

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	Modeling partial lockdowns in multiplex networks using partition strategies. Applied Network Science, 2021, 6, 27.	0.8	8
2	Quasi-symmetries in complex networks: a dynamical model approach. Journal of Complex Networks, 2021, 9, .	1.1	2
3	Optimal cost tuning of frustration: Achieving desired states in the Kuramoto-Sakaguchi model. Physical Review E, 2021, 103, 012216.	0.8	0
4	Comparing spatial networks: A one-size-fits-all efficiency-driven approach. Physical Review E, 2020, 101, 042301.	0.8	3
5	Benchmarking seeding strategies for spreading processes in social networks: an interplay between influencers, topologies and sizes. Scientific Reports, 2020, 10, 3666.	1.6	13
6	Functionability in complex networks: Leading nodes for the transition from structural to functional networks through remote asynchronization. Chaos, 2020, 30, 013105.	1.0	4
7	Flocking-enhanced social contagion. Physical Review Research, 2020, 2, .	1.3	10
8	Assessing diversity in multiplex networks. Scientific Reports, 2019, 9, 4511.	1.6	26
9	Collective motion of active Brownian particles with polar alignment. Soft Matter, 2018, 14, 2610-2618.	1.2	75
10	A Complex Network Framework to Model Cognition: Unveiling Correlation Structures from Connectivity. Complexity, 2018, 2018, 1-19.	0.9	4
11	Synchronization invariance under network structural transformations. Physical Review E, 2018, 97, 060301.	0.8	8
12	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
13	Self-Organization in Multiplex Networks. , 2018, , 148-158.		0
14	Quantification of network structural dissimilarities. Nature Communications, 2017, 8, 13928.	5.8	166
15	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
16	Synchronization in Dynamical Networks of Locally Coupled Self-Propelled Oscillators. Physical Review X, 2017, 7, .	2.8	27
17	Opinion competition dynamics on multiplex networks. New Journal of Physics, 2017, 19, 123019.	1.2	34
18	Interplay between social influence and competitive strategical games in multiplex networks. Scientific Reports, 2017, 7, 7087.	1.6	24

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19	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
20	Influence of topology in the mobility enhancement of pulse-coupled oscillator synchronization. <i>Physical Review E</i> , 2017, 96, 062306.	0.8	7
21	Noise-induced polarization switching in complex networks. <i>Physical Review E</i> , 2017, 95, 042305.	0.8	0
22	Food-Bridging: A New Network Construction to Unveil the Principles of Cooking. <i>Frontiers in ICT</i> , 2017, 4, .	3.6	20
23	<i>Active</i> and <i>reactive</i> behaviour in human mobility: the influence of attraction points on pedestrians. <i>Royal Society Open Science</i> , 2016, 3, 160177.	1.1	13
24	Synchronization of mobile chaotic oscillator networks. <i>Chaos</i> , 2016, 26, 094824.	1.0	24
25	Chimera-like States in Modular Neural Networks. <i>Scientific Reports</i> , 2016, 6, 19845.	1.6	137
26	Chimera states in a network-organized public goods game with destructive agents. <i>Chaos</i> , 2016, 26, 123108.	1.0	6
27	Replicator dynamics with diffusion on multiplex networks. <i>Physical Review E</i> , 2016, 94, 022301.	0.8	12
28	10.1063/1.4971974.1., 2016, , .		0
29	Role of adjacency-matrix degeneracy in maximum-entropy-weighted network models. <i>Physical Review E</i> , 2015, 92, 052816.	0.8	12
30	Pattern formation in multiplex networks. <i>Scientific Reports</i> , 2015, 5, 10840.	1.6	93
31	Supersampling and Network Reconstruction of Urban Mobility. <i>PLoS ONE</i> , 2015, 10, e0134508.	1.1	21
32	An algebraic topological method for multimodal brain networks comparisons. <i>Frontiers in Psychology</i> , 2015, 6, 904.	1.1	32
33	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
34	Spectral properties of the Laplacian of multiplex networks. <i>Physical Review E</i> , 2013, 88, 032807.	0.8	186
35	Statistical mechanics of multiedge networks. <i>Physical Review E</i> , 2013, 88, 062806.	0.8	22
36	Tuning Synchronization of Integrate-and-Fire Oscillators through Mobility. <i>Physical Review Letters</i> , 2013, 110, 114101.	2.9	39

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37	Remote Synchronization Reveals Network Symmetries and Functional Modules. Physical Review Letters, 2013, 110, 174102.	2.9	209
38	Consensus in networks of mobile communicating agents. Physical Review E, 2012, 85, 016113.	0.8	48
39	Exploring complex networks by means of adaptive walkers. Physical Review E, 2012, 86, 066116.	0.8	13
40	Extracting topological features from dynamical measures in networks of Kuramoto oscillators. Physical Review E, 2012, 85, 036112.	0.8	22
41	SYNCHRONIZATION OF MOVING INTEGRATE AND FIRE OSCILLATORS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250179.	0.7	11
42	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
43	Role of network topology in the synchronization of power systems. European Physical Journal B, 2012, 85, 1.	0.6	66
44	Challenges in complex systems science. European Physical Journal: Special Topics, 2012, 214, 245-271.	1.2	59
45	Modeling international crisis synchronization in the world trade web. Networks and Heterogeneous Media, 2012, 7, 385-397.	0.5	5
46	Spectral Analysis of Synchronization in Mobile Networks. , 2011, , .		7
47	Synchronization in networks of mobile oscillators. Physical Review E, 2011, 83, 025101.	0.8	142
48	Optimal information transmission in organizations: search and congestion. Review of Economic Design, 2010, 14, 75-93.	0.2	10
49	Synchronization in symmetric bipolar population networks. Physical Review E, 2009, 80, 066120.	0.8	40
50	SYNCHRONIZATION IN RANDOM GEOMETRIC GRAPHS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2009, 19, 687-693.	0.7	25
51	On the rich-club effect in dense and weighted networks. European Physical Journal B, 2009, 67, 271-275.	0.6	46
52	Propagation of Innovations in Complex Patterns of Interaction. Understanding Complex Systems, 2009, , 269-284.	0.3	2
53	Identificaci3n de comunidades analizando el uso del correo electr3nico. Profesional De La Informacion, 2009, 18, 27-33.	2.7	0
54	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

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55	Synchronization in complex networks. <i>Physics Reports</i> , 2008, 469, 93-153.	10.3	2,928
56	Dynamics towards synchronization in hierarchical networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 224007.	0.7	5
57	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
58	Impact of community structure on information transfer. <i>Physical Review E</i> , 2008, 77, 036103.	0.8	48
59	Phase Patterns of Coupled Oscillators with Application to Wireless Communication. <i>Lecture Notes in Computer Science</i> , 2008, , 184-191.	1.0	11
60	Dynamical and spectral properties of complex networks. <i>New Journal of Physics</i> , 2007, 9, 187-187.	1.2	86
61	Complex fluctuations and robustness in stylized signalling networks. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007, 2007, P01013-P01013.	0.9	3
62	The global minima of the communicative energy of natural communication systems. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007, 2007, P06009-P06009.	0.9	18
63	Complex Networks: Statics and Dynamics. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	2
64	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
65	Synchronization and modularity in complex networks. <i>European Physical Journal: Special Topics</i> , 2007, 143, 19-25.	1.2	54
66	Community Structure Identification. <i>Complex Systems and Interdisciplinary Science</i> , 2007, , 93-114.	0.2	20
67	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
68	Synchronization Reveals Topological Scales in Complex Networks. <i>Physical Review Letters</i> , 2006, 96, 114102.	2.9	692
69	The real communication network behind the formal chart: Community structure in organizations. <i>Journal of Economic Behavior and Organization</i> , 2006, 61, 653-667.	1.0	43
70	Synchronization processes in complex networks. <i>Physica D: Nonlinear Phenomena</i> , 2006, 224, 27-34.	1.3	132
71	Modeling the Internet. <i>European Physical Journal B</i> , 2006, 50, 249-254.	0.6	13
72	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

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73	Competition and Adaptation in an Internet Evolution Model. <i>Physical Review Letters</i> , 2005, 94, 038701.	2.9	28
74	Efficiency of informational transfer in regular and complex networks. <i>Physical Review E</i> , 2005, 71, 036122.	0.8	134
75	Comparing community structure identification. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2005, 2005, P09008-P09008.	0.9	1,889
76	From The Cover: Emergence of complex dynamics in a simple model of signaling networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 15551-15555.	3.3	97
77	Community analysis in social networks. <i>European Physical Journal B</i> , 2004, 38, 373-380.	0.6	167
78	Models of social networks based on social distance attachment. <i>Physical Review E</i> , 2004, 70, 056122.	0.8	549
79	Local Search with Congestion in Complex Communication Networks. <i>Lecture Notes in Computer Science</i> , 2004, , 1078-1085.	1.0	7
80	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
81	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
82	Self-similar community structure in a network of human interactions. <i>Physical Review E</i> , 2003, 68, 065103.	0.8	1,092
83	Search and Congestion in Complex Networks. <i>Lecture Notes in Physics</i> , 2003, , 175-194.	0.3	18
84	Optimal Network Topologies for Local Search with Congestion. <i>Physical Review Letters</i> , 2002, 89, 248701.	2.9	501
85	Modeling diffusion of innovations in a social network. <i>Physical Review E</i> , 2002, 66, 026121.	0.8	66
86	Dynamical properties of model communication networks. <i>Physical Review E</i> , 2002, 66, 026704.	0.8	172
87	Self-organized criticality in evolutionary systems with local interaction. <i>Journal of Economic Dynamics and Control</i> , 2002, 26, 2115-2142.	0.9	33
88	Communication and optimal hierarchical networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 299, 247-252.	1.2	36
89	Communication in Networks with Hierarchical Branching. <i>Physical Review Letters</i> , 2001, 86, 3196-3199.	2.9	390
90	Synchronization, diversity, and topology of networks of integrate and fire oscillators. <i>Physical Review E</i> , 2000, 62, 5565-5570.	0.8	55

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91	Self-organized evolution in a socioeconomic environment. <i>Physical Review E</i> , 2000, 61, 3466-3469.	0.8	35
92	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
93	Pattern selection in a lattice of pulse-coupled oscillators. <i>Physical Review E</i> , 1999, 60, 3626-3632.	0.8	3
94	Mechanisms of synchronization and pattern formation in a lattice of pulse-coupled oscillators. <i>Physical Review E</i> , 1998, 57, 3820-3828.	0.8	18
95	Dynamical properties of the Zhang model of self-organized criticality. <i>Physical Review E</i> , 1998, 58, 247-253.	0.8	18
96	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
97	Self-Organized Criticality Induced by Diversity. <i>Physical Review Letters</i> , 1997, 78, 1492-1495.	2.9	27
98	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
99	ON SELF-ORGANIZED CRITICALITY AND SYNCHRONIZATION IN LATTICE MODELS OF COUPLED DYNAMICAL SYSTEMS. <i>International Journal of Modern Physics B</i> , 1996, 10, 1111-1151.	1.0	52
100	Synchronization in a Lattice Model of Pulse-Coupled Oscillators. <i>Physical Review Letters</i> , 1995, 75, 3697-3700.	2.9	29
101	Scaling Relations and Exponents in the Growth of Rough Interfaces through Random Media. <i>Europhysics Letters</i> , 1995, 29, 197-202.	0.7	7
102	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
103	Dynamic Renormalization Group Approach to Self-Organized Critical Phenomena. <i>Europhysics Letters</i> , 1994, 26, 177-182.	0.7	50
104	NONLINEAR STOCHASTIC DIFFERENTIAL EQUATIONS AND SELF-ORGANIZED CRITICALITY. <i>Fractals</i> , 1993, 01, 963-967.	1.8	5
105	Effects of Noise on Self-Organized Critical Phenomena. <i>NATO ASI Series Series B: Physics</i> , 1993, , 407-415.	0.2	0
106	Noise and dynamics of self-organized critical phenomena. <i>Physical Review A</i> , 1992, 45, 8551-8558.	1.0	43
107	Random mixtures with orientational order, and the anisotropic resistivity tensor of high- T_c superconductors. <i>Journal of Applied Physics</i> , 1991, 69, 379-383.	1.1	15
108	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

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109	On fluctuations in interfacial fluid systems. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1989, 157, 1018-1032.	1.2	2
110	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
111	Spatial correlations for temperature fluctuations from surface noise. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1987, 141, 220-232.	1.2	9
112	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
113	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
114	Asymptotic analysis of a stochastic non-linear nuclear reactor model. <i>Annals of Nuclear Energy</i> , 1986, 13, 49-52.	0.9	1
115	Internal and external fluctuations around nonequilibrium steady states in one-dimensional heat-conduction problems. <i>Physical Review A</i> , 1986, 34, 462-467.	1.0	20
116	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
117	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