Juan G Restrepo

List of Publications by Year
in descending order

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58	2,678	249298	214428
papers	citations	26 h-index	50 g-index

60	60	60	2443
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Rabbit Ventricular Action Potential Model Replicating Cardiac Dynamics at Rapid Heart Rates. Biophysical Journal, 2008, 94, 392-410.	0.2	370
2	Onset of synchronization in large networks of coupled oscillators. Physical Review E, 2005, 71, 036151.	0.8	248
3	Characterizing the Dynamical Importance of Network Nodes and Links. Physical Review Letters, 2006, 97, 094102.	2.9	199
4	Predicting Criticality and Dynamic Range in Complex Networks: Effects of Topology. Physical Review Letters, 2011, 106, 058101.	2.9	158
5	Calsequestrin-Mediated Mechanism for Cellular Calcium Transient Alternans. Biophysical Journal, 2008, 95, 3767-3789.	0.2	143
6	Approximating the largest eigenvalue of network adjacency matrices. Physical Review E, 2007, 76, 056119.	0.8	113
7	Synchronization in large directed networks of coupled phase oscillators. Chaos, 2006, 16, 015107.	1.0	85
8	The effect of heterogeneity on hypergraph contagion models. Chaos, 2020, 30, 103117.	1.0	84
9	Cluster synchrony in systems of coupled phase oscillators with higher-order coupling. Physical Review E, 2011, 84, 036208.	0.8	70
10	Inhibition Causes Ceaseless Dynamics in Networks of Excitable Nodes. Physical Review Letters, 2014, 112, 138103.	2.9	67
11	Hierarchical synchrony of phase oscillators in modular networks. Physical Review E, 2012, 85, 016208.	0.8	65
12	Higher-order simplicial synchronization of coupled topological signals. Communications Physics, 2021, 4, .	2.0	64
13	Statistical properties of avalanches in networks. Physical Review E, 2012, 85, 066131.	0.8	62
14	Shattered time: can a dissipative time crystal survive many-body correlations?. New Journal of Physics, 2018, 20, 123003.	1.2	61
15	Downlink Performance Analysis for a Generalized Shotgun Cellular System. IEEE Transactions on Wireless Communications, 2014, 13, 6684-6696.	6.1	60
16	Spatiotemporal intracellular calcium dynamics during cardiac alternans. Chaos, 2009, 19, 037115.	1.0	57
17	Emergence of synchronization in complex networks of interacting dynamical systems. Physica D: Nonlinear Phenomena, 2006, 224, 114-122.	1.3	54
18	Weighted Percolation on Directed Networks. Physical Review Letters, 2008, 100, 058701.	2.9	48

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19	Spatial patterns of desynchronization bursts in networks. Physical Review E, 2004, 69, 066215.	0.8	41
20	Mean-field theory of assortative networks of phase oscillators. Europhysics Letters, 2014, 107, 60006.	0.7	41
21	Emergence of Coherence in Complex Networks of Heterogeneous Dynamical Systems. Physical Review Letters, 2006, 96, 254103.	2.9	40
22	Dynamics and pattern formation in large systems of spatially-coupled oscillators with finite response times. Chaos, 2011, 21, 023122.	1.0	40
23	Downlink coverage analysis in a heterogeneous cellular network. , 2012, , .		40
24	Spontaneous synchronization of coupled oscillator systems with frequency adaptation. Physical Review E, 2010, 81, 046214.	0.8	39
25	Effects of degree-frequency correlations on network synchronization: Universality and full phase-locking. Europhysics Letters, 2013, 101, 20001.	0.7	38
26	Effects of network topology, transmission delays, and refractoriness on the response of coupled excitable systems to a stochastic stimulus. Chaos, 2011, 21, 025117.	1.0	34
27	Complex macroscopic behavior in systems of phase oscillators with adaptive coupling. Physica D: Nonlinear Phenomena, 2014, 267, 27-35.	1.3	31
28	Using machine learning to assess short term causal dependence and infer network links. Chaos, 2019, 29, 121104.	1.0	26
29	Carrier to Interference Ratio Analysis for the Shotgun Cellular System. , 2009, , .		25
30	Multi-Tier Network Performance Analysis Using a Shotgun Cellular System. , 2011, , .		24
31	Frequency assortativity can induce chaos in oscillator networks. Physical Review E, 2015, 91, 060902.	0.8	24
32	Desynchronization Waves and Localized Instabilities in Oscillator Arrays. Physical Review Letters, 2004, 93, 114101.	2.9	23
33	Analysis of Downlink Connectivity Models in a Heterogeneous Cellular Network via Stochastic Geometry. IEEE Transactions on Wireless Communications, 2016, 15, 3895-3907.	6.1	20
34	Feedback control stabilization of critical dynamics via resource transport on multilayer networks: How glia enable learning dynamics in the brain. Physical Review E, 2016, 94, 042310.	0.8	20
35	Coexisting chaotic and multi-periodic dynamics in a model of cardiac alternans. Chaos, 2014, 24, 043126.	1.0	15
36	Stochastic Ordering Based Carrier-to-Interference Ratio Analysis for the Shotgun Cellular Systems. IEEE Wireless Communications Letters, 2012, 1, 565-568.	3.2	13

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37	Line-defect patterns of unstable spiral waves in cardiac tissue. Physical Review E, 2009, 79, 030906.	0.8	12
38	Robust entropy requires strong and balanced excitatory and inhibitory synapses. Chaos, 2018, 28, 103115.	1.0	12
39	Network connectivity during mergers and growth: Optimizing the addition of a module. Physical Review E, 2011, 83, 066112.	0.8	11
40	Hypergraph assortativity: A dynamical systems perspective. Chaos, 2022, 32, .	1.0	11
41	Scale Dependence of Branching in Arterial and Bronchial Trees. Physical Review Letters, 2006, 96, 128101.	2.9	10
42	Unidirectional Pinning and Hysteresis of Spatially Discordant Alternans in Cardiac Tissue. Physical Review Letters, 2012, 108, 108103.	2.9	10
43	Heterogeneous cellular network performance analysis under open and closed access. , 2012, , .		8
44	Modeling of Interference from Cooperative Cognitive Radios for Low Power Primary Users. , 2010, , .		7
45	Spatiotemporal dynamics of calcium-driven cardiac alternans. Physical Review E, 2014, 89, 052707.	0.8	7
46	Geometry, Topology andÂSimplicial Synchronization. Understanding Complex Systems, 2022, , 269-299.	0.3	7
47	Onset of synchronization in the disordered Hamiltonian mean-field model. Physical Review E, 2014, 89, 052125.	0.8	6
48	Hamiltonian mean field model: Effect of network structure on synchronization dynamics. Physical Review E, 2015, 92, 052802.	0.8	6
49	A network-specific approach to percolation in complex networks with bidirectional links. Europhysics Letters, 2012, 98, 16007.	0.7	4
50	Dodge and survive: Modeling the predatory nature of dodgeball. Physical Review E, 2020, 102, 062302.	0.8	4
51	Dynamic regulation of resource transport induces criticality in interdependent networks of excitable units. Physical Review E, 2020, 101, 022303.	0.8	4
52	Optimal control of excitable systems near criticality. Physical Review Research, 2020, 2, .	1.3	4
53	Competitive suppression of synchronization and nonmonotonic transitions in oscillator communities with distributed time delay. Physical Review Research, 2019, 1, .	1.3	3
54	Uncovering low dimensional macroscopic chaotic dynamics of large finite size complex systems. Chaos, 2017, 27, 083121.	1.0	2

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55	Downlink analysis for a heterogeneous cellular network. , 2014, , .		1
56	Dynamics in hybrid complex systems of switches and oscillators. Chaos, 2013, 23, 033142.	1.0	0
57	Ensemble-based estimates of eigenvector error for empirical covariance matrices. Information and Inference, 2019, 8, 289-312.	0.9	0
58	Synchronization of Kuramoto oscillators in networks of networks. IEICE Proceeding Series, 2014, 1, 171-174.	0.0	0