review E</i> , 2013, 88, 032807.	0.8	186
10	The effect of size heterogeneity on community identification in complex networks. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2006, 2006, P11010-P11010.	0.9	178
11	Dynamical properties of model communication networks. <i>Physical Review E</i> , 2002, 66, 026704.	0.8	172
12	Community analysis in social networks. <i>European Physical Journal B</i> , 2004, 38, 373-380.	0.6	167
13	Quantification of network structural dissimilarities. <i>Nature Communications</i> , 2017, 8, 13928.	5.8	166
14	Synchronization in networks of mobile oscillators. <i>Physical Review E</i> , 2011, 83, 025101.	0.8	142
15	Chimera-like States in Modular Neural Networks. <i>Scientific Reports</i> , 2016, 6, 19845.	1.6	137
16	Efficiency of informational transfer in regular and complex networks. <i>Physical Review E</i> , 2005, 71, 036122.	0.8	134
17	Synchronization processes in complex networks. <i>Physica D: Nonlinear Phenomena</i> , 2006, 224, 27-34.	1.3	132
18	Self-Organized Criticality and Synchronization in a Lattice Model of Integrate-and-Fire Oscillators. <i>Physical Review Letters</i> , 1995, 74, 118-121.	2.9	105

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19	From The Cover: Emergence of complex dynamics in a simple model of signaling networks. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15551-15555.	3.3	97
20	Pattern formation in multiplex networks. Scientific Reports, 2015, 5, 10840.	1.6	93
21	Dynamical and spectral properties of complex networks. New Journal of Physics, 2007, 9, 187-187.	1.2	86
22	Collective motion of active Brownian particles with polar alignment. Soft Matter, 2018, 14, 2610-2618.	1.2	75
23	Modeling diffusion of innovations in a social network. Physical Review E, 2002, 66, 026121.	0.8	66
24	Role of network topology in the synchronization of power systems. European Physical Journal B, 2012, 85, 1.	0.6	66
25	Challenges in complex systems science. European Physical Journal: Special Topics, 2012, 214, 245-271.	1.2	59
26	Synchronization, diversity, and topology of networks of integrate and fire oscillators. Physical Review E, 2000, 62, 5565-5570.	0.8	55
27	Synchronization and modularity in complex networks. European Physical Journal: Special Topics, 2007, 143, 19-25.	1.2	54
28	ON SELF-ORGANIZED CRITICALITY AND SYNCHRONIZATION IN LATTICE MODELS OF COUPLED DYNAMICAL SYSTEMS. International Journal of Modern Physics B, 1996, 10, 1111-1151.	1.0	52
29	Dynamic Renormalization Group Approach to Self-Organized Critical Phenomena. Europhysics Letters, 1994, 26, 177-182.	0.7	50
30	Impact of community structure on information transfer. Physical Review E, 2008, 77, 036103.	0.8	48
31	Consensus in networks of mobile communicating agents. Physical Review E, 2012, 85, 016113.	0.8	48
32	On the rich-club effect in dense and weighted networks. European Physical Journal B, 2009, 67, 271-275.	0.6	46
33	Noise and dynamics of self-organized critical phenomena. Physical Review A, 1992, 45, 8551-8558.	1.0	43
34	The real communication network behind the formal chart: Community structure in organizations. Journal of Economic Behavior and Organization, 2006, 61, 653-667.	1.0	43
35	The dynamics of norm change in the cultural evolution of language. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8260-8265.	3.3	42
36	Synchronization in symmetric bipolar population networks. Physical Review E, 2009, 80, 066120.	0.8	40

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37	Tuning Synchronization of Integrate-and-Fire Oscillators through Mobility. <i>Physical Review Letters</i> , 2013, 110, 114101.	2.9	39
38	Communication and optimal hierarchical networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 299, 247-252.	1.2	36
39	Self-organized evolution in a socioeconomic environment. <i>Physical Review E</i> , 2000, 61, 3466-3469.	0.8	35
40	Opinion competition dynamics on multiplex networks. <i>New Journal of Physics</i> , 2017, 19, 123019.	1.2	34
41	Self-organized criticality in evolutionary systems with local interaction. <i>Journal of Economic Dynamics and Control</i> , 2002, 26, 2115-2142.	0.9	33
42	An algebraic topological method for multimodal brain networks comparisons. <i>Frontiers in Psychology</i> , 2015, 6, 904.	1.1	32
43	Nonequilibrium phase transition in a model for the propagation of innovations among economic agents. <i>Physical Review E</i> , 2003, 68, 066101.	0.8	30
44	Synchronization in a Lattice Model of Pulse-Coupled Oscillators. <i>Physical Review Letters</i> , 1995, 75, 3697-3700.	2.9	29
45	Competition and Adaptation in an Internet Evolution Model. <i>Physical Review Letters</i> , 2005, 94, 038701.	2.9	28
46	Self-Organized Criticality Induced by Diversity. <i>Physical Review Letters</i> , 1997, 78, 1492-1495.	2.9	27
47	Synchronization in Dynamical Networks of Locally Coupled Self-Propelled Oscillators. <i>Physical Review X</i> , 2017, 7, .	2.8	27
48	Assessing diversity in multiplex networks. <i>Scientific Reports</i> , 2019, 9, 4511.	1.6	26
49	SYNCHRONIZATION IN RANDOM GEOMETRIC GRAPHS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2009, 19, 687-693.	0.7	25
50	Synchronization of mobile chaotic oscillator networks. <i>Chaos</i> , 2016, 26, 094824.	1.0	24
51	Interplay between social influence and competitive strategical games in multiplex networks. <i>Scientific Reports</i> , 2017, 7, 7087.	1.6	24
52	Extracting topological features from dynamical measures in networks of Kuramoto oscillators. <i>Physical Review E</i> , 2012, 85, 036112.	0.8	22
53	Statistical mechanics of multiedge networks. <i>Physical Review E</i> , 2013, 88, 062806.	0.8	22
54	Symmetries and fixed point stability of stochastic differential equations modeling self-organized criticality. <i>Physical Review E</i> , 1997, 55, 2434-2445.	0.8	21

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55	Supersampling and Network Reconstruction of Urban Mobility. PLoS ONE, 2015, 10, e0134508.	1.1	21
56	Internal and external fluctuations around nonequilibrium steady states in one-dimensional heat-conduction problems. Physical Review A, 1986, 34, 462-467.	1.0	20
57	Food-Bridging: A New Network Construction to Unveil the Principles of Cooking. Frontiers in ICT, 2017, 4, .	3.6	20
58	Community Structure Identification. Complex Systems and Interdisciplinary Science, 2007, , 93-114.	0.2	20
59	Mechanisms of synchronization and pattern formation in a lattice of pulse-coupled oscillators. Physical Review E, 1998, 57, 3820-3828.	0.8	18
60	Dynamical properties of the Zhang model of self-organized criticality. Physical Review E, 1998, 58, 247-253.	0.8	18
61	Search and Congestion in Complex Networks. Lecture Notes in Physics, 2003, , 175-194.	0.3	18
62	The global minima of the communicative energy of natural communication systems. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P06009-P06009.	0.9	18
63	Random mixtures with orientational order, and the anisotropic resistivity tensor of high- T_c superconductors. Journal of Applied Physics, 1991, 69, 379-383.	1.1	15
64	Modeling the Internet. European Physical Journal B, 2006, 50, 249-254.	0.6	13
65	Exploring complex networks by means of adaptive walkers. Physical Review E, 2012, 86, 066116.	0.8	13
66	Active and reactive behaviour in human mobility: the influence of attraction points on pedestrians. Royal Society Open Science, 2016, 3, 160177.	1.1	13
67	Benchmarking seeding strategies for spreading processes in social networks: an interplay between influencers, topologies and sizes. Scientific Reports, 2020, 10, 3666.	1.6	13
68	Role of adjacency-matrix degeneracy in maximum-entropy-weighted network models. Physical Review E, 2015, 92, 052816.	0.8	12
69	Replicator dynamics with diffusion on multiplex networks. Physical Review E, 2016, 94, 022301.	0.8	12
70	SYNCHRONIZATION OF MOVING INTEGRATE AND FIRE OSCILLATORS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250179.	0.7	11
71	Phase Patterns of Coupled Oscillators with Application to Wireless Communication. Lecture Notes in Computer Science, 2008, , 184-191.	1.0	11
72	Optimal information transmission in organizations: search and congestion. Review of Economic Design, 2010, 14, 75-93.	0.2	10

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73	Flocking-enhanced social contagion. <i>Physical Review Research</i> , 2020, 2, .	1.3	10
74	Spatial correlations for temperature fluctuations from surface noise. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1987, 141, 220-232.	1.2	9
75	Performance of excitable small-world networks of Bonhoeffer-van der Pol-FitzHugh-Nagumo oscillators. <i>Europhysics Letters</i> , 2006, 76, 780-786.	0.7	9
76	The configuration multi-edge model: Assessing the effect of fixing node strengths on weighted network magnitudes. <i>Europhysics Letters</i> , 2014, 107, 38002.	0.7	8
77	Synchronization invariance under network structural transformations. <i>Physical Review E</i> , 2018, 97, 060301.	0.8	8
78	Modeling partial lockdowns in multiplex networks using partition strategies. <i>Applied Network Science</i> , 2021, 6, 27.	0.8	8
79	On fluctuations about non-equilibrium steady states near Gunn instability. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1986, 135, 200-212.	1.2	7
80	Scaling Relations and Exponents in the Growth of Rough Interfaces through Random Media. <i>Europhysics Letters</i> , 1995, 29, 197-202.	0.7	7
81	Stability of spatio-temporal structures in a lattice model of pulse-coupled oscillators. <i>Physica D: Nonlinear Phenomena</i> , 1997, 103, 419-429.	1.3	7
82	Spectral Analysis of Synchronization in Mobile Networks. , 2011, , .		7
83	Influence of topology in the mobility enhancement of pulse-coupled oscillator synchronization. <i>Physical Review E</i> , 2017, 96, 062306.	0.8	7
84	Local Search with Congestion in Complex Communication Networks. <i>Lecture Notes in Computer Science</i> , 2004, , 1078-1085.	1.0	7
85	Renormalization of the diffusion coefficient in a fluid in elongational flow. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1989, 154, 257-270.	1.2	6
86	Optimization as a result of the interplay between dynamics and structure. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 326, 567-577.	1.2	6
87	Chimera states in a network-organized public goods game with destructive agents. <i>Chaos</i> , 2016, 26, 123108.	1.0	6
88	On fluctuations about non-equilibrium steady states near Gunn instability. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1986, 135, 180-199.	1.2	5
89	NONLINEAR STOCHASTIC DIFFERENTIAL EQUATIONS AND SELF-ORGANIZED CRITICALITY. <i>Fractals</i> , 1993, 01, 963-967.	1.8	5
90	Dynamics towards synchronization in hierarchical networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 224007.	0.7	5

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91	Stationary patterns in star networks of bistable units: Theory and application to chemical reactions. <i>Physical Review E</i> , 2017, 95, 042203.	0.8	5
92	Modeling international crisis synchronization in the world trade web. <i>Networks and Heterogeneous Media</i> , 2012, 7, 385-397.	0.5	5
93	A Complex Network Framework to Model Cognition: Unveiling Correlation Structures from Connectivity. <i>Complexity</i> , 2018, 2018, 1-19.	0.9	4
94	Functionability in complex networks: Leading nodes for the transition from structural to functional networks through remote asynchronization. <i>Chaos</i> , 2020, 30, 013105.	1.0	4
95	Analysis of non-stationary fluctuations in a nuclear power reactor with temperature feedback. <i>Annals of Nuclear Energy</i> , 1985, 12, 441-447.	0.9	3
96	Pattern selection in a lattice of pulse-coupled oscillators. <i>Physical Review E</i> , 1999, 60, 3626-3632.	0.8	3
97	Complex fluctuations and robustness in stylized signalling networks. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007, 2007, P01013-P01013.	0.9	3
98	The role of time scale separation in a nonequilibrium roughening transition. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 374, 289-292.	1.2	3
99	Comparing spatial networks: A one-size-fits-all efficiency-driven approach. <i>Physical Review E</i> , 2020, 101, 042301.	0.8	3
100	Analysis of fluctuations in transient states in a non-linear nuclear reactor model with delayed neutrons. <i>Annals of Nuclear Energy</i> , 1985, 12, 501-508.	0.9	2
101	On fluctuations in interfacial fluid systems. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1989, 157, 1018-1032.	1.2	2
102	SYNCHRONIZATION IN A RING OF PULSATING OSCILLATORS WITH BIDIRECTIONAL COUPLINGS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1999, 09, 2203-2207.	0.7	2
103	Complex Networks: Statics and Dynamics. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	2
104	Quasi-symmetries in complex networks: a dynamical model approach. <i>Journal of Complex Networks</i> , 2021, 9, .	1.1	2
105	Propagation of Innovations in Complex Patterns of Interaction. <i>Understanding Complex Systems</i> , 2009, , 269-284.	0.3	2
106	Asymptotic analysis of a stochastic non-linear nuclear reactor model. <i>Annals of Nuclear Energy</i> , 1986, 13, 49-52.	0.9	1
107	Heat transfer in the coolant channel of a heat-exchanger system based on fluctuation theories. <i>Physical Review A</i> , 1988, 38, 4822-4831.	1.0	1
108	Publisher's Note: Impact of community structure on information transfer [Phys. Rev. E77, 036103 (2008)]. <i>Physical Review E</i> , 2008, 77, .	0.8	1

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109	PACEMAKERS IN A CAYLEY TREE OF KURAMOTO OSCILLATORS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250161.	0.7	1
110	Publisher's Note: Synchronization in Dynamical Networks of Locally Coupled Self-Propelled Oscillators [Phys. Rev. X 7 , 011028 (2017)]. Physical Review X, 2017, 7, .	2.8	0
111	Noise-induced polarization switching in complex networks. Physical Review E, 2017, 95, 042305.	0.8	0
112	Optimal cost tuning of frustration: Achieving desired states in the Kuramoto-Sakaguchi model. Physical Review E, 2021, 103, 012216.	0.8	0
113	Identificación de comunidades analizando el uso del correo electrónico. Profesional De La Informacion, 2009, 18, 27-33.	2.7	0
114	Complexity of Boolean Dynamics in Simple Models of Signaling Networks and in Real Genetic Networks. World Scientific Lecture Notes in Complex Systems, 2009, , 79-101.	0.1	0
115	Effects of Noise on Self-Organized Critical Phenomena. NATO ASI Series Series B: Physics, 1993, , 407-415.	0.2	0
116	10.1063/1.4971974.1. , 2016, , .		0
117	Self-Organization in Multiplex Networks. , 2018, , 148-158.		0