

Sergio Roberto Lopes

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131
papers

1,627
citations

20
h-index

33
g-index

140
ext. papers

1,826
ext. citations

3.5
avg, IF

4.67
L-index

#	Paper	IF	Citations
131	Delayed feedback control of bursting synchronization in a scale-free neuronal network. <i>Neural Networks</i> , 2010 , 23, 114-24	9.1	108
130	Chaotic phase synchronization in scale-free networks of bursting neurons. <i>Physical Review E</i> , 2007 , 76, 016218	2.4	101
129	Phase synchronization of bursting neurons in clustered small-world networks. <i>Physical Review E</i> , 2012 , 86, 016211	2.4	62
128	Rhythm synchronization and chaotic modulation of coupled Van der Pol oscillators in a model for the heartbeat. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004 , 338, 335-355	3.3	54
127	Suppression of bursting synchronization in clustered scale-free (rich-club) neuronal networks. <i>Chaos</i> , 2012 , 22, 043149	3.3	45
126	Transport properties in nontwist area-preserving maps. <i>Chaos</i> , 2009 , 19, 043108	3.3	43
125	Phase synchronization of coupled bursting neurons and the generalized Kuramoto model. <i>Neural Networks</i> , 2015 , 66, 107-18	9.1	40
124	Bursting synchronization in scale-free networks. <i>Chaos, Solitons and Fractals</i> , 2009 , 41, 2220-2225	9.3	39
123	Finite-time Lyapunov spectrum for chaotic orbits of non-integrable Hamiltonian systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2005 , 335, 394-401	2.3	39
122	Synchronization of bursting Hodgkin-Huxley-type neurons in clustered networks. <i>Physical Review E</i> , 2014 , 90, 032818	2.4	36
121	Bubbling bifurcation: Loss of synchronization and shadowing breakdown in complex systems. <i>Physica D: Nonlinear Phenomena</i> , 2005 , 206, 94-108	3.3	36
120	Lyapunov spectrum and synchronization of piecewise linear map lattices with power-law coupling. <i>Physical Review E</i> , 2002 , 65, 056209	2.4	36
119	Spatial recurrence plots. <i>Physical Review E</i> , 2006 , 73, 056207	2.4	35
118	Collective behavior in a chain of van der Pol oscillators with power-law coupling. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2002 , 303, 339-356	3.3	31
117	Model for tumour growth with treatment by continuous and pulsed chemotherapy. <i>BioSystems</i> , 2014 , 116, 43-8	1.9	29
116	Control of bursting synchronization in networks of Hodgkin-Huxley-type neurons with chemical synapses. <i>Physical Review E</i> , 2013 , 87, 042713	2.4	29
115	Validity of numerical trajectories in the synchronization transition of complex systems. <i>Physical Review E</i> , 2003 , 68, 067204	2.4	26

114	Recurrence quantification analysis of chimera states. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2015 , 379, 2188-2192	2.3	23
113	Effective transport barriers in nontwist systems. <i>Physical Review E</i> , 2012 , 86, 036206	2.4	23
112	Nonlinear three-mode interaction and drift-wave turbulence in a tokamak edge plasma. <i>Physics of Plasmas</i> , 2006 , 13, 042510	2.1	21
111	Neuron dynamics variability and anomalous phase synchronization of neural networks. <i>Chaos</i> , 2018 , 28, 106304	3.3	20
110	Quantifying entropy using recurrence matrix microstates. <i>Chaos</i> , 2018 , 28, 083108	3.3	19
109	Finite-time rotation number: A fast indicator for chaotic dynamical structures. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2013 , 377, 452-456	2.3	19
108	Bursting synchronization in non-locally coupled maps. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008 , 387, 4417-4428	3.3	19
107	Controlling chaos in nonlinear three-wave coupling. <i>Physical Review E</i> , 1996 , 54, 170-174	2.4	19
106	Two-state on-off intermittency and the onset of turbulence in a spatiotemporally chaotic system. <i>Physical Review Letters</i> , 2010 , 105, 055001	7.4	18
105	Using recurrences to characterize the hyperchaos-chaos transition. <i>Physical Review E</i> , 2008 , 78, 066206	2.4	17
104	Mode locking in small-world networks of coupled circle maps. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003 , 322, 118-128	3.3	17
103	Detection of nonstationary transition to synchronized states of a neural network using recurrence analyses. <i>Physical Review E</i> , 2017 , 96, 012320	2.4	17
102	Bursting synchronization in networks with long-range coupling mediated by a diffusing chemical substance. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2012 , 17, 2924-2942	3.7	16
101	Transition to chaos in the conservative four-wave parametric interactions. <i>Physica D: Nonlinear Phenomena</i> , 1997 , 110, 277-288	3.3	16
100	Spatial correlations and synchronization in coupled map lattices with long-range interactions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004 , 343, 201-218	3.3	16
99	Optimizing the detection of nonstationary signals by using recurrence analysis. <i>Chaos</i> , 2018 , 28, 085703	3.3	15
98	Mathematical model of brain tumour with glia-neuron interactions and chemotherapy treatment. <i>Journal of Theoretical Biology</i> , 2015 , 368, 113-21	2.3	15
97	Nonintegrable dynamics of the triplet-triplet spatiotemporal interaction. <i>Physical Review E</i> , 1999 , 60, 5375-84	2.4	15

96	Hamiltonian chaos in two coupled three-wave parametric interactions with quadratic nonlinearity. <i>Physica D: Nonlinear Phenomena</i> , 1996 , 99, 269-275	3.3	15
95	Dynamic range in a neuron network with electrical and chemical synapses. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2014 , 19, 164-172	3.7	14
94	Suppression of anomalous synchronization and nonstationary behavior of neural network under small-world topology. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018 , 497, 126-138	3.3	14
93	Bicoherence in electrostatic turbulence driven by high magnetohydrodynamic activity in Tokamak Chauffage Alfvén Brûlé. <i>Physics of Plasmas</i> , 2009 , 16, 042508	2.1	13
92	Periodic orbit analysis at the onset of the unstable dimension variability and at the blowout bifurcation. <i>Chaos</i> , 2007 , 17, 023131	3.3	13
91	Predictability of arousal in mouse slow wave sleep by accelerometer data. <i>PLoS ONE</i> , 2017 , 12, e0176761	3.7	12
90	Control of extreme events in the bubbling onset of wave turbulence. <i>Physical Review E</i> , 2014 , 89, 040901	2.4	12
89	Analysis of the influence of external biasing on Texas Helimak turbulence. <i>Physics of Plasmas</i> , 2013 , 20, 022310	2.1	12
88	Synchronization domains in two coupled neural networks. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2019 , 75, 140-151	3.7	11
87	Dynamic range in small-world networks of Hodgkin-Huxley neurons with chemical synapses. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014 , 410, 628-640	3.3	11
86	Shearless transport barriers in magnetically confined plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2012 , 54, 124035	2	11
85	COHERENT GENERATION OF NARROW-BAND CIRCULARLY POLARIZED RADIO BURSTS FROM THE SUN AND FLARE STARS. <i>Solar Physics</i> , 1997 , 173, 199-202	2.6	11
84	Temperature dependence of phase and spike synchronization of neural networks. <i>Chaos, Solitons and Fractals</i> , 2019 , 123, 35-42	9.3	10
83	Pattern formation and Turing instability in an activator-inhibitor system with power-law coupling. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2015 , 419, 487-497	3.3	10
82	Synchronization of biological clock cells with a coupling mediated by the local concentration of a diffusing substance. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2016 , 35, 37-52	3.7	10
81	Mechanism for explosive synchronization of neural networks. <i>Physical Review E</i> , 2019 , 100, 052301	2.4	10
80	Spatial recurrence analysis: a sensitive and fast detection tool in digital mammography. <i>Chaos</i> , 2014 , 24, 013106	3.3	10
79	Two-state on-off intermittency caused by unstable dimension variability in periodically forced drift waves. <i>Physical Review E</i> , 2011 , 84, 056211	2.4	10

78	Crisis-induced unstable dimension variability in a dynamical system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008 , 372, 5569-5574	2.3	10
77	Chaos synchronization in a lattice of piecewise linear maps with regular and random couplings. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006 , 367, 145-157	3.3	10
76	Chaotic dynamics of nonthermal planetary radio emissions. <i>Planetary and Space Science</i> , 2000 , 48, 9-21	2	10
75	Nonstationary transition to phase synchronization of neural networks induced by the coupling architecture. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018 , 507, 321-334	3.3	10
74	Parameter-free quantification of stochastic and chaotic signals. <i>Chaos, Solitons and Fractals</i> , 2020 , 133, 109616	9.3	9
73	Mechanism for stickiness suppression during extreme events in Hamiltonian systems. <i>Physical Review E</i> , 2015 , 91, 062903	2.4	9
72	Spherically symmetric stationary MHD equilibria with azimuthal rotation. <i>Plasma Physics and Controlled Fusion</i> , 1997 , 39, 197-203	2	9
71	Boundary crises, fractal basin boundaries, and electric power collapses. <i>Chaos, Solitons and Fractals</i> , 2003 , 15, 417-424	9.3	9
70	Phase synchronization and intermittent behavior in healthy and Alzheimer-affected human-brain-based neural network. <i>Physical Review E</i> , 2019 , 99, 022402	2.4	9
69	Weak dissipative effects on trajectories from the edge of basins of attraction. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2016 , 456, 68-74	3.3	9
68	Periodic-orbit analysis and scaling laws of intermingled basins of attraction in an ecological dynamical system. <i>Physical Review E</i> , 2008 , 78, 056214	2.4	8
67	Hippocampal and cortical communication around micro-arousals in slow-wave sleep. <i>Scientific Reports</i> , 2019 , 9, 5876	4.9	7
66	Characterization of spatial patterns produced by a Turing instability in coupled dynamical systems. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2014 , 19, 1055-1071	3.7	7
65	Self-organized criticality in MHD driven plasma edge turbulence. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012 , 376, 753-757	2.3	7
64	Anomalous transport induced by nonhyperbolicity. <i>Physical Review E</i> , 2012 , 86, 016216	2.4	7
63	Multistability and phase-space structure of dissipative nonlinear parametric four-wave interactions. <i>Physical Review E</i> , 2004 , 70, 056403	2.4	7
62	Multiple short-term memories in coupled weakly nonlinear map lattices. <i>Physical Review E</i> , 2000 , 61, 5990-3	2.4	7
61	The influence of connectivity on the firing rate in a neuronal network with electrical and chemical synapses. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2012 , 391, 819-827	3.3	6

60	Bubbling transition to spatial mode excitation in an extended dynamical system. <i>Physica D: Nonlinear Phenomena</i> , 2009 , 238, 516-525	3-3	6
59	Lyapunov spectrum of a lattice of chaotic systems with local and non-local couplings. <i>Chaos, Solitons and Fractals</i> , 2007 , 32, 702-710	9-3	6
58	Collective behavior in coupled chaotic map lattices with random perturbations. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008 , 387, 1655-1668	3-3	6
57	Synchronization regimes for two coupled noisy Liñard-type driven oscillators. <i>Chaos, Solitons and Fractals</i> , 2008 , 36, 901-910	9-3	6
56	Self-organized memories in coupled map lattices. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006 , 368, 387-398	3-3	6
55	Clustering and diffusion in a symplectic map lattice with non-local coupling. <i>Chaos, Solitons and Fractals</i> , 2009 , 41, 2201-2215	9-3	5
54	Riddling and chaotic synchronization of coupled piecewise-linear Lorenz maps. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009 , 388, 2515-2525	3-3	5
53	Turing instability in oscillator chains with nonlocal coupling. <i>Physical Review E</i> , 2011 , 83, 046220	2-4	5
52	Onset of spatiotemporal chaos in a nonlinear system. <i>Physical Review E</i> , 2007 , 75, 067202	2-4	5
51	Synchronous patterns and intermittency in a network induced by the rewiring of connections and coupling. <i>Chaos</i> , 2019 , 29, 123132	3-3	5
50	Maximum entropy principle in recurrence plot analysis on stochastic and chaotic systems. <i>Chaos</i> , 2020 , 30, 043123	3-3	5
49	Evidence of determinism for intermittent convective transport in turbulence processes. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014 , 402, 8-13	3-3	4
48	Blowout bifurcation and spatial mode excitation in the bubbling transition to turbulence. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011 , 390, 365-373	3-3	4
47	Extreme fractal structures in chaotic mechanical systems: riddled basins of attraction. <i>Journal of Physics: Conference Series</i> , 2010 , 246, 012001	0-3	4
46	Chaos and energy redistribution in the nonlinear interaction of two spatio-temporal wave triplets. <i>Physica D: Nonlinear Phenomena</i> , 1998 , 117, 13-25	3-3	4
45	Sudden transition to spatiotemporal chaos in a nonlinear Klein-Gordon equation. <i>Chaos, Solitons and Fractals</i> , 2002 , 13, 1269-1279	9-3	4
44	The role of individual neuron ion conductances in the synchronization processes of neuron networks. <i>Neural Networks</i> , 2021 , 137, 97-105	9-1	4
43	Symbolic analysis of bursting dynamical regimes of Rulkov neural networks. <i>Neurocomputing</i> , 2021 , 441, 44-51	5-4	4

42	Super persistent transient in a master-slave configuration with Colpitts oscillators. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014 , 47, 405101	2	3
41	Dynamical analysis of turbulence in fusion plasmas and nonlinear waves. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2012 , 17, 4690-4699	3-7	3
40	Parametric evolution of unstable dimension variability in coupled piecewise-linear chaotic maps. <i>Physical Review E</i> , 2011 , 83, 037201	2-4	3
39	Synchronization time in a hyperbolic dynamical system with long-range interactions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2010 , 389, 5279-5286	3-3	3
38	Low-dimensional chaos and wave turbulence in plasmas. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2008 , 366, 609-20	3	3
37	Basins of attraction of nonlinear wave-wave interactions. <i>Chaos, Solitons and Fractals</i> , 2007 , 32, 711-724	9-3	3
36	Conversion of local transient chaos into global laminar states in coupled map lattices with long-range interactions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006 , 367, 158-172	3-3	3
35	The presence of an invariant manifold in the dissipative nonlinear four-wave coupling. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004 , 343, 247-262	3-3	3
34	Correlation decay and partial coherence in nonlinear wave interactions. <i>Physical Review E</i> , 2003 , 68, 056601	2-1	3
33	Nonlinear Dynamics and Chaos in Space Plasmas. <i>Progress of Theoretical Physics Supplement</i> , 2000 , 139, 34-45		3
32	Bistability in the synchronization of identical neurons. <i>Physical Review E</i> , 2021 , 104, 024204	2-4	3
31	Correlated Brownian motion and diffusion of defects in spatially extended chaotic systems. <i>Chaos</i> , 2019 , 29, 071104	3-3	2
30	Multidimensional aspects of nonlinear electromagnetic solitary pulses. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014 , 404, 332-340	3-3	2
29	On a cellular automaton with time delay for modelling cancer tumors. <i>Journal of Physics: Conference Series</i> , 2011 , 285, 012015	0-3	2
28	Intermittent Behavior and Synchronization of Two Coupled Noisy Driven Oscillators. <i>Mathematical Problems in Engineering</i> , 2009 , 2009, 1-13	1-1	2
27	Nonintegrable interaction of ion acoustic and electromagnetic waves in a plasma. <i>Physical Review E</i> , 1997 , 55, 3423-3430	2-4	2
26	Turbulence Induced Transport in Tokamaks. <i>AIP Conference Proceedings</i> , 2006 ,	0	2
25	Short-term memories with a stochastic perturbation. <i>Chaos, Solitons and Fractals</i> , 2005 , 23, 1689-1694	9-3	2

24	Ecology and signal structure drive the evolution of synchronous displays. <i>Evolution; International Journal of Organic Evolution</i> , 2020 , 74, 434-446	3.8	2
23	Discriminating chaotic and stochastic time series using permutation entropy and artificial neural networks. <i>Scientific Reports</i> , 2021 , 11, 15789	4.9	2
22	Protocol for suppression of phase synchronization in Hodgkin-Huxley-type networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2019 , 528, 121388	3.3	1
21	Suppression of Phase Synchronization in Scale-Free Neural Networks Using External Pulsed Current Protocols. <i>Mathematical and Computational Applications</i> , 2019 , 24, 46	1	1
20	Synchronization and suppression of chaos in non-locally coupled map lattices 2009 , 73, 999-1009		1
19	SYNCHRONIZATION OF CHAOS AND THE TRANSITION TO WAVE TURBULENCE. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2012 , 22, 1250234	2	1
18	Direction coherence in scale-free lattices of chaotic maps. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007 , 383, 725-732	3.3	1
17	Transversal dynamics of a non-locally-coupled map lattice. <i>Physical Review E</i> , 2007 , 76, 017202	2.4	1
16	Langmuir Turbulence and Solar Radio Bursts. <i>Space Science Reviews</i> , 2003 , 107, 507-514	7.5	1
15	The presence of an invariant manifold in the dissipative nonlinear four-wave coupling. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004 , 343, 247-262	3.3	1
14	Synchronization malleability in neural networks under a distance-dependent coupling. <i>Physical Review Research</i> , 2020 , 2,	3.9	1
13	Langmuir Turbulence and Solar Radio Bursts 2003 , 507-514		1
12	Maximum entropy in the dimensional transition of the magnetic domain wall dynamics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2021 , 568, 125730	3.3	1
11	Detection of data corruption in stationary time series using recurrence microstates probabilities. <i>European Physical Journal: Special Topics</i> , 1	2.3	1
10	Evaluating Temporal Correlations in Time Series Using Permutation Entropy, Ordinal Probabilities and Machine Learning. <i>Entropy</i> , 2021 , 23,	2.8	1
9	Phase-locking intermittency induced by dynamical heterogeneity in networks of thermosensitive neurons. <i>Chaos</i> , 2021 , 31, 083121	3.3	0
8	Characterization of intermittency at the onset of turbulence in the forced and damped nonlinear Schrödinger equation. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2017 , 42, 404-419	3.7	
7	Investigation of Details in the Transition to Synchronization in Complex Networks by Using Recurrence Analysis. <i>Mathematical and Computational Applications</i> , 2019 , 24, 42	1	

- 6 Dynamical Effects in Confined Plasma Turbulence. *Brazilian Journal of Physics*, **2014**, 44, 903-913 1.2
- 5 Radial dependence of self-organized criticality behavior in TCABR tokamak. *Journal of Physics: Conference Series*, **2011**, 285, 012004 0.3
- 4 Transport barriers in plasmas. *Journal of Physics: Conference Series*, **2012**, 370, 012001 0.3
- 3 Short-time memories in a network with randomly distributed connections. *Physical Review E*, **2008**, 78, 037102 2.4
- 2 Controlling ratchet transport via a finite kicked environment. *Physical Review E*, **2016**, 94, 062210 2.4
- 1 Efficient computation of recurrence quantification analysis via microstates. *Applied Mathematics and Computation*, **2022**, 428, 127175 2.7