

# Javier M Buldu

## List of Publications by Year in descending order

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105  
papers

2,871  
citations

186265

28  
h-index

189892

50  
g-index

108  
all docs

108  
docs citations

108  
times ranked

2639  
citing authors

#	ARTICLE	IF	CITATIONS
1	Zero-Lag Long-Range Synchronization via Dynamical Relaying. <i>Physical Review Letters</i> , 2006, 97, 123902.	7.8	268
2	Explosive First-Order Transition to Synchrony in Networked Chaotic Oscillators. <i>Physical Review Letters</i> , 2012, 108, 168702.	7.8	154
3	Synchronization of Interconnected Networks: The Role of Connector Nodes. <i>Physical Review Letters</i> , 2014, 112, 248701.	7.8	135
4	Reorganization of Functional Networks in Mild Cognitive Impairment. <i>PLoS ONE</i> , 2011, 6, e19584.	2.5	121
5	Complex network theory and the brain. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130520.	4.0	111
6	Inter-layer synchronization in non-identical multi-layer networks. <i>Scientific Reports</i> , 2017, 7, 45475.	3.3	96
7	Explosive transitions to synchronization in networks of phase oscillators. <i>Scientific Reports</i> , 2013, 3, 1281.	3.3	95
8	Synchronization Interfaces and Overlapping Communities in Complex Networks. <i>Physical Review Letters</i> , 2008, 101, 168701.	7.8	91
9	Principles of recovery from traumatic brain injury: Reorganization of functional networks. <i>NeuroImage</i> , 2011, 55, 1189-1199.	4.2	83
10	Successful strategies for competing networks. <i>Nature Physics</i> , 2013, 9, 230-234.	16.7	82
11	Topological Structure of the Space of Phenotypes: The Case of RNA Neutral Networks. <i>PLoS ONE</i> , 2011, 6, e26324.	2.5	72
12	Functional brain networks: great expectations, hard times and the big leap forward. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130525.	4.0	65
13	Multiscale vulnerability of complex networks. <i>Chaos</i> , 2007, 17, 043110.	2.5	62
14	Topology of music recommendation networks. <i>Chaos</i> , 2006, 16, 013107.	2.5	60
15	Frequency-based brain networks: From a multiplex framework to a full multilayer description. <i>Network Neuroscience</i> , 2018, 2, 418-441.	2.6	56
16	Inferring the connectivity of coupled oscillators from time-series statistical similarity analysis. <i>Scientific Reports</i> , 2015, 5, 10829.	3.3	54
17	Beware of the Small-World Neuroscientist!. <i>Frontiers in Human Neuroscience</i> , 2016, 10, 96.	2.0	53
18	Using Network Science to Analyse Football Passing Networks: Dynamics, Space, Time, and the Multilayer Nature of the Game. <i>Frontiers in Psychology</i> , 2018, 9, 1900.	2.1	48

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19	The cost of attack in competing networks. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20150770.	3.4	39
20	Effect of external noise correlation in optical coherence resonance. <i>Physical Review E</i> , 2001, 64, 051109.	2.1	35
21	Multimode synchronization and communication using unidirectionally coupled semiconductor lasers. <i>IEEE Journal of Quantum Electronics</i> , 2004, 40, 640-650.	1.9	34
22	THE SOCIAL NETWORK OF CONTEMPORARY POPULAR MUSICIANS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2007, 17, 2281-2288.	1.7	33
23	Phase Locking Induces Scale-Free Topologies in Networks of Coupled Oscillators. <i>PLoS ONE</i> , 2008, 3, e2644.	2.5	33
24	Ghost resonance in a semiconductor laser with optical feedback. <i>Europhysics Letters</i> , 2003, 64, 178-184.	2.0	32
25	Emergence of a multilayer structure in adaptive networks of phase oscillators. <i>Chaos, Solitons and Fractals</i> , 2016, 84, 23-30.	5.1	32
26	Generalized synchronization in relay systems with instantaneous coupling. <i>Physical Review E</i> , 2013, 88, 052908.	2.1	31
27	Antiphase synchronization in multiplex networks with attractive and repulsive interactions. <i>Physical Review E</i> , 2021, 103, 032310.	2.1	31
28	Evolutionary dynamics on networks of selectively neutral genotypes: Effects of topology and sequence stability. <i>Physical Review E</i> , 2009, 80, 066112.	2.1	30
29	Topological Measure Locating the Effective Crossover between Segregation and Integration in a Modular Network. <i>Physical Review Letters</i> , 2012, 108, 228701.	7.8	29
30	Ghost stochastic resonance with distributed inputs in pulse-coupled electronic neurons. <i>Physical Review E</i> , 2006, 73, 021101.	2.1	28
31	Isochronous synchronization in mutually coupled chaotic circuits. <i>Chaos</i> , 2007, 17, 023128.	2.5	28
32	Synchronization in Semiconductor Laser Rings. <i>Journal of Lightwave Technology</i> , 2007, 25, 1549-1554.	4.6	28
33	Synchronization of intermittent behavior in ensembles of multistable dynamical systems. <i>Physical Review E</i> , 2015, 91, 032902.	2.1	27
34	Delay-induced resonances in an optical system with feedback. <i>Physical Review E</i> , 2004, 69, 046207.	2.1	26
35	Periodic entrainment of power dropouts in mutually coupled semiconductor lasers. <i>Applied Physics Letters</i> , 2002, 81, 5105-5107.	3.3	24
36	Introduction to Focus Issue: Mesoscales in Complex Networks. <i>Chaos</i> , 2011, 21, 016101.	2.5	24

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37	The resumption of sports competitions after COVID-19 lockdown: The case of the Spanish football league. <i>Chaos, Solitons and Fractals</i> , 2020, 138, 109964.	5.1	23
38	Asymmetric and delayed activation of side modes in multimode semiconductor lasers with optical feedback. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2002, 4, 415-420.	1.4	22
39	Demultiplexing chaos from multimode semiconductor lasers. <i>IEEE Journal of Quantum Electronics</i> , 2005, 41, 164-170.	1.9	22
40	Reconstructing functional brain networks: have we got the basics right?. <i>Frontiers in Human Neuroscience</i> , 2014, 8, 107.	2.0	22
41	Stochastic entrainment of optical power dropouts. <i>Physical Review E</i> , 2002, 66, 021106.	2.1	21
42	Community structures and role detection in music networks. <i>Chaos</i> , 2008, 18, 043105.	2.5	21
43	Evaluating the effect of aging on interference resolution with time-varying complex networks analysis. <i>Frontiers in Human Neuroscience</i> , 2015, 9, 255.	2.0	21
44	Functional brain networks reveal the existence of cognitive reserve and the interplay between network topology and dynamics. <i>Scientific Reports</i> , 2018, 8, 10525.	3.3	21
45	Experimental demonstration of bidirectional chaotic communication by means of isochronal synchronization. <i>Europhysics Letters</i> , 2008, 81, 40005.	2.0	20
46	Enhancing the stability of the synchronization of multivariable coupled oscillators. <i>Physical Review E</i> , 2015, 92, 032804.	2.1	20
47	Ordinal synchronization: Using ordinal patterns to capture interdependencies between time series. <i>Chaos, Solitons and Fractals</i> , 2019, 119, 8-18.	5.1	19
48	Spatial and Temporal Entropies in the Spanish Football League: A Network Science Perspective. <i>Entropy</i> , 2020, 22, 172.	2.2	19
49	The complex network of musical tastes. <i>New Journal of Physics</i> , 2007, 9, 172-172.	2.9	18
50	Competition among networks highlights the power of the weak. <i>Nature Communications</i> , 2016, 7, 13273.	12.8	18
51	Coupling-mediated ghost resonance in mutually injected lasers. <i>Chaos</i> , 2005, 15, 013103.	2.5	16
52	Synchronization of electronic genetic networks. <i>Chaos</i> , 2006, 16, 013127.	2.5	16
53	Episodic Synchronization via Dynamic Injection. <i>Physical Review Letters</i> , 2006, 96, 024102.	7.8	16
54	Noise-Induced Phase Bistability via Stochastic Rocking. <i>Physical Review Letters</i> , 2009, 102, 010601.	7.8	15

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55	Synchronization of networks of chaotic oscillators: Structural and dynamical datasets. Data in Brief, 2016, 7, 1185-1189.	1.0	15
56	Synchronization by dynamical relaying in electronic circuit arrays. Chaos, 2006, 16, 043113.	2.5	14
57	Unveiling Protein Functions through the Dynamics of the Interaction Network. PLoS ONE, 2011, 6, e17679.	2.5	14
58	Synchronization-based computation through networks of coupled oscillators. Frontiers in Computational Neuroscience, 2015, 9, 97.	2.1	14
59	Pitch networks reveal organizational and spatial patterns of Guardiola's F.C. Barcelona. Chaos, Solitons and Fractals, 2020, 138, 109934.	5.1	13
60	Functional Hubs in Mild Cognitive Impairment. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1550034.	1.7	12
61	Editorial: On the relation of dynamics and structure in brain networks. Chaos, 2017, 27, 047201.	2.5	12
62	Disorder and decision cost in spatial networks. Chaos, 2008, 18, 023103.	2.5	10
63	Quantifying stochasticity in the dynamics of delay-coupled semiconductor lasers via forbidden patterns. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 367-377.	3.4	10
64	Biological conservation law as an emerging functionality in dynamical neuronal networks. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11826-11831.	7.1	10
65	Brain synchronizability, a false friend. NeuroImage, 2019, 196, 195-199.	4.2	10
66	Dynamics of modal power distribution in a multimode semiconductor laser with optical feedback. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, L1-L3.	1.4	9
67	Bistable phase control via rocking in a nonlinear electronic oscillator. Chaos, 2006, 16, 043126.	2.5	9
68	Can multilayer brain networks be a real step forward?. Physics of Life Reviews, 2018, 24, 153-155.	2.8	9
69	Experimental datasets of networks of nonlinear oscillators: Structure and dynamics during the path to synchronization. Data in Brief, 2020, 28, 105012.	1.0	9
70	Consistency and identifiability of football teams: a network science perspective. Scientific Reports, 2020, 10, 19735.	3.3	9
71	Using network science to unveil badminton performance patterns. Chaos, Solitons and Fractals, 2020, 135, 109834.	5.1	8
72	ELECTRONIC DESIGN OF SYNTHETIC GENETIC NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 3507-3511.	1.7	6

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73	Entraining the topology and the dynamics of a network of phase oscillators. <i>Physical Review E</i> , 2009, 79, 046105.	2.1	6
74	NETWORKS OF SPRINGS: A PRACTICAL APPROACH. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2010, 20, 937-942.	1.7	6
75	Integration Versus Segregation in Functional Brain Networks. <i>IEEE Transactions on Biomedical Engineering</i> , 2011, 58, 3004-3007.	4.2	6
76	Interconnecting Networks: The Role of Connector Links. <i>Understanding Complex Systems</i> , 2016, , 61-77.	0.6	5
77	Experimental implementation of maximally synchronizable networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2016, 448, 113-121.	2.6	5
78	Taming out-of-equilibrium dynamics on interconnected networks. <i>Nature Communications</i> , 2019, 10, 5314.	12.8	5
79	Functional Brain Networks: beyond the small-world paradigm*. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012, 45, 57-62.	0.4	4
80	Anomalous consistency in Mild Cognitive Impairment: A complex networks approach. <i>Chaos, Solitons and Fractals</i> , 2015, 70, 144-155.	5.1	4
81	Multiplex networks of musical artists: The effect of heterogeneous inter-layer links. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018, 510, 671-677.	2.6	4
82	Editorial: Nonlinear dynamics and networks in sports. <i>Chaos, Solitons and Fractals</i> , 2021, 142, 110518.	5.1	4
83	Entropy of Badminton Strike Positions. <i>Entropy</i> , 2021, 23, 799.	2.2	4
84	Episodic synchronization in dynamically driven neurons. <i>Physical Review E</i> , 2006, 74, 061910.	2.1	3
85	Entraining synthetic genetic oscillators. <i>Chaos</i> , 2009, 19, 033139.	2.5	3
86	MODELING THE EVOLUTION OF ITEM RATING NETWORKS USING TIME-DOMAIN PREFERENTIAL ATTACHMENT. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2012, 22, 1250180.	1.7	3
87	Network Theory in Neuroscience. , 2014, , 1-21.		3
88	Dynamics of power distribution in multimode semiconductor lasers with optical feedback. , 2002, 4646, 411.		2
89	Processing distributed inputs in coupled excitable lasers. <i>Physical Review A</i> , 2007, 76, .	2.5	2
90	PREFERENTIAL ATTACHMENT, AGING AND WEIGHTS IN RECOMMENDATION SYSTEMS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2009, 19, 755-763.	1.7	2

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91	Asymmetries in Football: The Passê”Goal Paradox. Symmetry, 2020, 12, 1052.	2.2	2
92	Identifiability of structural networks of nonlinear electronic oscillators. Scientific Reports, 2020, 10, 14668.	3.3	2
93	Chaos-synchronization of semiconductor laser systems in an open-loop configuration: the short cavity regime and its potential for secure communication systems. , 2003, , .		1
94	External noise in semiconductor lasers. , 2004, , .		1
95	From single layer to multilayer networks in Mild Cognitive Impairment and Alzheimerâ€™s Disease. Journal of Physics Complexity, 0, , .	2.2	1
96	Ghost resonance in a semiconductor laser operating in an excitable regime. , 2003, 5111, 118.		0
97	Ghost resonance in coupled lasers. AIP Conference Proceedings, 2004, , .	0.4	0
98	Coincidence detection of inharmonic pulses in a nonlinear crystal. Physical Review E, 2007, 75, 012902.	2.1	0
99	Generation of scale-free topology in complex networks by phase entrainment. International Journal of Systems Science, 2009, 40, 923-930.	5.5	0
100	ENTRAINMENT COMPETITION IN COMPLEX NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2010, 20, 827-833.	1.7	0
101	NONLOCAL ANALYSIS OF MODULAR ROLES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250167.	1.7	0
102	Multilayer structure formation via homophily and homeostasis. Proceedings of SPIE, 2016, , .	0.8	0
103	Dynamical consistency in networks of nonlinear oscillators. Chaos, Solitons and Fractals, 2021, 148, 111017.	5.1	0
104	Distance Between Players During a Soccer Match: The Influence of Player Position. Frontiers in Psychology, 2021, 12, 723414.	2.1	0
105	Network Theory in Neuroscience. , 2022, , 2190-2206.		0